START

0037775

9413279.1308

NOTICE OF INTENT FOR EXPANSION UNDER INTERIM STATUS

HANFORD FACILITY, WASTE RECEIVING AND PROCESSING (MODULES 1, 2A, AND 2B) RICHLAND, WASHINGTON

AUG 1994
RECEIVED
EDMC

U.S. DEPARTMENT OF ENERGY,
RICHLAND OPERATIONS OFFICE

AUGUST 1994

THIS PAGE INTENTIONALLY
LEFT BLANK

CONTENTS

1.0 INTRODUCTION 1

2.0 FACILITY DESCRIPTION AND GENERAL PROVISIONS 1
2.1 LOCATION OF PROPOSED EXPANSION 2
2.2 DESCRIPTION OF UNIT TO BE EXPANDED 2
2.2.1 Waste Receiving and Processing Module 1 (Building 2336-W) 2
2.2.2 Waste Receiving and Processing Module 2A (Building 2337-W) 5
2.2.3 Waste Receiving and Processing Module 2B 6
2.3 DESCRIPTION OF EXPANSION AT WASTE RECEIVING AND PROCESSING 6
2.4 COMPLIANCE WITH STATE ENVIRONMENTAL POLICY ACT 6
2.5 COMPLIANCE WITH SITING STANDARDS 6
2.5.1 Criteria for Elements of the Natural Environment 7
2.5.2 Criteria for Elements of the Built Environment 9

3.0 TEN-YEAR COMPLIANCE HISTORY 11

4.0 JUSTIFICATION OF NEED 11

5.0 IMPACT ON OVERALL CAPACITY AT THE HANFORD FACILITY AND THE STATE OF WASHINGTON 11

6.0 REFERENCES 11
6.1 DOCUMENTS 11
6.2 FEDERAL AND STATE ACTS 13
6.3 REVISED CODE OF WASHINGTON AND WASHINGTON ADMINISTRATIVE CODE 13
6.4 U.S. DEPARTMENT OF ENERGY ORDERS 13

APPENDICES

A LOCATION MAPS . . . . . APP A-i

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

C SUMMARY OF NOTICES OF COMPLIANCE VIOLATIONS AND THE U.S. DEPARTMENT OF ENERGY, RICHLAND OPERATIONS OFFICE RESPONSES . . . . . APP C-i

9413279.1309

FIGURES

1. Hanford Site Map F-1
2. 200 Area West Partial Site Plan Referencing Location of Waste Receiving and Processing F-2
3. Waste Receiving and Processing Module 1 Floor Plan F-3
4. Plan - Upper Level F-4
5. Columbia River Floodplain F-5
6. Yakima River Floodplain F-6
7. Cold Creek Watershed Floodplain F-7

9413279.1310

1.0 INTRODUCTION

The Washington State Department of Ecology (Ecology) *Dangerous Waste Regulations*, Washington Administrative Code (WAC) 173-303-281, require 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 treatment, storage, and/or disposal (TSD) units on the Hanford Facility. The following information for this NOI is being filed with Ecology by the U.S. Department of Energy, Richland Operations Office (DOE-RL), the owner and operator.

This document is to serve notice of the intent to add greater than 90-day container storage as an additional process to Waste Receiving and Processing located in the 200 West Area of the Hanford Facility, Richland, Washington.

The ability to treat and store dangerous waste in tanks is being added to ensure compliance with treatment requirements and greater than 90-day accumulation requirements of WAC 173-303 and the *Resource Conservation and Recovery Act* (RCRA) *of 1976*, as amended.

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

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

Manager, Richland Operations Office: Mr. John D. Wagoner

Richland Operations Office Contact: Mr. J. E. Rasmussen

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

Telephone: (509) 376-5441

2.0 FACILITY DESCRIPTION AND GENERAL PROVISIONS

The Hanford Facility is a single RCRA facility identified by the U.S. Environmental Protection Agency (EPA)/State Identification Number WA7890008967 that consists of over 60 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 all contiguous land, and structures, other appurtenances, and improvements on the land, used for recycling, reusing, reclaiming, transferring, storing, treating, or disposing of dangerous waste, which, for

the purposes of the RCRA, are owned by the U.S. Government and operated by the DOE-RL (excluding lands north and east of the Columbia River, river islands, lands owned or used by the Bonneville Power Administration, lands leased or under lease obligation to the Washington Public Power Supply System, and lands owned by or leased to the state of Washington).

