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## Department of Energy

Richland Operations Office  
P.O. Box 550  
Richland, Washington 99352

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OCT 3 1991

91-EAB-295

Mr. Paul T. Day  
Hanford Project Manager  
U.S. Environmental Protection Agency  
712 Swift Blvd., Suite 5  
Richland, Washington 99352

Mr. Timothy L. Nord  
Hanford Project Manager  
State of Washington  
Department of Ecology  
Mail Stop PV-11  
Olympia, Washington 98504-8711



Dear Messrs. Day and Nord:

### HANFORD FACILITY DANGEROUS WASTE PERMIT APPLICATION

Transmitted herewith is the Hanford Facility Dangerous Waste Permit Application and a State Environmental Policy Act (SEPA) Checklist. The content of the permit application is based on the:

- work of a DOE Field Office, Richland (RL)/Contractor Issues Resolution Task Force in effect since February 1991,
- results of ten issues resolution meetings held among the State of Washington Department of Ecology (Ecology), the U.S. Environmental Protection Agency (EPA), and RL since February 1991, and
- proposed revised text for the Draft Hanford Facility Permit transmitted to Ecology and EPA on August 6, 1991.

Despite the efforts of the Issues Resolution Task Force, together with representatives from EPA and Ecology, several facility-wide permitting issues remain unresolved. The Hanford Facility Permit Application reflects the current RL/contractor position on these issues as of the date of this transmittal. As noted in our letter transmitted to you on September 18, 1991, we will continue to work with you to address these issues and to formalize the approach for the development of the initial Hanford Facility Permit and subsequent modifications. This approach will help ensure that the Hanford Facility Dangerous Waste Permit will be issued in time to support the April 1992 start-of-construction milestone for the Hanford Waste Vitrification Plant.

Messrs. Day and Nord

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91-EAB-295  
OCT 3 1991

Per your request, copies of the Hanford Facility Permit Application and SEPA Checklist have been distributed as follows: (1) 5 copies to Mr. T. M. Michelena of Ecology (Lacey, Washington, office); (2) one copy to Mr. D. C. Nylander of Ecology (Kennewick, Washington, office); (3) two copies to Mr. D. L. Duncan of EPA (Seattle, Washington, office); and (4) one copy to Mr. P. T. Day of EPA (Richland, Washington, office).

If you have any questions regarding the Hanford Facility Permit Application, please contact Mr. C. E. Clark of RL on (509) 376-9333, or Ms. S. M. Price of the Westinghouse Hanford Company on (509) 376-1653.

Sincerely,

*E. A. Bracken*

E. A. Bracken, Director  
Environmental Restoration Division  
DOE Field Office, Richland

ERD:CEC

*R. E. Lerch*

R. E. Lerch  
Environmental Division  
Westinghouse Hanford Company

Enclosures:

1. Hanford Facility Dangerous Waste Permit Application
2. SEPA Checklist for the Hanford Facility Dangerous Waste Permit Application

cc w/o encl.:

T. D. Chikalla, PNL  
D. L. Duncan, EPA  
C. E. Findley, EPA  
R. E. Lerch, WHC  
T. M. Michelena, Ecology  
D. C. Nylander, Ecology

92124121135

STATE ENVIRONMENTAL POLICY ACT  
ENVIRONMENTAL CHECKLIST

FOR

HANFORD FACILITY DANGEROUS WASTE PERMIT APPLICATION

REVISION 0

SEPTEMBER 18, 1991

WASHINGTON ADMINISTRATIVE CODE  
ENVIRONMENTAL CHECKLIST FORMS  
[WAC 197-11-960]

92124121136

**A. BACKGROUND**

**1. Name of proposed project if applicable:**

Permitting of the Hanford Facility. This *State Environmental Policy Act (SEPA) of 1971* Checklist is being submitted concurrently with the *Hanford Facility Dangerous Waste Permit Application* (Hanford Facility Permit Application) for the treatment, storage, and/or disposal of dangerous waste and mixed waste on the Hanford Facility. Information contained in this checklist pertains only to treatment, storage, and/or disposal (TSD) units located on the Hanford Facility for which a final status permit has been, or will be, sought under the *Resource Conservation and Recovery Act (RCRA) of 1976*/Washington State Department of Ecology (Ecology) *Dangerous Waste Regulations*, Washington Administrative Code (WAC) 173-303. In the context of this document, 'facility' refers to the contiguous portion of the Hanford Site that contains these TSD units and, for the purposes of the RCRA and *Dangerous Waste Regulations*, is owned and operated by the U.S. Department of Energy (excluding land north and east of the Columbia River, river islands, state owned or leased lands, lands owned by the Bonneville Power Administration, and lands leased to the Washington Public Power Supply System). 'Site' refers to the Hanford Site, the approximately 560 square mile (1,450 square kilometers) area in southeastern Washington State owned by the United States Government and commonly known as the Hanford Reservation.

The environmental checklist for the Hanford Facility will be supplemented by environmental checklists prepared to accompany the submittal of unit-specific Part B permit applications.

