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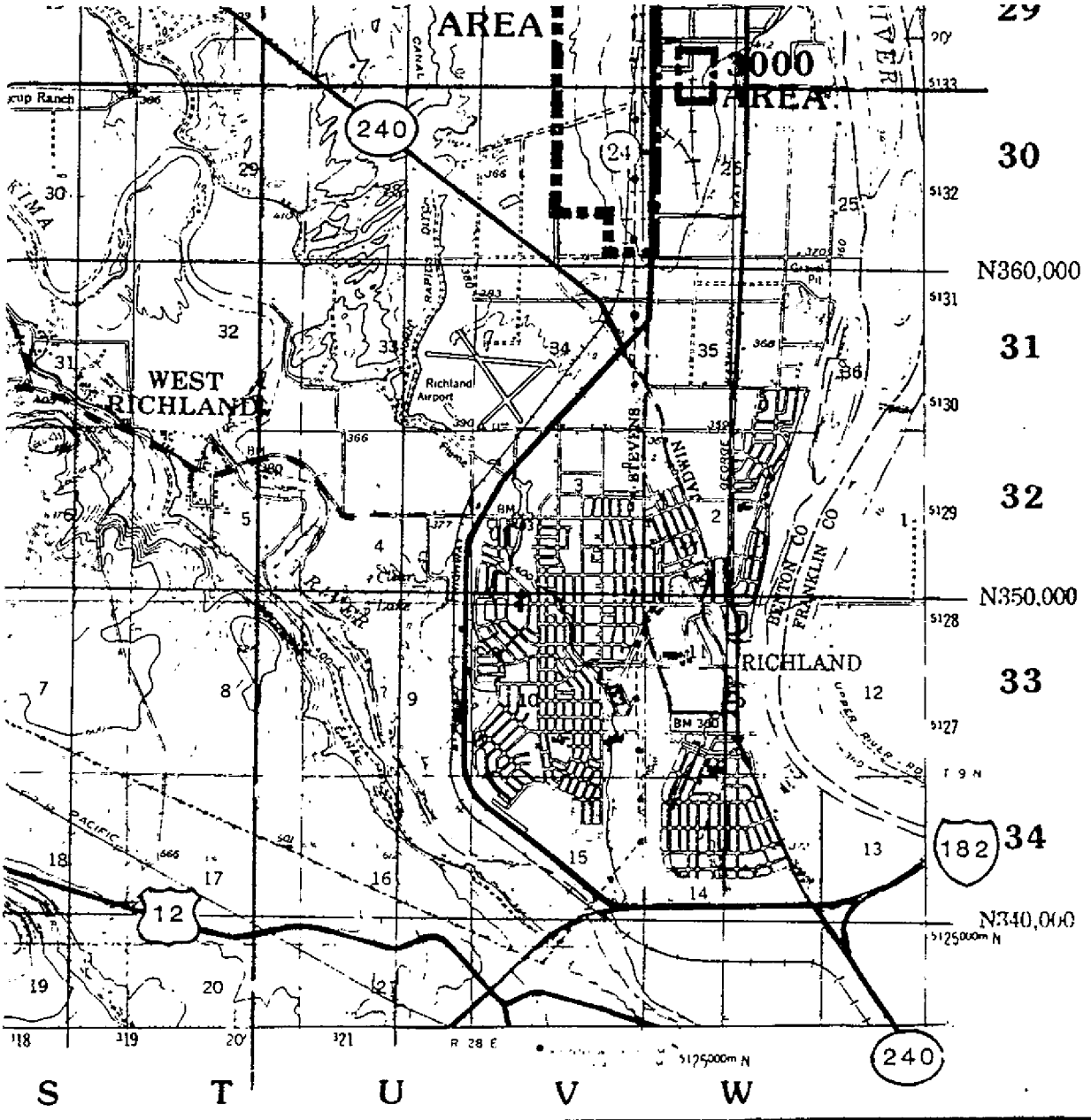
NOTICE OF INTENT FOR EXPANSION UNDER INTERIM STATUS

241-Z TREATMENT AND STORAGE TANKS HANFORD FACILITY, RICHLAND, WASHINGTON

FEB 1992

U.S. DEPARTMENT OF ENERGY,
DOE RICHLAND FIELD OFFICE

JANUARY 1992



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DRAWN K. D. JUNT	

U. S. Department of Energy
Richland Operations Office

Westinghouse Hanford Company

OVERALL HANFORD FACILITIES

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U.S. DEPARTMENT OF ENERGY
Richland Operations Office
Westinghouse Hanford Company

TOPOGRAPHIC MAP 241-Z TREATMENT STORAGE TANK

SIZE	BLDG NO	INDEX NO	DWG NO	REV
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NOTICE OF INTENT

FOR EXPANSION UNDER INTERIM STATUS

241-Z TREATMENT AND STORAGE TANKS
HANFORD FACILITY,
RICHLAND, WASHINGTON

U.S. DEPARTMENT OF ENERGY, DOE RICHLAND FIELD OFFICE

JANUARY 1992

CONTENTS

1.0 INTRODUCTION 1

2.0 FACILITY DESCRIPTION AND GENERAL PROVISIONS 1

2.1 LOCATION OF PROPOSED EXPANSION 2

2.2 DESCRIPTION OF WASTE MANAGEMENT UNIT TO BE EXPANDED 2

2.3 DESCRIPTION OF EXPANSION OF 241-Z TREATMENT AND STORAGE TANKS 3

2.4 COMPLIANCE WITH STATE ENVIRONMENTAL POLICY ACT 3

2.5 COMPLIANCE WITH SITING STANDARDS 3
2.5.1 Seismic Considerations 3
2.5.2 Floodplain Standard 4
2.5.3 Shoreline Standard 4
2.5.4 Sole Source Aquifer Criteria 4

3.0 TEN-YEAR NONCOMPLIANCE HISTORY 4

4.0 JUSTIFICATION OF NEED 5

5.0 IMPACT ON OVERALL CAPACITY AT THE HANFORD FACILITY AND THE STATE OF WASHINGTON 5

6.0 REFERENCES 6

APPENDICES

A HANFORD SITE MAPS . . . . . APP A-i

B STATE ENVIRONMENTAL POLICY ACT ENVIRONMENTAL CHECKLIST . . . . APP B-i

FIGURES

1. Hanford Site F-1
2. Location of the 241-Z Treatment and Storage Tanks F-2
3. 241-Z-Treatment and Storage Tanks. F-3
4. Columbia River Floodplain (probable maximum flood) F-4
5. Yakima River Floodplain F-5
6. Cold Creek Watershed Floodplain (probable maximum flood) F-6

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1.0 INTRODUCTION

The Washington State Department of Ecology (Ecology) *Dangerous Waste Regulations*, Washington Administrative Code (WAC) 173-303-281, requires that dangerous waste facility owners and/or operators submit a Notice of Intent (NOI) before submittal of a permit application for new or expanded dangerous waste management units on the Hanford Facility. The following information for this NOI is being filed with Ecology by the U.S. Department of Energy, DOE Richland Field Office (DOE-RL), the owner and operator. This NOI is to serve notice of the intent to expand the greater than 90-day storage capacity of the 241-Z Treatment and Storage Tanks (241-Z) on the Hanford Facility, Richland, Washington.