The following sections provide a description of Waste Receiving and Processing, along with other general provisions specified in WAC 173-303-281.

2.1 LOCATION OF PROPOSED EXPANSION

Waste Receiving and Processing will be located in the 200 West Area of the Hanford Facility, Benton County, Washington. Waste Receiving and Processing currently is planned to be three separate modules to be constructed at various times: Waste Receiving and Processing Module 1, Waste Receiving and Processing Module 2A, and Waste Receiving and Processing Module 2B. Each module will be constructed to handle various sizes and types of mixed waste containers. Small-scale maps depicting the Hanford Site and the location of Waste Receiving and Processing are provided in Figures 1 and 2. Large-scale maps and a topographic map, which meet the 1-inch-equals-not-more-than-200-feet requirement, are provided in Appendix A and include the following:

- General Overview of Hanford Site (H-6-958)

- Topographic map showing Waste Receiving and Processing (H-6-000002), including surrounding 1,000 feet (305 meters). There are no existing or planned injection or withdrawal wells in the vicinity of Waste Receiving and Processing. There are no barriers planned for drainage or flood control at Waste Receiving and Processing.

2.2 DESCRIPTION OF UNIT TO BE EXPANDED

Waste Receiving and Processing will consist of three separate modules, Waste Receiving and Processing Module 1, Waste Receiving and Processing Module 2A, and Waste Receiving and Processing Module 2B, to be constructed at various times. Each module will handle various sizes and types of mixed waste containers.

2.2.1 Waste Receiving and Processing Module 1 (Building 2336-W)

Module 1 (Building 2336-W) will be located in the 200 West Area. Module 1 will provide waste receipt, confirmation, repackaging, certification, treatment, and/or storage of radioactive and/or mixed waste from the Hanford Facility or from offsite sources.

The Module 1 site will be a part of the Solid Waste Operations Complex. Figure 3 shows the overall site plan for the Waste Receiving and Processing Module 1 within the Solid Waste Operations Complex. The Solid Waste

Operations Complex consists of various TSD units in the 200 West Area (i.e., Central Waste Complex, Waste Receiving and Processing, and 200 West Area Low-Level Burial Grounds). Module 1 will be housed within a pre-engineered metal building, measuring approximately 200 feet (61 meters) by 240 feet (73 meters). The elevation of the Module 1 is approximately 700 feet (213 meters) above mean sea level. The layout of Module 1 is shown in Figures 4 and 5.

Module 1 will accept only contact-handled radioactive and/or mixed waste in 55-gallon (208-liter) or 85-gallon (322-liter) drums and boxes no larger than 8 feet (2.4 meters) long by 5 feet (1.5 meters) high by 5 feet (1.5 meters) wide. Module 1 will be designed to receive approximately 7,000 waste containers annually. These containers include retrieved[1] and newly generated contact-handled[2] waste, low-level waste, and mixed waste. Remote-handled waste (with an external surface dose rate exceeding 200 millirem per hour) will not be handled in Module 1. The maximum weight of the containers received in Module 1 will be 1,000 pounds (906.6 kilograms) for drums and 7,000 pounds (3,175 kilograms) for boxes. Module 1 will have the capability to change the physical form of the radioactive and/or mixed waste through compaction, solidification or absorption of liquids, neutralization of corrosives, immobilization of particulates, and reacting of reactive waste.

Some of the contact-handled waste containers received at Module 1 could contain lead that was used to shield against radiation. When these containers are identified, the lead will be removed in the transuranic waste process and/or low-level waste process enclosures and returned to storage pending future decontamination, treatment, and/or disposal.

Mixed waste received at Module 1 could include equipment and materials contaminated with small amounts of any of the following dangerous constituents: antifreeze, asbestos, beryllium, cadmium, carbon tetrachloride, copper, hydraulic fluid, lead, lithium, methylene chloride, miscellaneous organics, nitric acid, oils, polychlorinated biphenyls, sodium, sodium hydroxide, solvents, tributyl phosphate, and zirconium.

The criteria to be used for the design of Module 1 are in accordance with the U.S. Department of Energy Order 6430.1A, *General Design Criteria*.