**2. Name of applicants:**

U.S. Department of Energy (DOE) Field Office, Richland (RL)

**3. Address and phone number of applicant and contact person:**

U.S. Department of Energy  
Field Office, Richland  
P.O. Box 550  
Richland, Washington 99352

**Contact Person:**

E. A. Bracken, Director  
Environmental Restoration Division  
(509) 376-7277

**4. Date checklist prepared:**

September 18, 1991

1 5. Agency requesting the checklist:  
2

3 Washington State  
4 Department of Ecology  
5 Mail Stop PV-11  
6 Olympia, WA 98504-8711  
7

8 6. Proposed timing or schedule (including phasing, if applicable):  
9

10 Pursuant to the *Hanford Federal Facility Agreement and Consent Order*  
11 (Tri-Party Agreement) (Ecology et al. 1990), a single RCRA/dangerous  
12 waste permit will be issued to cover the entire Hanford Facility. The  
13 Tri-Party Agreement specifies that the U.S. Environmental Protection  
14 Agency (EPA) and Ecology will issue the Hanford Facility Dangerous Waste  
15 Permit (Hanford Facility Permit) for less than the entire Hanford  
16 Facility because all of the TSD units cannot be permitted simultaneously.  
17 Using a step-wise permitting process will ensure proper implementation of  
18 the Tri-Party Agreement. The permit eventually will grow into a single  
19 permit for the entire Hanford Facility. Any TSD units that are not  
20 included in the initial Hanford Facility Permit normally will be  
21 incorporated through a permit modification. Individual TSD units will be  
22 processed using the schedule outlined in the Tri-Party Agreement Action  
23 Plan, or amendments thereof.  
24

25 7. Do you have any plans for future additions, expansion, or further  
26 activity related to or connected with this proposal? If yes, explain.  
27

28 Yes. The permitting process for the Hanford Facility is outlined in  
29 Section 6.3 of the Tri-Party Agreement Action Plan. This process applies  
30 to existing TSD units operating under interim status, expansion of  
31 TSD units under interim status, and new TSD units (units that do not have  
32 interim status and must have a RCRA/dangerous waste permit before  
33 construction). A Notice of Intent (as specified in WAC-173-281) will be  
34 submitted for 'interim status expansion' or 'new' TSD units.  
35

36 8. List any environmental information you know about that has been prepared,  
37 or will be prepared, directly related to this proposal.  
38

- 39
- 40 • This environmental checklist is being submitted concurrently with the  
41 *Hanford Facility Dangerous Waste Permit Application*
  - 42 • The *Hanford Facility Dangerous Waste Part A Permit Application*  
43 (DOE-RL 1988).  
44

45 Environmental information on the Hanford Site, in general, can be found  
46 in the following references: (1) *Final Environmental Impact Statement -*  
47 *Disposal of Hanford Defense High-Level, Transuranic and Tank Wastes,*  
48 *DOE/EIS-0113* (U.S. Department of Energy, 1987, Richland, Washington);  
49 (2) *Hanford Site National Environmental Policy Act (NEPA)*  
50 *Characterization*, PNL-6415 (Revision 2, Pacific Northwest Laboratories,

1 1990, Richland, Washington); (3) *Draft Environmental Impact Statement -*  
2 *Decommissioning of Eight Surplus Production Reactors at the Hanford Site,*  
3 *Richland, Washington, DOE/EIS-0119D (U.S. Department of Energy, 1989,*  
4 *Washington, D.C.); (4) Final Environmental Impact Statement - Waste*  
5 *Management Operations, ERDA-1538 (U.S. Energy Research and Development*  
6 *Administration, 1975, Richland, Washington); and (5) Archaeological*  
7 *Survey of the 200 East and 200 West Areas, Hanford Site Washington,*  
8 *PNL-7264 (Pacific Northwest Laboratory, 1990, Richland, Washington).*  
9

- 10 9. Do you know whether applications are pending for government approvals of  
11 other proposals directly affecting property covered by your proposal? If  
12 yes, explain.  
13

14 Yes. The Hanford Site currently has three such permits: Clean Water Act  
15 - National Pollutant Discharge Elimination System (NPDES), EPA,  
16 WA-000374-3; Clean Air Act - Prevention of Significant Deterioration  
17 (PSD), EPA PSD-X80-14; Clean Air Act - Radioactive Source Registration,  
18 Washington State Department of Health, FF-01.  
19

- 20 10. List any government approvals or permits that will be needed for your  
21 proposal, if known.  
22

23 A RCRA/dangerous waste permit for the treatment, storage and/or disposal  
24 of dangerous waste and mixed waste on the Hanford Facility will be  
25 required. A permit application has been submitted concurrently with this  
26 environmental checklist and will serve as the basis for the initial  
27 Hanford Facility Permit. Once issued, the Hanford Facility Permit will  
28 be modified, as necessary, to incorporate permits for individual TSD  
29 units. This process briefly is described in the answer to Checklist  
30 Question 6.  
31

32 For the most part, other approvals or permits needed by the Hanford  
33 Facility are required by the *Clean Air Act of 1977*, the *Clean Water Act*  
34 *of 1977*, and the *Toxic Substances and Control Act of 1976*.  
35

- 36 11. Give a brief, complete description of your proposal, including the  
37 proposed uses and the size of the project and site.  
38

39 The Hanford Site covers approximately 560 square miles (1,450 square  
40 kilometers) of semiarid land that is owned by the U.S. Government and  
41 managed by the DOE-RL. The Hanford Site is located northwest of the city  
42 of Richland, Washington. The city of Richland adjoins the southeastern  
43 most portion of the Hanford Site boundary and is the nearest population  
44 center. In early 1943, the U.S. Army Corps of Engineers selected the  
45 Hanford Site as the location for reactor, chemical separation, and  
46 related activities for the production and purification of special nuclear  
47 materials and other nuclear activities. The mission of the Hanford Site  
48 recently has focused on environmental remediation and restoration.  
49

1 The Hanford Facility, for purposes of the RCRA and the *Dangerous Waste*  
2 *Regulations*, is defined as the contiguous portion of the Hanford Site  
3 that includes approximately 25 TSD units for which a final status permit  
4 has been, or will be, sought. The Hanford Facility is assigned the  
5 single EPA/State Identification Number WA7890008987, and the RL is  
6 specified as the owner/operator. All waste management activities carried  
7 out under the assigned identification number are considered to be onsite.  
8