The 241-Z is a belowground liquid waste collection system containing five tanks in five separate concrete vaults (four of which are active) . These tanks are used for intermediate storage and neutralization of Plutonium Finishing Plant (PFP) liquid mixed waste. After neutralization, the waste is pumped to the 244-TX Double Contained Receiver Tank, then transferred to the 102-SY Tank for storage in the Double-Shell Tank System.

The 241-Z consists of five tanks and an overflow tank. These tanks are located in belowground concrete vaults. The 241-Z consists of storage tanks D-4, D-6, D-7, and D-8, and treatment and storage tank D-5. Tank D-6 has been isolated and taken out of service. The tanks have a storage capacity of 4,300 gallons (16,276 liters) each.

The following identifies the owner and operator of the Hanford Facility and the primary contact:

Owner and Operator: U.S. Department of Energy, DOE Richland Field Office

Manager, DOE Richland Field Office: Mr. John D. Wagoner

DOE Richland Field Office Contact: Mr. R. D. Izatt

Address: U.S. Department of Energy
DOE Richland Field Office
Post Office Box 550
Richland, Washington 99352

Telephone: (509) 376-5441

2.0 FACILITY DESCRIPTION AND GENERAL PROVISIONS

The Hanford Facility is defined as a single *Resource Conservation and Recovery Act* (RCRA) *of 1976* facility, identified by the EPA/State Identification Number WA7890008967, that consists of over 60 treatment, storage, and/or disposal (TSD) units conducting dangerous waste management activities. These TSD units are included in the *Hanford Facility Dangerous*

Waste Part A Permit Application (DOE-RL 1988b). The Hanford Facility consists of the contiguous portion of the Hanford Site that contains these TSD units and, for the purposes of RCRA, is owned and operated by the U.S. Department of Energy (excluding lands north and east of the Columbia River, river islands, state owned or leased lands, lands owned by the Bonneville Power Administration, lands leased to the Washington Public Power Supply System, and the Ashe Substation). The Hanford Facility is a single site for purposes of provisions regulating 'offsite' or 'onsite' waste handling.

The following sections provide a description of the expanded treatment and storage capacity of the 241-Z, along with other general provisions specified in WAC 173-303-281.

2.1 LOCATION OF PROPOSED EXPANSION

The 241-Z is located in the PFP Complex in the 200 West Area of the Hanford Facility, Benton County, Washington. Small-scale maps depicting the Hanford Facility and the location of the 241-Z are provided in Figures 1, 2, and 3. A large-scale map and a topographic map, which meet the 1-inch-(2.54-centimeter-) equals-not-more-than-200-feet (61 meters) requirement, are provided in Appendix A and include the following:

- Overall Hanford Facility (H-6-958)

- Topographic map of the 241-Z (H-13-000016), including surrounding 1,000 feet (305 meters). There are no existing or planned injection or withdrawal wells in the vicinity of the 241-Z. There are no barriers planned for drainage or flood control at the 241-Z.

2.2 DESCRIPTION OF WASTE MANAGEMENT UNIT TO BE EXPANDED

The 241-Z is located in the southeastern corner of the PFP Complex. The 241-Z contains five stainless steel tanks (Figure 3) that are located in belowground concrete vaults--tanks D-4, D-5, D-6, D-7, and D-8 [4,300 gallons (16,276 liters) each]. Tanks D-4, D-7, and D-8 are used primarily for storage of various PFP waste. Tank D-4 receives aqueous waste from processes and laboratories in the PFP Complex. Waste transferred to tank D-4 includes steam condensate from the 236-Z plutonium product and filtrate concentrators, filtrate evaporator overheads, and the 234-5Z 26-inch vacuum pump water seal. The waste from tank D-4 is batch transferred to tank D-7 for sampling and analysis to determine the composition of the waste. Tank D-8 receives aqueous waste from the 236-Z solvent extraction process. This waste is sampled and analyzed to determine the composition before transfer to tank D-5. Tank D-6 has been isolated and taken out of service.

Tank D-5 is used as a treatment tank to neutralize the waste before transfer to the Double-Shell Tank System. Tanks D-4, D-7, and D-8 are used for primary and backup storage of liquid mixed waste from the PFP Complex. The liquid mixed waste is transferred from tanks D-4, D-7, and D-8 to tank D-5 for treatment and storage before transfer to the Double-Shell Tank System.

The liquid mixed waste is treated in tank D-5 with sodium hydroxide, ferric nitrate, and sodium nitrite. Sodium hydroxide raises the free hydroxide ion concentration of the treated liquid to greater than 1.5 molar. Ferric nitrate solution is added to provide 1 percent stable solids. Sodium nitrite is added to inhibit corrosion. This treatment process makes the liquid mixed waste more amenable for storage in the Double-Shell Tank System.

2.3 DESCRIPTION OF EXPANSION OF 241-Z TREATMENT AND STORAGE TANKS

The mission of the 241-Z was originally for treatment and less-than-90-day storage of liquid mixed waste from the PFP Complex. Because of the historical delays in transferring the liquid mixed waste to the Double-Shell Tank System, storage of the liquid mixed waste in the storage tanks could be longer than 90 days.

The total expansion of the process design capacity for the storage of liquid mixed waste in tanks D-4, D-5, D-7, and D-8 is 17,200 gallons (65,102 liters).

2.4 COMPLIANCE WITH STATE ENVIRONMENTAL POLICY ACT

The *State Environmental Policy Act of 1971* Environmental Checklist is provided as Appendix B.

2.5 COMPLIANCE WITH SITING STANDARDS

The demonstration of compliance with the siting criteria as required under WAC 173-303-282(6) and (7) are addressed in Appendix B, Sections B.1., B.2., and B.3. The following provides additional compliance information on siting requirements.

2.5.1 Seismic Considerations

The 241-Z is located in Benton County, Washington, and has been identified as being in Zone 2B in accordance with the *Uniform Building Code* (ICBO 1991). An integrity assessment for seismic considerations will be performed as detailed in the *241-Z Plutonium Finishing Plant Aqueous Waste Disposal Facility Tank System Integrity Assessment Plan* (WHC 1991) by December 31, 1992. The integrity assessment will verify that the storage tanks, vault structure, and associated piping leading to and from the tanks are adequate to resist a seismic event as defined in the *Hanford Plant Standards, Standards Design Criteria - 4.1* (DOE-RL 1988a). This plant standard provides seismic load criteria specific for the Hanford Facility.

2.5.2 Floodplain Standard

Three sources of potential flooding of the area were considered: (1) the Columbia River, (2) the Yakima River, and (3) storm-induced run-off in ephemeral streams draining the Hanford Facility. No perennial streams occur in the central part of the Hanford Facility.