---

[1]Retrieved waste from the Hanford Facility is contained primarily in 7.41-cubic feet (0.21-cubic meter) drums and metal or wooden boxes. Waste also is contained in casks, concrete boxes, concrete filled culverts, and other miscellaneous containers. The waste normally will be received in U.S. Department of Transportation 55-gallon (208-liter) drums, but also could be received in other U.S. Department of Transportation-approved containers. The waste will be transported to Waste Receiving and Processing where the waste will be opened, sorted, sampled, treated (if necessary), classified, certified (if required), and transported to an offsite TSD facility or to an onsite TSD unit.

[2]Contact-handled waste is any waste with an external surface dose rate not exceeding 200 millirem per hour.

Accordingly, Module 1 is classified as a "Special Facility - Radioactive Solid Waste Facility" for the purposes of identifying the required design criteria within this U.S. Department of Energy Order. A preliminary safety evaluation of Module 1 indicates that this will be a "low-hazard-facility," as defined in U.S. Department of Energy Order 5481.1B, Chapter II, *Safety Analysis and Review System*.

Module 1 design incorporates a confinement system that provides primary and secondary confinement of the radioactive materials. Primary confinement will prevent direct physical contact between the radioactive materials and personnel and will be provided by the process enclosures and their ventilation systems. Secondary confinement will prevent release of radioactive material to the environment and will be provided by the building shell and the secondary ventilation system.

Module 1 has a waste shipping and receiving area; nondestructive examination and nondestructive assay area; process area, having enclosures for opening and sorting the contents of waste containers; restricted waste management enclosures for waste sampling and treatment; process support area; sample management area; and administrative area.

Waste containers will be received at the Module 1 shipping and receiving area. After processing, the low-level portion of the waste will be disposed of in the Hanford Facility Low-Level Burial Grounds or, as in the case of some mixed waste, stored in the Central Waste Complex until further treatment becomes available. The transuranic waste will be shipped to the Waste Isolation Pilot Plant (WIPP) in Carlsbad, New Mexico, or to another approved waste disposal site.

Module 1 will provide nondestructive examination and nondestructive assay of the contact-handled waste. Nondestructive examination is used to identify the physical contents of the waste containers to support waste characterization and processing, confirmation, or certification. The assay results are used to determine the radioactive content and the distribution of the waste. This information is used to identify waste types in each package.

The Module 1 process area enclosures are designed for opening, sorting, and sampling for the purposes of characterizing; retrieved suspect transuranic waste; and for confirming the characterization of newly generated contact-handled containers of transuranic, low-level waste, and mixed waste. Limited treatment of certain corrosive materials, loose particulates, and free liquids; volume reduction of waste (e.g., compaction); and repackaging of waste to meet current disposal site waste acceptance criteria are provided in the process area enclosures.

Process support areas are provided with space for heating, ventilating, and air conditioning equipment, mechanical equipment, and electrical equipment used to support operations of Module 1.

A sample management area will be provided to manage the various samples that are taken from within the enclosures in the process area.

The administrative area will contain restrooms; change rooms, including an anti-contamination change area; offices; and space for visitor control. This area also will provide space for a computer control room used to monitor the process control system, nondestructive examination equipment, nondestructive assay equipment, and other process equipment.

Exterior storage space is provided for the receipt of new containers and other materials.

2.2.2 Waste Receiving and Processing Module 2A (Building 2337-W)

Module 2A (Building 2337-W) will be located west of the proposed Module 1 and Enhanced Radioactive and Mixed Waste Storage (Project W-112) and will be a part of the Solid Waste Operations Complex. Module 2A will be linked to Module 1 and Project W-112 via a transfer corridor for waste receipt and shipment. Figure 3 shows the proposed site plan for Module 2A within the Solid Waste Operations Complex. The elevation of Module 2A will be approximately 700 feet (213 meters) above mean sea level.

Module 2A currently is planned to receive approximately 5,300 containers annually. These containers will consist of contact-handled low-level mixed waste currently in storage at the Central Waste Complex and newly generated (over the next 30 years) contact-handled low-level mixed waste.

Module 2A will be designed to process, package, certify, and ship low-level mixed waste. Module 2A will be limited to low to moderate temperature [<500 °F (260 °C)] treatment processes. These processes will consist of stabilization of heterogeneous dry materials (e.g., construction debris), and a polyethylene encapsulation process for waste that contains high percentages of soluble salts (such as ammonium sulphate); an example is waste generated from the operation of the 200 Area Effluent Treatment Facility.