9 The Hanford Facility does not include the Bonneville Power Administration  
10 Midway Site, the U.S. Department of Energy lands north and northeast of  
11 the Columbia River, nor lands owned or leased by the state of Washington.  
12 The Midway Site is owned by the Bonneville Power Administration, and the  
13 U.S. Department of Energy has no ownership or control over this site.  
14 The U.S. Department of Energy lands north and east of the Columbia River  
15 contain no TSD units and are not considered to be contiguous to the  
16 Hanford Facility because these lands are separated by the state-owned  
17 Columbia River bed.  
18

19 In addition, the Washington Public Power Supply System will be applying  
20 for a RCRA permit for the U.S. Department of Energy lands leased to the  
21 Washington Public Power Supply System. These lands will be covered by a  
22 separate permit and, therefore, will not be included in the Hanford  
23 Facility Permit.  
24

25 The Hanford Facility generates dangerous and mixed waste, and treats,  
26 stores, and/or disposes of dangerous and mixed waste that is generated  
27 onsite. Mixed waste that is generated offsite also is managed within  
28 certain TSD units on the Hanford Facility. The radioactive portion of  
29 mixed waste is interpreted by the U.S. Department of Energy to be  
30 regulated under the *Atomic Energy Act of 1954*; the nonradioactive  
31 dangerous portion of mixed waste is interpreted to be regulated under the  
32 RCRA and WAC 173-303.  
33

34 The TSD units to be permitted on the Hanford Facility are centralized in  
35 four numerically designated areas, the 200, 300, 400, and 600 Areas.  
36 These TSD units include container storage units, surface impoundments,  
37 waste piles, tank systems, and miscellaneous units, unique units not  
38 fitting into an established category for a TSD unit. These units treat,  
39 store, and/or dispose of dangerous and/or mixed waste designated as:  
40 (1) characteristic dangerous waste; (2) toxic, carcinogenic, and  
41 persistent (by WAC 173-303 criteria); and (3) listed (because the waste  
42 contains small amounts of spent solvents and discarded pure chemical  
43 products). Specific dangerous waste codes, process design capacities,  
44 and estimated quantities of waste handled on an annual basis by specific  
45 TSD units are specified in the *Hanford Facility Part A Permit*  
46 *Application*.  
47

- 1 12. Give the location of the proposal. Give sufficient information for a  
2 person to understand the precise location of the proposed project,  
3 including a street address, if any, and section, township, and range, if  
4 known. If a proposal would occur over a range of area, provide the range  
5 or boundaries of the site(s). Provide a legal description, site plan,  
6 vicinity map, and topographic map, if reasonably available.  
7

8 The location of the Hanford Facility is described in the answer to  
9 Checklist Question 11. The location of individual TSD units on the  
10 Hanford Facility is provided in the *Hanford Facility Part A Permit*  
11 *Application*.  
12

13 A map of the Hanford Facility and legal description is included in  
14 Section 2.2 of the *Hanford Facility Dangerous Waste Permit Application*.  
15 Legal descriptions for individual TSD units will be provided in the unit-  
16 specific Part B permit applications.  
17

18  
19  
20 **B. ENVIRONMENTAL ELEMENTS**  
21

22 **1. Earth**  
23

- 24 a. General description of the site (indicate one): Flat, rolling,  
25 hilly, steep, mountainous, other.  
26

27 The terrain of the central and eastern portions of the Hanford  
28 Facility is relatively flat. The northern and western parts of the  
29 Hanford Facility have moderate to steep topographic ridges composed  
30 of basalt and sediments. The TSD units are located on the relatively  
31 flat, central portion of the Hanford Facility. A more detailed  
32 description of the Hanford Facility can be found in *Hanford Site*  
33 *National Environmental Policy Act (NEPA) Characterization*, PNL-6415  
34 (Revision 2, Pacific Northwest Laboratory, 1990, Richland,  
35 Washington). More detailed descriptions of individual TSD units can  
36 be found in unit-specific Part B permit applications.  
37

- 38 b. What is the steepest slope on the site (approximate percent slope)?  
39

40 The TSD units are located on the relatively flat, central portion of  
41 the Hanford Facility. The approximate slope of the land at each TSD  
42 unit is generally less than two percent. More detailed descriptions  
43 of individual TSD units can be found in unit-specific Part B permit  
44 applications.  
45

- 46 c. What general types of soils are found on the site (for example, clay,  
47 sand, gravel, peat, muck)? If you know the classification of  
48 agricultural soils, specify them and note any prime farmland.  
49

1 The soil at the Hanford Facility ranges from fine silty and sandy  
2 soil to sandy gravel with good drainage characteristics. No farming  
3 is permitted on the Hanford Facility or the Hanford Site.  
4

- 5 d. Are there surface indications or history of unstable soils in the  
6 immediate vicinity? If so, describe.  
7

8 No. There are no indications of unstable soils at the Hanford  
9 Facility.  
10

- 11 e. Describe the purpose, type, and approximate quantities of any filling  
12 or grading proposed. Indicate the source of the fill.  
13

14 Excavation will be required for the operation of some TSD units such  
15 as the Low-Level Burial Grounds and the Grout Treatment Facility.  
16 Excavation also will be required for the modification and  
17 construction of some TSD units. Excavated material will be  
18 stockpiled for use as backfill. Excavated material also will be  
19 used, as required, for finish grading to blend the materials into the  
20 existing topography and to provide drainage away from buildings and  
21 structures.  
22

- 23 f. Could erosion occur as a result of clearing, construction, or use?  
24 If so, generally describe.  
25