The Federal Emergency Management Agency has not prepared floodplain maps for the Columbia River through the Hanford Facility. The flow of the Columbia River is largely controlled by several upstream dams that are designed to reduce major flood flows. Based on a U.S. Army Corps of Engineers study of the flooding potential of the Columbia River that considered historical data and water storage capacity of the dams on the Columbia River (COE 1969), the U.S. Department of Energy (ERDA 1976) has estimated the probable maximum flood (Figure 4). The estimated probable maximum flood would have a larger floodplain than either the 100- or 500-year floods. The 241-Z is well above the elevation of the Columbia River probable maximum flood and, therefore, is not within the 100- or 500-year floodplain.

The 100-year floodplain for the Yakima River, as determined by the Federal Emergency Management Agency (FEMA 1980), is shown in Figure 5. The 241-Z is not within the floodplain.

The only other potential source of flooding of the 241-Z is run-off from a large precipitation event in the Cold Creek watershed. This event could result in flooding of the ephemeral Cold Creek. Skaggs and Walters (1981) have given an estimate of the probable maximum flood using conservative values of precipitation, infiltration, surface roughness, and topographic features. The resulting flood area (Figure 6) would not affect the 241-Z. The 100-year flood would be less than the probable maximum flood.

2.5.3 Shoreline Standard

The 241-Z is not located within regulated 'shorelines' of the state or 'wetlands' as defined by the *Shoreline Management Act of 1971*.

2.5.4 Sole Source Aquifer Criteria

The 241-Z is not located over one of the sole source aquifers of Washington as defined in Section 1424(e) of the *Safe Drinking Water Act of 1974*.

3.0 TEN-YEAR NONCOMPLIANCE HISTORY

The U.S. Department of Energy, DOE Richland Field Office has not received any Notice of Noncompliance since the 222-S Laboratory Complex--219-S Waste Handling Facility NOI was filed in November 1991.

4.0 JUSTIFICATION OF NEED

In May 1989, the U.S. Department of Energy along with Ecology and the U.S. Environmental Protection Agency (EPA) formally entered into an agreement known as the *Hanford Federal Facility Agreement and Consent Order* (Tri-Party Agreement) (Ecology et al. 1990) for the purpose of the Hanford Facility gaining compliance with federal, state, and local laws concerning the management of waste. The operation of 241-Z supports Tri-Party Agreement milestones by providing a means to identify waste constituents and prepare the waste for treatment and transfer within the Hanford Facility. Included within the Tri-Party Agreement are milestones for the environmental restoration and waste stabilization on the Hanford Facility.

Because of the possible delays in transferring the liquid mixed waste to the Double-Shell Tank System, it is imperative that the expansion of the storage capacity of the 241-Z be approved.

5.0 IMPACT ON OVERALL CAPACITY AT THE HANFORD FACILITY AND THE STATE OF WASHINGTON

The current capacity for the storing, treating, and/or disposing of liquid mixed waste is limited within Washington State and the Hanford Facility. The operation of the 241-Z provides the means to treat and store the liquid mixed waste retrieved from various PFP operations, and will comply with regulations on mixed waste.

6.0 REFERENCES

COE, 1969, *Lower Columbia River Standard Project Flood and Probable Maximum Flood*, U.S. Army Corps of Engineers, North Pacific Division, Portland, Oregon.

DOE-RL, 1988a, "Design Load for Structures," HPS-SDC-4.1, Revision 11, *Hanford Plant Standards*, U.S. Department of Energy-Richland Operations Office, Richland Washington.

DOE-RL, 1988b, *Hanford Facility Dangerous Waste Part A Permit Application*, DOE/RL-88-21, Vols. 1-3, U.S. Department of Energy-Richland Operations Office, Richland, Washington.

Ecology, 1991, *Dangerous Waste Regulations*, Washington Administrative Code, Chapter 173-303, Washington State Department of Ecology, Olympia, Washington.

Ecology, EPA, and DOE, 1990, *Hanford Federal Facility Agreement and Consent Order*, Vols. 1 and 2, as amended, Washington State Department of Ecology, U.S. Environmental Protection Agency, U.S. Department of Energy, Olympia, Washington.

ERDA, 1976, *Evaluation of Impact of Potential Flooding Criteria on the Hanford Project*, RLO-76-4, U.S. Energy Research and Development Administration-Richland Operations Office, Richland, Washington.

FEMA, 1980, *Flood Insurance Study: Benton County Washington*, Federal Emergency Management Agency, Federal Insurance Administration, Washington, D.C.

ICBO, 1991, *Uniform Building Code*, International Conference of Building Officials, Whittier, California.

Safe Drinking Water Act of 1974, as amended, 42 USC 300f et seq.

Shoreline Management Act of 1971, Revised Code of Washington, Chapter 90.58.101 et seq., Olympia, Washington.

Skaggs, R.L. and W.H. Walters, 1981, *Flood Risk Analysis of Cold Creek Near the Hanford Site*, PNL-4219, Pacific Northwest Laboratory, Richland, Washington.

State Environmental Policy Act of 1976, 42 USC 4321

WHC, 1991, *241-Z Plutonium Finishing Plant Aqueous Waste Disposal Facility Tank System Integrity Assessment Plan*, WHC-SD-CW-DP-011, Revision 0, Westinghouse Hanford Company, Richland, Washington.