Module 2A will be housed within a pre-engineered metal building, measuring approximately 250 feet (76 meters) by 240 feet (73 meters). External storage will be provided for new containers entering the process and for the bulk constituents of the cement grout and polymer encapsulation process. This external storage will be located to the south of the building where truck access is available.

Module 2A will be designed to withstand design basis accidents as required by U.S. Department of Energy Order 6430.1A and per criteria defined in the *Hanford Plant Standards*, Standard Design Criteria - 4.1 (DOE-RL 1988a). The design life of Module 2A will be 30 years.

The design of Module 2A incorporates a confinement system that provides primary and secondary confinement of the radioactive materials. Primary confinement will prevent direct physical contact between the radioactive materials and personnel and will be provided by equipment process enclosures and their ventilation systems. Secondary confinement will prevent release of

radioactive material to the environment and will be provided by the building shell and the secondary ventilation system.

Module 2A will be divided into distinct areas to accommodate functional and safety requirements: office administration, support area, process area, and a process support area. The arrangement and design of these areas will facilitate safe and efficient functional operations, provide for future flexibility, and comply with current building and fire safety codes including, but not limited to, the Uniform Building Code, National Fire Codes, and U.S. Department of Energy Order No. 6430.1A.

2.2.3 Waste Receiving and Processing Module 2B

Module 2B will be located in the 200 West Area. Figure 3 shows the proposed site plan for Module 2B within the Solid Waste Operations Complex. The elevation of Module 2B will be approximately 700 feet (213 meters) above mean sea level.

Module 2B currently is envisioned to treat, characterize, certify, and ship remote-handled transuranic waste and low-level mixed waste in containers that are too large, too heavy, or too contaminated for Module 1 or Module 2A processing. The design and handling capacity of Module 2B currently is being developed; therefore, no design data are available to describe this module.

2.3 DESCRIPTION OF EXPANSION AT WASTE RECEIVING AND PROCESSING

The scope of dangerous waste handling activities at Waste Receiving and Processing Module 1, 2A, and 2B is being expanded to include container storage of dangerous waste for greater than 90 days. The addition of greater than 90-day container storage will not affect the planned configuration or size of Module 1, 2A, and 2B.

2.4 COMPLIANCE WITH STATE ENVIRONMENTAL POLICY ACT

The SEPA Environmental Checklist was submitted June 1991 with the NOI for Construction of Waste Receiving and Processing. Supplement 1 (Appendix B) provides information pertaining only to Module 1, 2A, and 2B.

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 the following sections.

9413279.1316

2.5.1 Criteria for Elements of the Natural Environment

The following section addresses measures in place at Waste Receiving and Processing to provide protection of the natural environment. Each element of the criteria identified in WAC 173-303-282(6) is addressed.

2.5.1.1 Earth. This section addresses the potential for the release of mixed waste into the environment because of structural damage resulting from conditions of the earth at Waste Receiving and Processing.

2.5.1.1.1 Seismic Consideration. Waste Receiving and Processing will be located in Zone 2B as identified in the *Uniform Building Code* (ICBO 1991). Waste Receiving and Processing will be designed in accordance with the regulations of Section 2312 of the *Uniform Building Code* (ICBO 1991) for earthquake Zone 2. The design of Waste Receiving and Processing for seismic considerations will be in accordance with the *Hanford Plant Standards*, Standard Design Criteria - 4.1 (DOE-RL 1988a). The Hanford Plant Standard provides seismic load criteria specific for the Hanford Site and is more restrictive than the *Uniform Building Code*.

No active faults, or evidence of a fault that has had displacement during Holocene times, have been found at the Hanford Site (DOE 1988; WHC 1991). The youngest faults recognized at the Hanford Site occur on Gable Mountain, over 7.5 miles (12.1 kilometers) northeast of the 200 West Area. These faults are of Quaternary age and are considered 'capable' by the Nuclear Regulatory Commission (NRC 1982).

2.5.1.1.2 Subsidence. Waste Receiving and Processing will be located in the 200 West Area of the Hanford Facility. This area of the Hanford Facility is not considered an area subject to subsidence (PNL 1992).

2.5.1.1.3 Slope or Soil Instability. Waste Receiving and Processing will not be located in an area of slope or soil instability, or located in an area affected by unstable slope or soil conditions (PNL 1992).

2.5.1.2 Air. Waste Receiving and Processing will not be an incineration unit. Discussion of measures taken to reduce air emissions resulting from incineration is not applicable.