26 Erosion due to wind and/or precipitation could occur in areas on and  
27 directly surrounding TSD units at which excavation is used during  
28 operations. Erosion due to wind and/or precipitation also could  
29 occur in association with the modification and construction of  
30 TSD units. Topographical expression of erosional features is  
31 uncommon at the Hanford Site.  
32

- 33 g. Approximately what percent of the site will be covered with  
34 impervious surfaces after project construction (for example, asphalt  
35 or buildings)?  
36

37 Less than one percent of the Hanford Facility is affected by  
38 impervious surfaces. A more detailed description of impervious  
39 surfaces associated with individual TSD units can be found in unit-  
40 specific Part B permit applications.  
41

- 42 h. Proposed measures to reduce or control erosion, or other impacts to  
43 the earth, if any?  
44

45 To control the amount of dust generated by excavation, modification,  
46 or construction activities, water trucks might be used to  
47 periodically spray areas undergoing such activities. Paved access  
48 roadways and graveled parking areas will be provided to minimize  
49 erosion due to vehicular traffic. Natural vegetation covers much of  
50 the Hanford Site minimizing both wind and water erosion.

1     **2. Air**

- 2  
3     a. What types of emissions to the air would result from the proposal  
4       (i.e., dust, automobile, odors, industrial wood smoke) during  
5       construction and when the project is completed? If any, generally  
6       describe and give approximate quantities if known.  
7

8       Small amounts of air emissions (exhaust) might be generated by  
9       excavation and construction equipment and vehicles used by personnel  
10       to gain access to the Hanford Facility. Some dust will be generated  
11       during construction activities.  
12

13       Air emissions which may result from operational activities associated  
14       with individual TSD units will be permitted as required under federal  
15       and state clean air regulations. Emissions of regulated air  
16       pollutants from existing Hanford Site operations are reported in the  
17       *Hanford Site Environmental Report*, which is updated annually by  
18       Pacific Northwest Laboratory.  
19

- 20     b. Are there any off-site sources of emissions or odors that may affect  
21       your proposal? If so, generally describe.  
22

23       None.  
24

- 25     c. Proposed measures to reduce or control emissions or other impacts to  
26       the air, if any?  
27

28       To control the amount of dust generated by excavation or construction  
29       activities, water trucks will be available onsite to periodically  
30       spray affected areas. For individual TSD units, plant ventilation  
31       systems will use airlocks, pressure and temperature differentials,  
32       continuous air monitoring and surveillance equipment, and air  
33       scrubbers and HEPA filters to ensure that air emissions remain within  
34       applicable regulatory limits and guidelines at all times. Individual  
35       sources of regulated air pollutants will be permitted under  
36       applicable Clean Air Act regulations.  
37

38     **3. Water**

- 39     a. Surface:  
40

- 41       1) Is there any surface water body on or in the immediate vicinity of  
42       the site (including year-round and seasonal streams, saltwater,  
43       lakes, ponds, wetlands)? If yes, describe type and provide names.  
44       If appropriate, state what stream or river it flows into.  
45       If appropriate, state what stream or river it flows into.  
46

47       Yes. The primary surface-water features associated with the  
48       Hanford Facility are the Columbia and Yakima Rivers. Several  
49       surface ponds and ditches are present, and are generally  
50       associated with fuel and waste processing activities. Some of

1 these ponds have been in place for as long as two decades,  
2 although many have been eliminated. Two intermittent streams  
3 transverse the Hanford Site. These are Cold Creek and Dry Creek.  
4 Water drains through these creeks during the wetter winter and  
5 spring months. No perennial streams originate within the Hanford  
6 Site. Small spring streams, Rattlesnake Springs and Snively  
7 Springs, flow for short distances in the western portion of the  
8 Hanford Site.  
9

- 10 2) Will the project require any work over, in, or adjacent to [within  
11 200 feet (61 meters) of] the described waters? If yes, please  
12 describe and attach available plans.  
13

14 Yes. Individual TSD Units with such work will address impacts on  
15 the described waters through environmental checklists submitted  
16 with the unit-specific Part B permit applications.  
17

- 18 3) Estimate the amount of fill and dredge material that would be  
19 placed in or removed from surface water or wetlands and indicate  
20 the area of the site that would be affected. Indicate the source  
21 of fill material.  
22

23 None.  
24

- 25 4) Will the proposal require surface water withdrawals or diversions?  
26 Give general description, purpose, and approximate quantities if  
27 known.  
28

29 Yes. Nearly all the water used on the Hanford Facility is  
30 withdrawn from the Columbia River (approximately 1.3 million  
31 gallons per day). Individual TSD Units that use Columbia River  
32 water will address this use in environmental checklists submitted  
33 with unit-specific Part B permit applications.  
34

- 35 5) Does the proposal lie within a 100-year floodplain? If so, note  
36 location on the site plan.  
37

38 Yes. Portions of the 100 and 300 Areas are within the 100-year  
39 floodplain. However, none of the current TSD units within the  
40 Hanford Facility are within the 100-year floodplain.  
41

- 42 6) Does the proposal involve any discharges of waste materials to  
43 surface waters? If so, describe the type of waste and anticipated  
44 volume of discharge.  
45

46 Some of the TSD units might discharge nondangerous liquid effluent  
47 to ponds, cribs, or to the Columbia River. The specific details  
48 of these liquid effluent discharges will be documented in  
49 environmental checklists submitted with unit-specific Part B  
50 permit applications.

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b. Ground:

- 1) Will ground water be withdrawn, or will water be discharged to ground water? Give general description, purpose, and approximate quantities, if known.