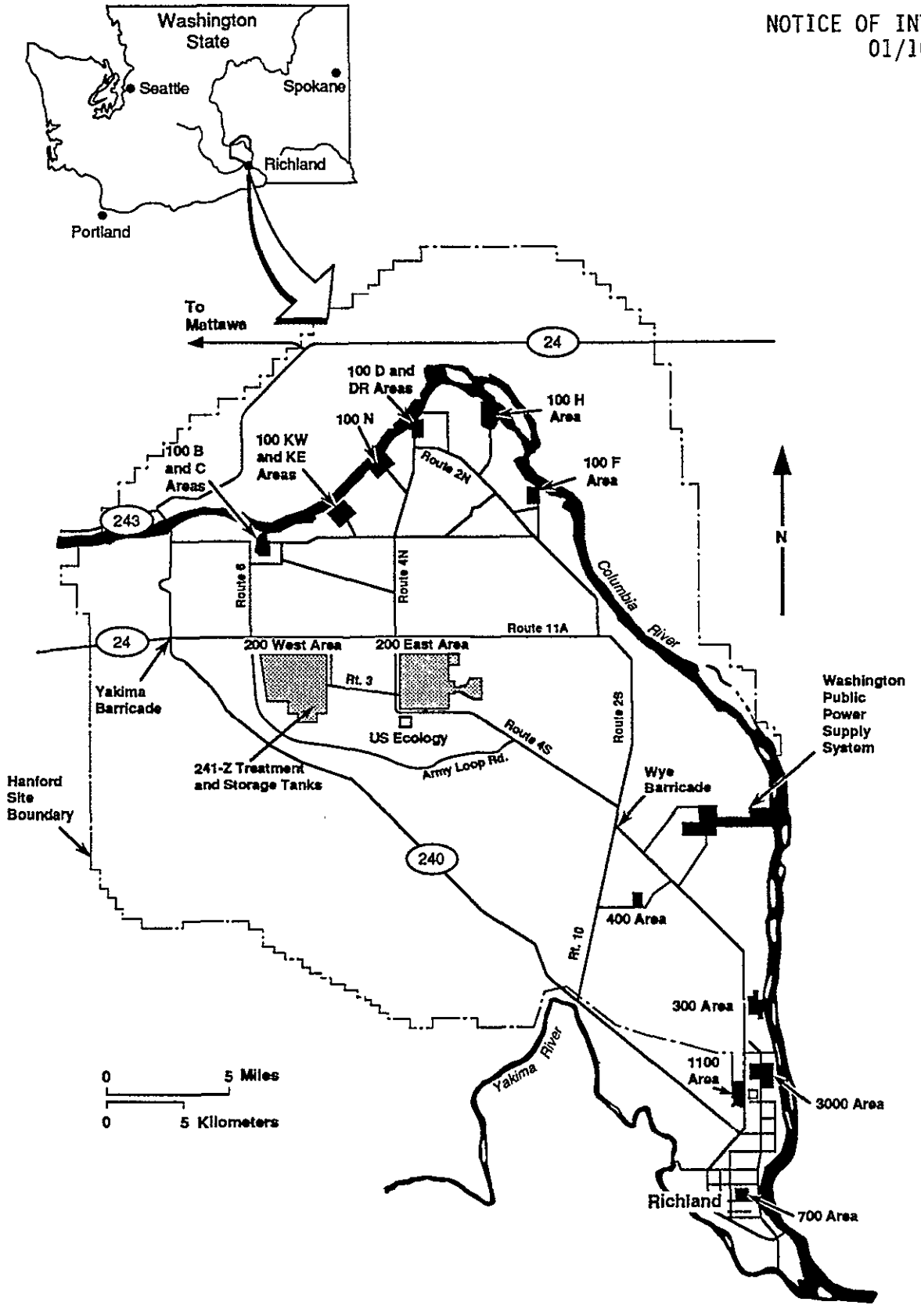

Figure 1. Hanford Site.

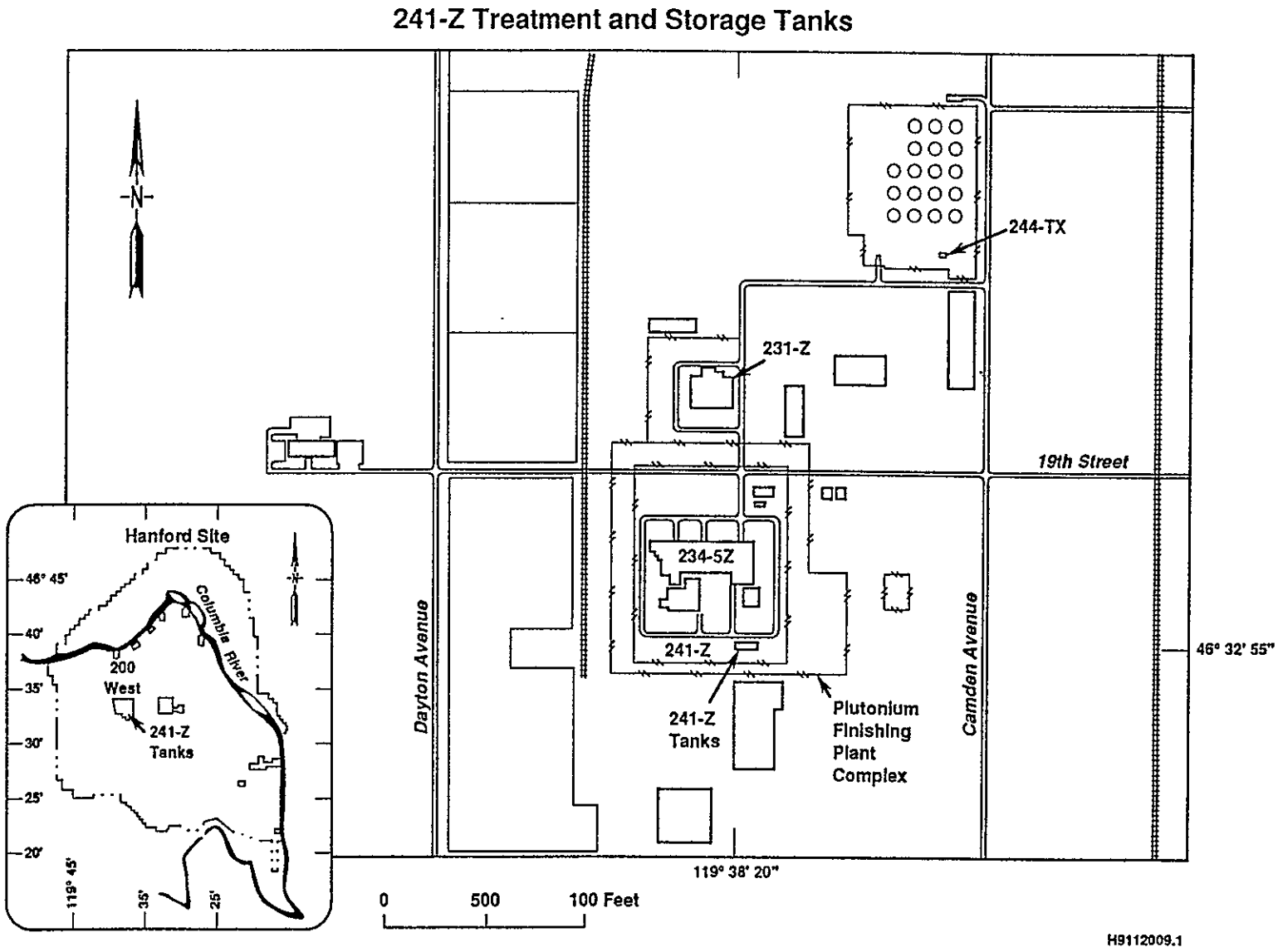

Figure 2. Location of the 241-Z Treatment and Storage Tanks.