Yes. Several drinking water supply wells are located on the Hanford Facility. Water supply wells are the Yakima Barricade well about 3.2 miles (5.2 kilometers) west of the 200 West Area, two wells in the 400 Area (one supply and one back-up), and the Rattlesnake Springs well located 4 miles (6.4 kilometers) southwest of the 200 West Area. Relatively small volumes of water are withdrawn from these wells, as most drinking water and water used for other purposes is taken from the Columbia River. A small volume of water is withdrawn from wells distributed throughout the Hanford Facility for groundwater monitoring and sampling.

No water will be discharged directly to the groundwater.

- 2) Describe waste materials that will be discharged into the ground from septic waste tanks or other sources, if any (for example: domestic sewage; industrial, containing the following chemicals...; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.

Septic tanks and drain fields exist and might be expanded to receive sanitary waste from restrooms, changerooms, showers, and lunchrooms of the various TSD units. Some of the TSD units might discharge nondangerous liquid effluent or purgewater to ponds or cribs that might be sources for groundwater recharge. The specific details of these liquid effluent discharges will be documented in environmental checklists submitted with unit-specific Part B permit applications.

c. Water run-off (including storm water):

- 1) Describe the source of run-off (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.

Extremely small quantities of storm water run-off will be generated. Descriptions of collection and disposal methods for individual TSD units are detailed, where applicable, in the unit-specific Part B permit applications.

1 2) Could waste materials enter ground or surface waters? If so,  
2 generally describe.  
3

4 Yes. Nonradioactive, nondangerous waste might be released to the  
5 ground via septic systems and various drains associated with  
6 TSD units within the Hanford Facility. Some of the TSD units  
7 might discharge nondangerous liquid effluent to ponds or cribs  
8 that might be sources for groundwater recharge. The specific  
9 details of these liquid effluent discharges will be documented in  
10 environmental checklists submitted with unit-specific Part B  
11 permit applications. Discharges to ground or surface waters will  
12 be permitted as appropriate under the Clean Water Act.  
13

14 d. Proposed measures to reduce or control surface, ground, and run-off  
15 water impacts, if any:  
16

17 Many TSD units use double containment piping and leak detection,  
18 grading and ground cover, and/or other measures to prevent  
19 degradation of groundwater quality. Measures to be taken for  
20 individual TSD units are detailed, where applicable, in the unit-  
21 specific Part B permit applications  
22

23 4. Plants  
24

25 a. Check the types of vegetation found on the site:  
26

- 27  deciduous tree: alder, maple, aspen, other  
28  evergreen tree: fir, cedar, pine, other  
29  shrubs  
30  grass  
31  pasture  
32  crop or grain  
33  wet soil plants: cattail, buttercup, bulrush, skunk cabbage,  
34 other  
35  water plants: water lily, eelgrass, milfoil, other  
36  other types of vegetation  
37

38 The vegetation on the Hanford Facility consists of sagebrush, forbs,  
39 and other common central Washington desert plant species. A more  
40 detailed description of the Hanford Site vegetation can be found in  
41 *Hanford Site National Environmental Policy Act (NEPA)*  
42 *Characterization*, PNL-6415 (Revision 2, Pacific Northwest Laboratory,  
43 1990, Richland, Washington).  
44

45 b. What kind and amount of vegetation will be removed or altered?  
46

47 Vegetation around many TSD units is removed routinely, so that there  
48 is a low potential for accidental open burning. Vegetation will also  
49 be removed from unit construction localities and areas to be paved.

1 Most of the Hanford Facility beyond the bounds of the 200, 300, 400,  
2 and 1100 Areas is maintained as a natural habitat.  
3

- 4 c. List threatened or endangered species known to be on or near the  
5 site.  
6

7 The Columbia milk-vetch, and yellowcress are threatened and  
8 endangered plants occurring on the Hanford Site. Additional  
9 information on species can be found in *Hanford Site National*  
10 *Environmental Policy Act (NEPA) Characterization*, PNL-6415 (Revision  
11 2, Pacific Northwest Laboratory, 1990, Richland, Washington).  
12

- 13 d. Proposed landscaping, use of native plants, or other measures to  
14 preserve or enhance vegetation on the site, if any:  
15

16 Compaction of the soil is used to stabilize the soil during and after  
17 construction activities. Native vegetation often is planted to  
18 eliminate erosion potential of soils due to wind and water. Measures  
19 to be taken for individual TSD units are detailed, where applicable,  
20 in the unit-specific Part B permit applications. Most of the Hanford  
21 Facility beyond the bounds of the 200, 300, 400, and 1100 Areas is  
22 maintained as a natural habitat.  
23

24 **5. Animals**  
25

- 26 a. Indicate (by underlining) any birds and animals which have been  
27 observed on or near the site or are known to be on or near the site:  
28

29 birds: hawk, heron, eagle, songbirds, other  
30 mammals: deer, bear, elk, beaver, other  
31 fish: bass, salmon, trout, herring, shellfish, other  
32

33 A variety of insects, birds, and mammals are common to the Hanford  
34 Site and Hanford Facility, including pigeons, passerine birds,  
35 rodents, and lagomorphs. Larger mammals commonly seen in the  
36 vicinity include deer and coyote. Additional information on birds  
37 and animals on the Hanford Site can be found in *Hanford Site National*  
38 *Environmental Policy Act (NEPA) Characterization*, PNL-6415 (Revision  
39 2, Pacific Northwest Laboratory, 1990, Richland, Washington).  
40

- 41 b. List any threatened or endangered species known to be on or near the  
42 site.  
43

44 The Aleutian Canada goose, bald eagle, white pelican, sandhill crane,  
45 ferruginous hawk, and the peregrine falcon are sometimes seen on the  
46 Hanford Site.  
47

48 The TSD unit locations are not known to be used by any threatened or  
49 endangered species. Additional information concerning endangered and  
50 threatened species on the Hanford Site can be found in *Hanford Site*

1 *National Environmental Policy Act (NEPA) Characterization*, PNL-6415  
2 (Revision 2, Pacific Northwest Laboratory, 1990, Richland,  
3 Washington).

4  
5 c. Is the site part of a migration route? If so, explain.

6  
7 Yes. The adjacent Columbia River is part of the broad Pacific Flyway  
8 for waterfowl migration and other birds also migrate along the river.  
9

10 d. Proposed measures to preserve or enhance wildlife, if any:

11  
12 Fences around TSD units exclude larger animals. Landfill waste is  
13 covered with soil to isolate this waste from local fauna.  
14

15 **6. Energy and Natural Resources**

16  
17 a. What kinds of energy (electric, natural gas, oil, wood stove, solar)  
18 will be used to meet the completed project's energy needs? Describe  
19 whether it will be used for heating, manufacturing, etc.

20  
21 Diesel fuel, coal, gasoline, oil, and electrical power will be used  
22 to power equipment, to power building ventilation and lighting  
23 systems, and to provide process heating.  
24

25 b. Would your project affect the potential use of solar energy by  
26 adjacent properties? If so, generally describe.

27  
28 No.  
29

30 c. What kinds of energy conservation features are included in the plans  
31 of this proposal? List other proposed measures to reduce or control  
32 energy impacts, if any:  
33

34 Energy conservation guidelines outlined in the U.S. Department of  
35 Energy Order 6430.1A, "General Design Criteria," will be incorporated  
36 in the design of new structures. Under these guidelines, each area  
37 of a building will be subject to the air in-leakage depressurization  
38 test. The test will be done in accordance with American Society of  
39 Testing Materials E 779-87, "Standard Test Method for Determining Air  
40 Leakage Rate by Fan Pressurization". Only the depressurization test  
41 will need to be performed, and will demonstrate whether the building  
42 envelope meets the design specification for air tightness. A more  
43 detailed description of the energy conservation features of  
44 individual TSD units can be found in the environmental checklists  
45 accompanying unit-specific Part B permit applications.  
46

1 **7. Environmental Health**  
2

- 3 a. Are there any environmental health hazards, including exposure to  
4 toxic chemicals, risk of fire and explosion, spill, or hazardous  
5 waste, that could occur as a result of this proposal? If so,  
6 describe.  
7

8 Yes. Radioactive materials and toxic and explosive chemicals are  
9 routinely handled at the Hanford Facility.

- 10 1) Describe special emergency services that might be required.  
11

12 Hanford Site security, fire response, ambulance services, and an  
13 emergency communications and response system are on call 24 hours  
14 a day, 7 days a week, in the event of an onsite emergency.  
15

- 16 2) Proposed measures to reduce or control environmental health  
17 hazards, if any:  
18

19 The TSD units on the Hanford Facility will provide primary and  
20 secondary confinement barriers to prevent the release of  
21 potentially hazardous materials. Primary confinement will prevent  
22 direct physical contact between the hazardous materials and  
23 personnel and will be provided by process enclosures and  
24 ventilation systems. Secondary confinement will prevent releases  
25 of hazardous materials to the environment and will be provided by  
26 buildings housing the process enclosures and by building  
27 ventilation systems. Some of the buildings will be designed to  
28 withstand design-basis accidents required by the U.S. Department  
29 of Energy Order 6430.1A and criteria defined in Hanford Plant  
30 Standard Design Criteria (SDC) 4.1. Descriptions of measures to  
31 reduce or control environmental health hazards for individual  
32 TSD units are detailed, where applicable, in the unit-specific  
33 Part B permit applications and in environmental checklists  
34 accompanying these permit applications.  
35

- 36  
37 b. Noise  
38

- 39 1) What types of noise exist in the area which may affect your  
40 project (for example: traffic, equipment, operation, other)?  
41

42 None.  
43

- 44 2) What types and levels of noise would be created by or associated  
45 with the project on a short-term or a long-term basis (for  
46 example: traffic, construction, operation, other)? Indicate what  
47 hours noise would come from the site.  
48

49 The Hanford Facility is sufficiently removed from residential and  
50 offsite industrial areas to preclude excessive noise impacts. The

1 primary source of noise from the Hanford Facility will be from the  
2 operation of exhaust systems and from heavy equipment associated  
3 with excavation and construction activities.  
4

5 3) Proposed measures to reduce or control noise impacts, if any:

6  
7 Excavation, construction, and operational equipment will meet  
8 manufacturer's requirements for noise suppression.  
9

10 8. Land and Shoreline Use

11 a. What is the current use of the site and adjacent properties?

12  
13 The Hanford Site is dedicated to U.S. Department of Energy-controlled  
14 operations, with limited exceptions. Located within the boundaries  
15 of the Hanford Site and Hanford Facility are the Washington Public  
16 Power Supply System reactor and generating complex and the  
17 U.S. Ecology Company, Incorporated waste disposal facility located  
18 southwest of the 200 East Area. Seimens Nuclear Power is located  
19 just north of Richland, Washington, adjacent to the Hanford Site  
20 boundary. The eastern boundary of the nearest military installation,  
21 the Yakima Firing Center, is 25 miles (40 kilometers) west-northwest  
22 of the Hanford Site.  
23

24  
25 The portion of the Hanford Site south and west of the Columbia River  
26 is where reactor, fuel reprocessing, and TSD units are located. The  
27 portion of the Hanford Site that is located on the north and east  
28 sides of the Columbia Rive is designated as a buffer zone and  
29 currently is used for wildlife refuge or wildlife recreation land.  
30 The southwest portion of the Hanford Site is the Arid Lands Ecology  
31 Reserve.  
32

33 Outside the Hanford Site are privately owned farms and the urban and  
34 suburban areas of Richland and West Richland.  
35

36 b. Has the site been used for agriculture? If so, describe.