Cutaway View of the 241-Z Building

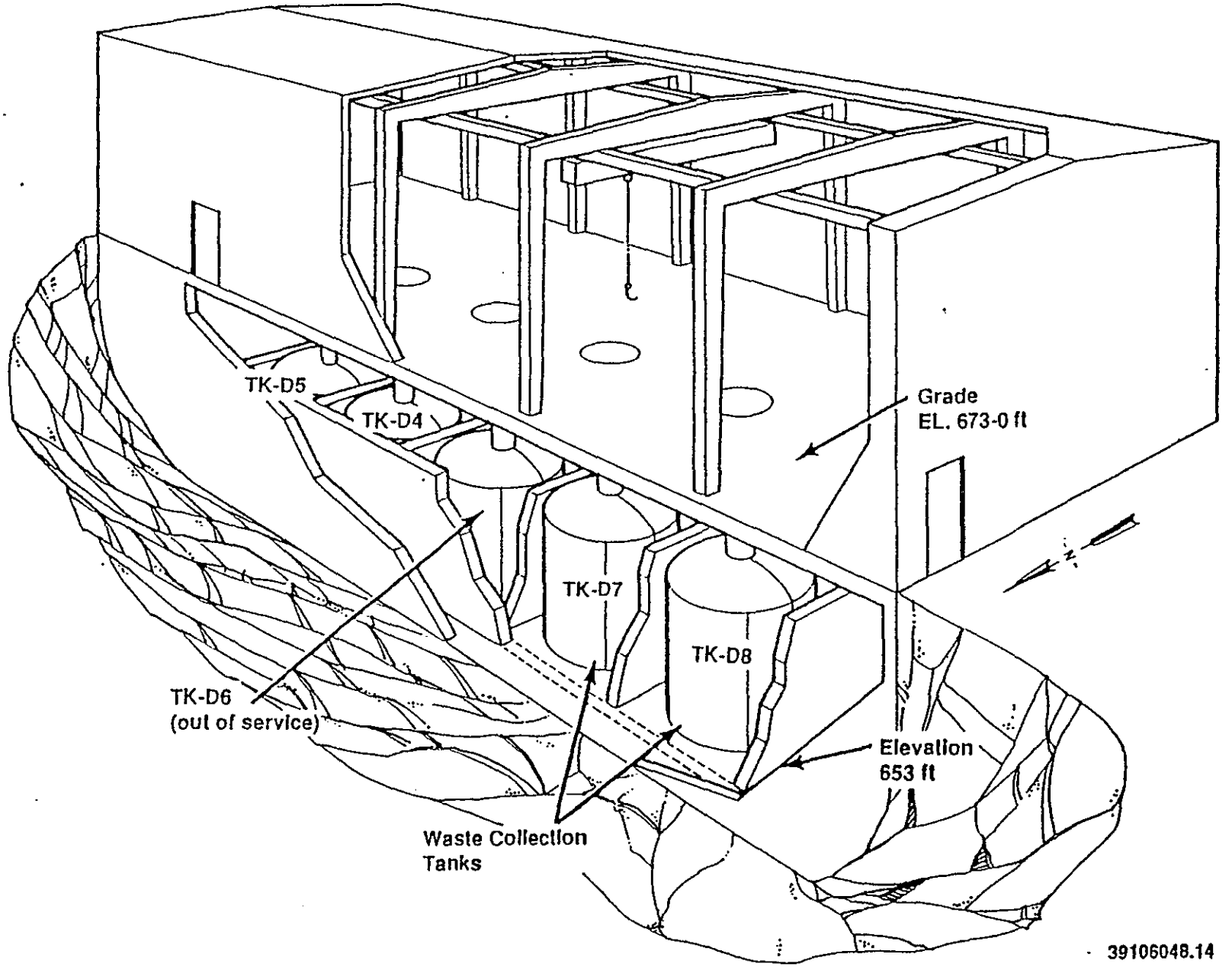

Figure 3. The 241-Z Treatment and Storage Tanks.

NOTICE OF INTENT
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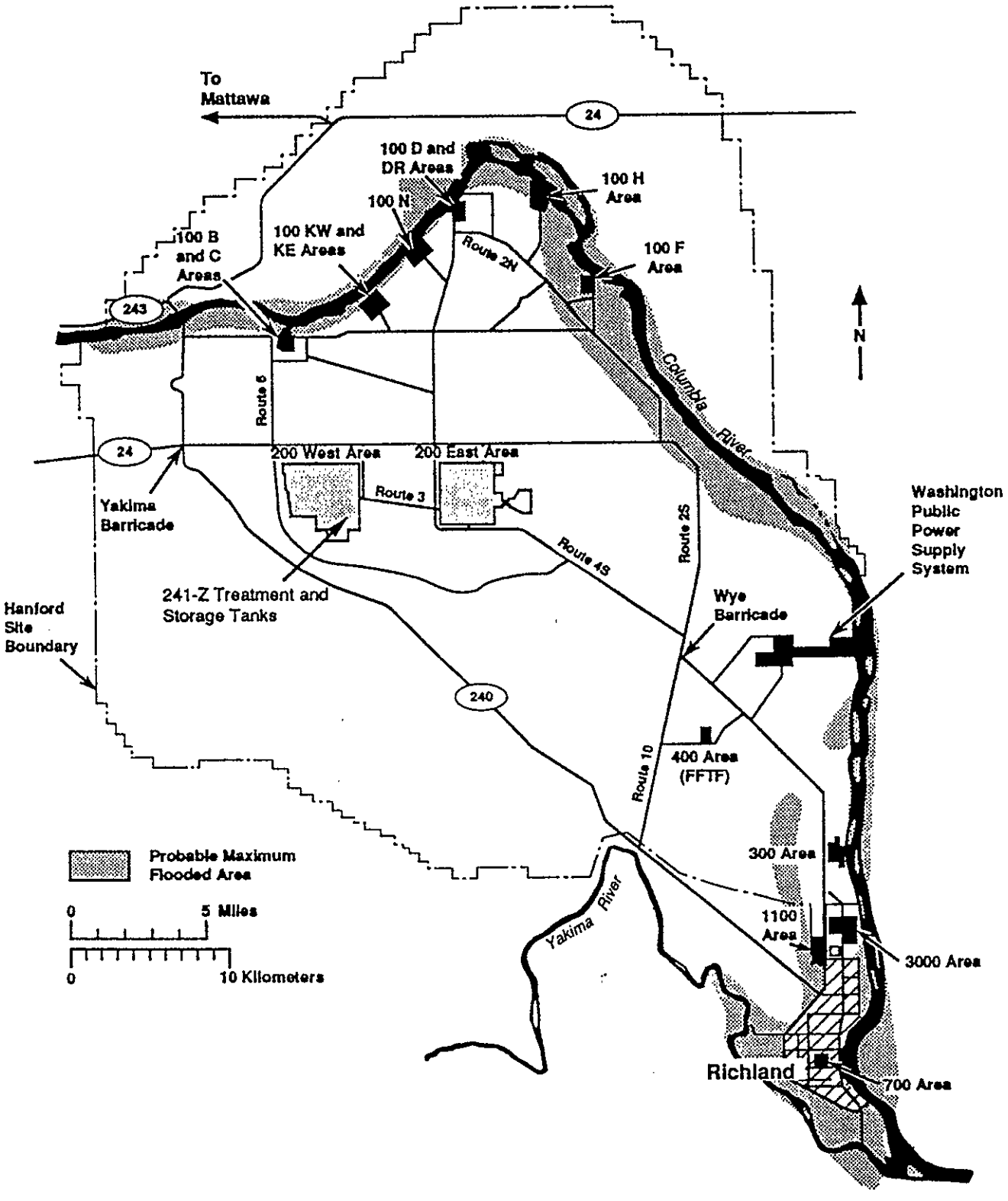

Figure 4. Columbia River Floodplain.