37  
38 No portion of the Hanford Site, including the localities of the  
39 TSD units have been used for agricultural purposes since 1943.  
40

41 c. Describe any structures on the site.

42  
43 The Hanford Site contains a number of structures, generally  
44 restricted to the 100, 200, 300, 400, 1100, and 3000 Areas. A map of  
45 these areas is contained in the Hanford Facility Permit Application.  
46 More detailed descriptions of the structures associated with  
47 individual TSD units can be found in the unit-specific Part B permit  
48 applications and in environmental checklists accompanying these  
49 permit applications.  
50

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- 1 d. Will any structures be demolished? If so, what?  
2

3 Structures might be demolished in association with closure of  
4 TSD units on the Hanford Facility. Descriptions of these demolition  
5 activities will be included in the closure/postclosure plan portion  
6 of the unit-specific Part B permit applications.  
7

- 8 e. What is the current zoning classification of the site?  
9

10 The Hanford Site is zoned by Benton County as an Unclassified Use (U)  
11 district.  
12

- 13 f. What is the current comprehensive plan designation of the site?  
14

15 The 1985 Benton County Comprehensive Land Use Plan designates the  
16 Hanford Site as the "Hanford Reservation". Under this designation,  
17 land on the Hanford Site might be used for "activities nuclear in  
18 nature". Nonnuclear activities are authorized "if and when  
19 [U.S. Department of Energy] approval for such activities is  
20 obtained".  
21

- 22 g. If applicable, what is the current shoreline master program  
23 designation of the site?  
24

25 Does not apply.  
26

- 27 h. Has any part of the site been classified as an "environmentally  
28 sensitive" area? If so, specify.  
29

30 No. However, the Hanford Reach of the Columbia River borders the  
31 Hanford Facility. The *Hanford Reach Study Act* (Public Law 100-605)  
32 directs the Secretary of the Interior to prepare a study on the  
33 Hanford Reach of the Columbia River to consider its addition to the  
34 National Wild and Scenic Rivers System. During the eight-year study  
35 period, ending in 1996, activities undertaken within a quarter mile  
36 of the Columbia River mean high-level mark, from river miles 396 to  
37 345, must be conducted in consultation and coordination with the  
38 National Park Service, acting for the Secretary of the Interior.  
39 Activities undertaken within the Hanford Reach are conducted in  
40 compliance with the *Hanford Reach Study Act*. Discussions of  
41 activities affecting the Hanford Reach are included in TSD unit-  
42 specific permit applications.  
43

- 44 i. Approximately how many people would reside or work in the completed  
45 project?  
46

47 Approximately 15,000 people work on the Hanford Site. Work  
48 localities for most personnel are in the 100, 200, 300, 400, 1100,  
49 and 3000 Areas. Hanford Facility TSD units are located in the 200,  
50 300, 400, and 600 Areas.

1 j. Approximately how many people would the completed project displace?

2  
3 None.

4  
5 k. Proposed measures to avoid or reduce displacement impacts, if any:

6  
7 Does not apply.

8  
9 l. Proposed measures to ensure the proposal is compatible with existing  
10 and projected land uses and plans, if any:

11  
12 Does not apply. (Refer to Checklist Question B.8.f.)

13  
14 9. Housing

15  
16 a. Approximately how many units would be provided, if any? Indicate  
17 whether high-, middle-, or low-income housing.

18  
19 None.

20  
21 b. Approximately how many units, if any, would be eliminated? Indicate  
22 whether high-, middle-, or low-income housing.

23  
24 None.

25  
26 c. Proposed measures to reduce or control housing impacts, if any:

27  
28 Does not apply.

29  
30 10. Aesthetics

31  
32 a. What is the tallest height of any proposed structure(s), not  
33 including antennas; what is the principal exterior building  
34 material(s) proposed?

35  
36 The height of structures on the Hanford Facility is generally less  
37 than 100 feet (33 meters) The height of various structures  
38 associated with TSD units can be found in the unit-specific Part B  
39 permit applications and environmental checklists accompanying these  
40 permit applications.

41  
42 b. What views in the immediate vicinity would be altered or obstructed?

43  
44 None.

45  
46 c. Proposed measures to reduce or control aesthetic impacts, if any:

47  
48 None.

49

1 11. Light and Glare  
2

- 3 a. What type of light or glare will the proposal produce? What time of  
4 day would it mainly occur?

5 None.  
6

- 7  
8 b. Could light or glare from the finished project be a safety hazard or  
9 interfere with views?

10 No.  
11

- 12  
13 c. What existing off-site sources of light or glare may affect your  
14 proposal?

15 None.  
16

- 17  
18 d. Proposed measures to reduce or control light and glare impacts, if  
19 any:

20 Does not apply.  
21

22 12. Recreation  
23

- 24 a. What designated and informal recreational opportunities are in the  
25 immediate vicinity?

26 None.  
27

- 28  
29 b. Would the proposed project displace any existing recreational uses?  
30 If so, describe.

31 Does not apply.  
32

- 33  
34 c. Proposed measures to reduce or control impacts on recreation,  
35 including recreation opportunities to be provided by the project or  
36 applicant, if any?

37 Does not apply.  
38

39 13. Historic and Cultural Preservation  
40

- 41 a. Are there any places or objects listed on, or proposed for, national,  
42 state, or local preservation registers known to be on or next to the  
43 site? If so, generally describe.