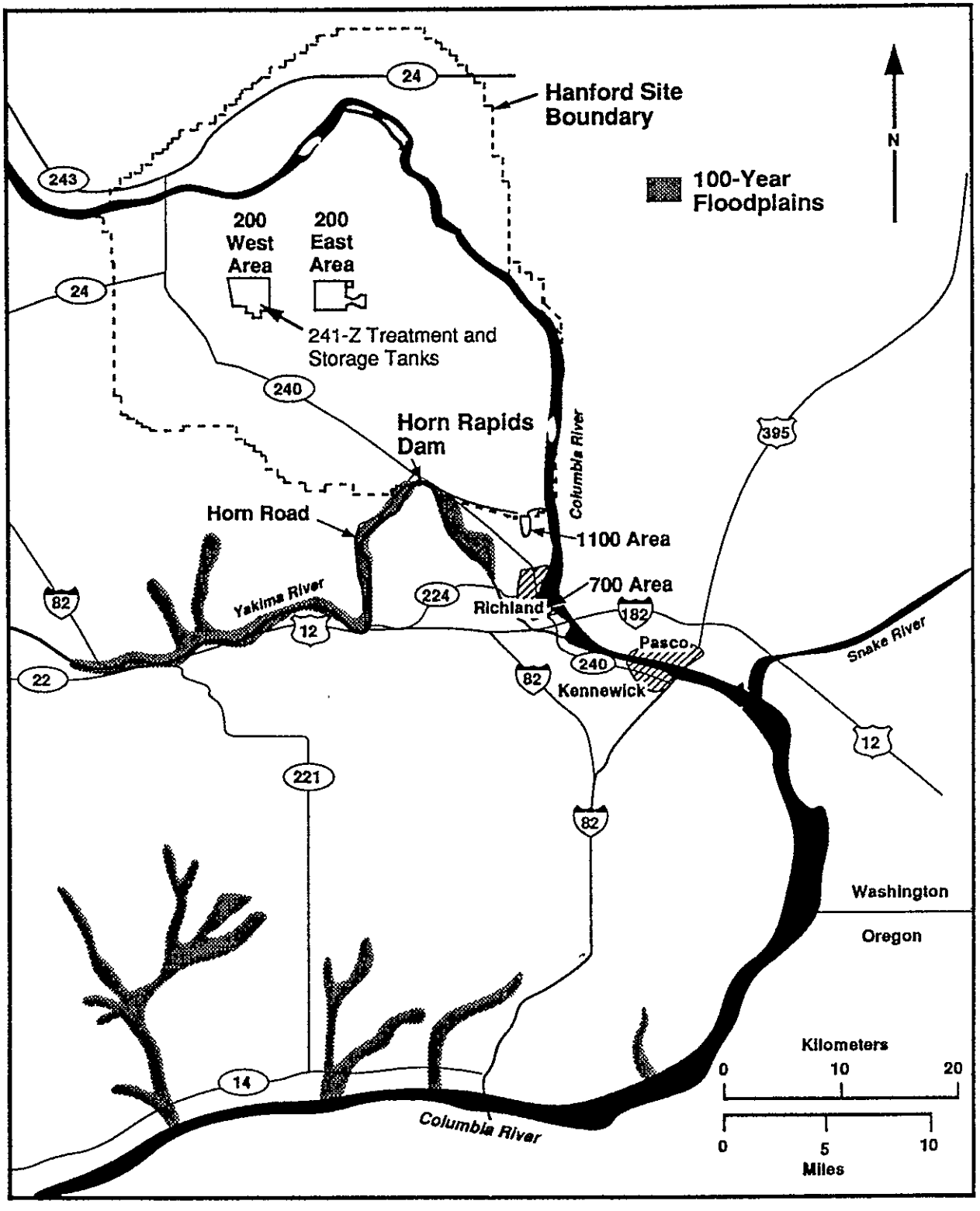

Figure 5. Yakima River Floodplain.

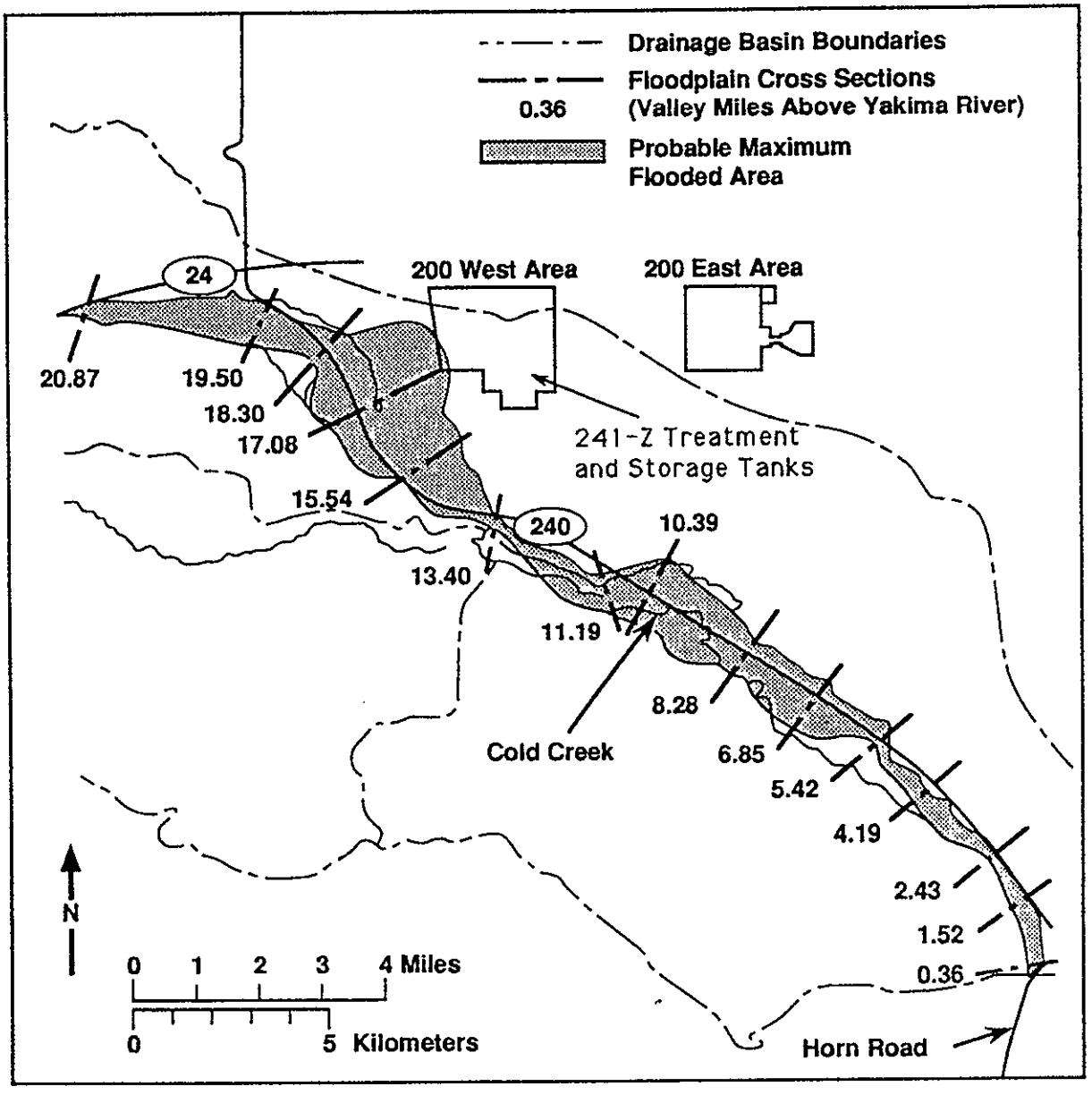

Figure 6. Cold Creek Watershed Floodplain.

APPENDIX A

HANFORD SITE MAPS

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APPENDIX B

STATE ENVIRONMENTAL POLICY ACT ENVIRONMENTAL CHECKLIST

This environmental checklist covers the entire 241-Z. This environmental checklist is being submitted concurrently with the *Notice of Intent for Expansion Under Interim Status for the 241-Z Treatment and Storage Tanks*, in accordance with Washington Administrative Code 173-303-281(3)(a)(v).

STATE ENVIRONMENTAL POLICY ACT (SEPA)

ENVIRONMENTAL CHECKLIST

FOR

241-Z TREATMENT AND STORAGE TANKS

REVISION 0

JANUARY 10, 1992

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

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A. BACKGROUND

1. Name of proposed project, if applicable:

   241-Z Treatment and Storage Tanks (241-Z) storage capacity expansion.

2. Name of applicants:

   U.S. Department of Energy, DOE Richland Field Office (RL); and Westinghouse Hanford Company

3. Address and phone number of applicants and contact persons:

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

   Westinghouse Hanford Company
   P.O. Box 1970
   Richland, Washington 99352

   Contact Persons:

   R. D. Izatt, Program Manager
   Office of Environmental Assurance, Permits and Policy
   (509) 376-5441

   R. E. Lerch, Manager
   Environmental Division
   (509) 376-5556

4. Date checklist prepared:

   January 10, 1992

5. Agency requesting checklist:

   Washington State
   Department of Ecology
   Mail Stop PV-11
   Olympia, Washington 98504-8711

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

   A Notice of Intent (NOI) is being submitted in accordance with Washington Administrative Code 173-303-281 "Notice of Intent," Section (2) Item (c) for expansion of the design capacity of the 241-Z. The NOI will be submitted to Washington State Department of Ecology (Ecology) by January 31, 1992.

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

Future activities related to this proposal are the proposed replacement of the existing interconnecting transfer lines between the 236-Z, 234-5Z, and 241-Z Buildings; replacement of the 241-Z tanks, piping, equipment, and operating controls systems; and refurbishing the 241-Z vaults and installing vault liners.

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

This SEPA Checklist is being submitted to Ecology concurrently with the NOI for the 241-Z. The Dangerous Waste Part B Permit Application for the 241-Z will be submitted to Ecology by June 30, 1995.

Environmental information on the Hanford Site, in general, can be found in the following references: (1) *Final Environmental Impact Statement - Disposal of Hanford Defense High-Level, Transuranic and Tank Wastes*, DOE/EIS-0113 (U.S. Department of Energy, 1987, Richland, Washington), (2) *Hanford Site National Environmental Policy Act* (NEPA) *Characterization*, PNL-6415 (Revision 4, Pacific Northwest Laboratory, 1991, Richland, Washington).

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

No other proposals are pending.

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

The Dangerous Waste Part B Permit Application for the 241-Z will be submitted to Ecology by June 30, 1995.

11. Give brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page.

This SEPA Checklist is for the 241-Z located within the Plutonium Finishing Plant Complex (PFP Complex) in the 200 West Area of the Hanford Facility, Richland, Washington. The proposed action is to permit existing tanks D-4, D-7, and D-8 in the 241-Z for storing liquid mixed waste for longer than 90 days before being transferred to the Double-Shell Tank System.

The 241-Z consists of five belowground tanks in concrete vaults in which liquid mixed waste from the PFP Complex can be received, treated, and stored. After treatment, the liquid mixed waste is transferred to the Double-Shell Tank System.

The 241-Z, which consists of five tanks in five separate covered cells beneath a corrugated metal structure, is used to store liquid mixed waste. Tank D-5 currently operates under interim status. Tank D-6 has been isolated and taken out of service. The remaining tanks operate under generating unit status. At the end of the operational life, this area will be clean closed. All liquid mixed waste and liquid mixed waste constituents could be removed to background or health and environmental based standards. If clean closed, postclosure monitoring will not be needed.

12. Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist.

The 241-Z is located south of 19th Street, east of Dayton Avenue and west of Camden Avenue in the 200 West Area, which is approximately 30 miles (48 kilometers) north of the city of Richland, Washington. A map and site plans are included with the NOI. The section, township, and range are as follows: Section 1, T12N, R25E.

B. ENVIRONMENTAL ELEMENTS

1. **Earth**

a. General description of the site (circle one): Flat, rolling, hilly, steep slopes, mountainous, other_____.

Flat.

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

The approximate slope of the land at the site of the 241-Z is less than two percent.

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

The soil at the site consists of compacted sand and gravel fill material underlain by sandy gravel with excellent drainage characteristics. No farming is permitted on the Hanford Site.

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

No, there has been no history of unstable soils or subsidence in the area of this waste management unit.

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

No fill or grading will be required.

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

No clearing or construction are required. Erosion will not occur.

g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings).

The existing building will not have any additional surface area covered by construction of any kind.

h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any:

No impacts expected.

2. **Air**

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

Because the 241-Z Building is an existing waste management unit, no construction will be done at this time. Approximate quantities of air emissions from the 241-Z stack are given in documentation titled *Calendar Year 1990 Air Emissions Report for the Hanford Site* (DOE-RL 1991).

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

No.

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

None at this time.

3. **Water**

a. **Surface**

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

There is no surface water body on or in the immediate vicinity of the 241-Z. Two intermittent streams traverse through the Hanford Site. These are Cold Creek and Dry Creek. Water drains through these creeks during the wetter winter and spring months. No perennial streams originate within the Pasco Basin. Primary surface-water features associated with the Hanford Site are the Columbia and Yakima Rivers, and their major tributaries, the Snake and Walla Walla Rivers. West Lake, about 10 acres (4.05 hectares) in size and less than 3 feet (0.9 meter) deep, is the only natural lake within the Hanford Site. Waste water ponds, cribs, and ditches associated with nuclear fuel reprocessing and waste disposal activities also are present on the Hanford Site.

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

No.

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

No fill or dredge material will be required.

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

No surface water will be affected by the addition of treatment and/or storage capacity of the 241-Z.