44 No places or objects listed on, or proposed for, national, state, or  
45 local preservation registers are known to be on or next to any  
46 TSD units. Additional information on the Hanford Facility  
47  
48  
49

1 environment can be found in the environmental documents referred to  
2 in the answer to Checklist Question A.8.  
3

- 4 b. Generally describe any landmarks or evidence of historic,  
5 archaeological, scientific, or cultural importance known to be on or  
6 next to the site.  
7

8 There are no known archaeological, historical, or native American  
9 religious localities at or next to any TSD units. Additional  
10 information on the Hanford Site environment can be found in the  
11 environmental documents referred to in the answer to Checklist  
12 Question A.8.  
13

14 NOTE: Pacific Northwest Laboratory recently filed a Request For  
15 Determination of Eligibility for the White Bluffs Road with the State  
16 Historic Preservation Office. If the road is found eligible, it  
17 might be necessary to determine if any TSD units will have an effect  
18 on the historic property.  
19

- 20 c. Proposed measures to reduce or control impacts, if any:  
21

22 Where appropriate, a cultural resource review will provide the  
23 vehicle for necessary approvals required under the *National Historic*  
24 *Preservation Act of 1966*.  
25

26 **14. Transportation**  
27

- 28 a. Identify public streets and highways serving the site, and describe  
29 proposed access to the existing street system. Show on site plans,  
30 if any.  
31

32 See maps in the accompanying Hanford Facility Permit Application.  
33

- 34 b. Is site currently served by public transit? If not, what is the  
35 approximate distance to the nearest transit stop?  
36

37 Portions of the Hanford Facility are served by public transportation.  
38 The 300 and 400 Areas of the Hanford Site are served by public  
39 transportation. Individual TSD units are not served by public  
40 transportation.  
41

- 42 c. How many parking spaces would the completed project have? How many  
43 would the project eliminate?  
44

45 A more detailed description of the parking needs for individual  
46 TSD units can be found in environmental checklists accompanying unit-  
47 specific Part B permit applications.  
48

- 1 d. Will the proposal require any new roads or streets, or improvements  
2 to existing roads or streets, not including driveways? If so,  
3 generally describe (indicate whether public or private).  
4

5 Paved roads for access to TSD units might be required. A more  
6 detailed description of transportation needs can be found in the  
7 environmental checklists accompanying unit-specific Part B permit  
8 applications. A portion of the roads will not be publicly  
9 accessible.  
10

- 11 e. Will the project use (or occur in the immediate vicinity of) water,  
12 rail, or air transportation? If so, generally describe.  
13

14 No.  
15

- 16 f. How many vehicular trips per day would be generated by the completed  
17 project? If known, indicate when peak volumes would occur.  
18

19 Peak traffic volumes will occur at the beginning and end of regular  
20 8-hour working shifts. Many employees use the Hanford Site shuttle  
21 bus system for transportation from northern Richland to the  
22 operational areas of the Hanford Site, including TSD units of the  
23 Hanford Facility.  
24

- 25 g. Proposed measures to reduce or control transportation impacts, if  
26 any:  
27

28 Proper codes, standards, regulations and accepted safety practices  
29 will be followed to mitigate human exposure while transporting waste.  
30

31 15. Public Services  
32

- 33 a. Would the project result in an increased need for public services  
34 (for example: fire protection, police protection, health care,  
35 schools, other)? If so, generally describe.  
36

37 No.  
38

- 39 b. Proposed measures to reduce or control direct impacts on public  
40 services, if any:  
41

42 Does not apply.  
43

1 16. Utilities  
2

- 3 a. List utilities currently available at the site (electricity, natural  
4 gas, water, refuse service, telephone, sanitary sewer, septic system,  
5 other):  
6

7 The Hanford Site and Hanford Facility are supported by a variety of  
8 utilities including electrical, natural gas, water, refuse service,  
9 telephone, sanitary sewer, and septic system. Descriptions of  
10 utilities currently available for individual TSD units can be found  
11 in unit-specific Part B permit applications and environmental  
12 checklists accompanying these permit applications.  
13

- 14 b. Describe the utilities that are proposed for the project, the utility  
15 providing the service, and the general construction activities on the  
16 site or in the immediate vicinity which might be needed.  
17

18 The Hanford Site and Hanford Facility are supported by a variety of  
19 utilities including electrical, natural gas, water, refuse service,  
20 telephone, sanitary sewer, and septic system. Construction  
21 activities will, in general, 'tie-in' to existing utilities.  
22 Descriptions of utilities currently available for individual  
23 TSD units can be found in unit-specific Part B permit applications  
24 and environmental checklists accompanying these permit applications.  
25  
26  
27  
28

29 SIGNATURES  
30

31 The above answers are true and complete to the best of my knowledge. I  
32 understand that the lead agency is relying on them to make its decision.  
33  
34  
35  
36  
37

38 \_\_\_\_\_  
39 E. A. Bracken, Director  
40 Environmental Restoration Division  
41 U.S. Department of Energy  
Richland Operations Office

\_\_\_\_\_  
Date

9157000D

ATTACHMENT 2

92124121157

# CORRESPONDENCE DISTRIBUTION COVERSHEET

Author: S. M. Price 6-1653  
Addressee: T. L. Nord, Ecology  
P. T. Day, EPA  
Correspondence No.: Incoming: 9105127  
Ref. #9157000D

Subject: HANFORD FACILITY DANGEROUS WASTE PERMIT APPLICATION

## INTERNAL DISTRIBUTION

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		S. M. Price	H4-57	
		L. L. Powers	B2-35	
		EDMC	H4-22	
		SMP LB	H4-57	

Attachments same as letter #9157000D.