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

The 241-Z Building does not lie within a 100-year floodplain.

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

There will be no discharge to surface waters.

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.

Groundwater will not be affected.

2) Describe waste material that will be discharged into the ground from septic 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.

Waste material will not be discharged into the ground.

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.

The Hanford Site has a mild desert climate and receives only 6 to 7 inches (15 to 18 centimeters) of annual precipitation. Any precipitation that occurs at the site will run off the existing buildings and seep into the soil on and near the site. No run-off will enter surface waters.

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

No waste materials are expected to enter ground or surface waters.

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

No surface, ground, or run-off water impacts are expected.

4. Plants

a. Check or circle the types of vegetation found on the site.

____ deciduous tree: alder, maple, aspen, other
____ evergreen tree: fir, cedar, pine, other
_x_ shrubs
_x_ grass
___ pasture
___ crop or grain
___ wet soil plants: cattail, buttercup, bulrush, skunk cabbage, other
___ water plants: water lily, eelgrass, milfoil, other
_x_ other types of vegetation

Small amounts of forbes and grasses might be seasonally present.

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

No vegetation will be removed or altered.

c. List threatened or endangered species known to be on or near the site.

None. Additional information on the Hanford Site environment can be found in the environmental document referred to in the answer to Checklist Question A.8.

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

None at this time.

5. Animals

a. Circle any birds and animals which have been observed on or near the site or are known to be on or near the site:

birds: hawk, heron, eagle, <u>songbirds, other</u>:
mammals: deer, bear, elk, beaver, other:
fish: bass, salmon, trout, herring, shellfish, other:

Starlings, pigeons, and lagomorphs have been observed near the site. Additional information on the Hanford Site environment can be found in the environmental document referenced in the answer to Checklist Question A.8.

b. List any threatened or endangered species known to be on or near the site.

The bald eagle, peregrine falcon, American white pelican, sandhill crane, pygmy rabbit, and the ferruginous hawk are sometimes seen on the Hanford Site but are not known to reside in the vicinity of the 241-Z Building. Additional information concerning endangered and

threatened species on the Hanford Site can be found in the environmental document referred to in the answer to Checklist Question A.8.

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

No: however, the Columbia River, which is 10 miles (16 kilometers) away, is part of the broad Pacific Flyway for waterfowl migration. Other birds also migrate along the Columbia River.

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

None at this time.

6. **Energy and Natural Resources**

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

Electricity is used to provide heating, ventilation, and lighting and to operate the 241-Z Building.

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

No.

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

None.

7. **Environmental Health**

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

Possible environmental health hazards from waste treatment and storage activities at the 241-Z could come from incompatible waste, accidental spills, radiation exposure, or a criticality incident.

1) Describe special emergency services that might be required.

Hanford Facility security, fire response, and ambulance services are on call at all times in the event of an onsite emergency.

2) Proposed measures to reduce or control environmental health hazards, if any:

The 241-Z treats and stores liquid mixed waste before transfer to the Double-Shell Tank System. All personnel are trained to follow proper procedures during these operations to minimize exposure to dangerous waste. The 241-Z has systems for ventilation, radiation monitoring, and fire protection, including alarms.

b. Noise

1) What type of noise exists in the area which may affect your project (for example: traffic, equipment, operation, other)?

None.

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

On a long-term basis, minor amounts of noise from equipment are expected during operating hours.

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

Vehicles and equipment meet manufacturer's requirements for noise suppression. Employees are trained in the use of ear protection equipment.

8. **Land and Shoreline Use**

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

The 241-Z is part of the PFP Complex, located in the 200 West Area of the U.S. Government-owned Hanford Site. The PFP Complex is used for the management of waste associated with the cleanup from past and/or present production of special nuclear materials and energy research. Commercial activities on the Hanford Site include a nuclear power plant and a state of Washington administered low-level burial area operated by U.S. Ecology. The portion of the Hanford Site within the town of Richland is adjoined by city government, park, and commercial property.

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

No part of the Hanford Site, including the 241-Z Building, has been used for agricultural purposes since 1943.

c. Describe any structures on the site.

The 241-Z Building is 20 feet (6.1 meters) wide, 92 feet (28.1 meters) long, and 24 feet (7.3 meters) high and is constructed of pre-engineered corrugated metal. The 241-Z Building covers a belowground liquid waste collection system. The building houses the ventilation filter enclosures and instrument racks, and provides weather protection for the belowground tanks.

The 241-Z has five tanks in which liquid mixed waste can be received, treated, and stored. The treated mixed waste is transferred to the Double-Shell Tank System.

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

No structures will be demolished.

e. What is the current zoning classification of the site?

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

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

The 1985 Benton County Comprehensive Land Use Plan designates the Hanford Site as the "Hanford Reservation". Under this designation, land on the Hanford Site may be used for "activities nuclear in nature." Nonnuclear activities are authorized "if and when DOE approval for such activities is obtained."

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

Does not apply.

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

No part of the 241-Z Building or adjacent grounds has been classified as environmentally sensitive.

i. Approximately how many people would reside or work in the completed project?

No workers will reside in the waste management unit. However, it has been estimated that approximately one worker year of effort generally will be required to monitor the 241-Z Building, perform periodic maintenance, and handle waste transfers.

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

None.

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

Does not apply.

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

None

9. **Housing**

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

None.

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

None.

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

Does not apply.

10. **Aesthetics**

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

No construction is proposed.

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

None.

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

None.

11. **Light and Glare**

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

None.

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

No.

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

None.

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

Does not apply.

12. **Recreation**

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

None.

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

No.

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

Does not apply.

13. **Historic and Cultural Preservation**

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

No places or objects listed on, or proposed for, national, state, or local preservation registers are known to be on or next to the 241-Z Building. Additional information on the Hanford Site environment can be found in the environmental document referred to in the answer to Checklist Question A.8.

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

There are no known archaeological, historical, or Native American religious sites on or next to the 241-Z Building. Additional information on the Hanford Site environment can be found in the environmental document referenced in the answer to Checklist Question A.8.

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

Does not apply.

14. **Transportation**

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

Does not apply.

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

The 241-Z is not served by public transit. The nearest public transit is 30 miles (48.3 kilometers) away.

c. How many parking spaces would the completed project have? How many would the project eliminate?

Not applicable.

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

No new roads or improvements to existing roads are required.

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

No.

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

None.

g. Proposed measures to reduce or control transportation impacts, if any:

None.

15. **Public Services**

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

No.

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

Does not apply.

16. **Utilities**

a. List utilities currently available at the site: electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system, other:

Electricity, telephone, and water and steam.

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

No additional utilities are proposed.

SIGNATURES

The answers are true and complete to the best of my knowledge. We understand that the lead agency is relying on them to make its decision.

R. D. Izatt, Program Manager
Office of Environmental Assurance,
Permits and Policy
U.S. Department of Energy
DOE Richland Field Office

1/30/92
Date

R. E. Lerch, Manager
Environmental Division
Westinghouse Hanford Company

1-30-92
Date

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