2.5.1.3 Water. This section addresses the potential for contaminating water of the state in the event of a release of mixed waste.

2.5.1.3.1 Surface Water. The following addresses considerations for the protection of surface water.

2.5.1.3.1.1 Flood, Seiche, and Tsunami Protection. 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.

9413279.1317

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 5). The estimated probable maximum flood would have a larger floodplain than either the 100- or 500-year floods. The location of Waste Receiving and Processing 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 6. Waste Receiving and Processing will not be within the floodplain.

The only other potential source of flooding of Waste Receiving and Processing 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 7) would not affect Waste Receiving and Processing.

2.5.1.3.1.2 Perennial Surface Water Bodies. Waste Receiving and Processing is a nonland-based facility as defined in WAC 173-303-282(3)(i). The WAC 173-303-282(6)(c)(i)(B)(I) requires nonland-based facilities to be located at least 500 feet (152 meters) from any perennial water body. Waste Receiving and Processing will be over 5.5 miles (9 kilometers) from the Columbia River, the closest perennial water body.

2.5.1.3.1.3 Surface Water Supply. Waste Receiving and Processing will not be located within an area designated as a watershed or will it be located within 500 feet (152 meters) of a surface water intake for domestic water.

2.5.1.3.2 Groundwater. The following addresses consideration for the protection of groundwater. Waste Receiving and Processing is a nonland-based facility as defined by WAC 173-303-282(3)(d); therefore, compliance with the contingent groundwater protection program is not required.

2.5.1.3.2.1 Depth to Groundwater. Waste Receiving and Processing will be located in the 200 West Area of the Hanford Facility. The depth to groundwater in the 200 West Area is over 260 feet (79 meters).

2.5.1.3.2.2 Sole Source Aquifer. Waste Receiving and Processing will not be located over an area designated as a 'sole source aquifer' under section 1424(e) of the *Safe Drinking Water Act of 1974*.

2.5.1.3.2.3 Groundwater Management Areas and Special Protection Areas. The proposed expansion involves the addition of container storage capacity at

Waste Receiving and Processing. The storage of waste in containers is not expected to result in an increased potential for release of radioactive and/or mixed waste to groundwater or to a special protection area.

2.5.1.3.2.4 Groundwater Intakes. Waste Receiving and Processing will not be located within 500 feet (152 meters) of a groundwater intake for domestic water.

2.5.1.4 Plants and Animals. The following sections address consideration to reduce the potential for mixed waste contaminating plant and animal habitat in the event of a release of mixed waste. The Waste Receiving and Processing will be over 500 feet (152 meters) from any of the following.

2.5.1.4.1 Wetlands. Waste Receiving and Processing is not located near any wetlands.

2.5.1.4.2 Designated Critical Habitat. Waste Receiving and Processing is not located in an area designated as critical habitat for federally listed threatened or endangered species as defined by the *Endangered Species Act of 1973*.

2.5.1.4.3 State Designated Habitat. Waste Receiving and Processing is not located in an area designated by the Washington State Department of Wildlife as habitat essential to the maintenance or recovery of any state listed threatened or endangered species.

2.5.1.4.4 Natural Area Preserves. Waste Receiving and Processing is not located in any natural area acquired or voluntarily registered or dedicated under Chapter 79.70 Revised Code of Washington.

2.5.1.4.5 Wildlife Refuge, Preserve, or Bald Eagle Protection Area. Waste Receiving and Processing is not located in a state or federally designated wildlife refuge, preserve, or bald eagle protection area.

2.5.1.5 Precipitation. Waste Receiving and Processing will not be located in an area having a mean annual precipitation level of greater than 100 inches (254 centimeters) (DOE 1987).

2.5.2 Criteria for Elements of the Built Environment

The following sections address the locational factors affecting protection of the built environment. Each element of the criteria for nonland-based facilities or units identified in WAC 173-303-282(7) is addressed.

2.5.2.1 Adjacent Land Use. This section addresses the setback criteria for adjacent land use.

940727.1337

Nonland-Based Facilities. Waste Receiving and Processing is located approximately 13 miles (21 kilometers) from the closest Hanford Facility property line.

2.5.2.2 Special Land Uses. This section addresses setback criteria for special land uses.

2.5.2.2.1 Wild and Scenic Rivers. Waste Receiving and Processing is located in the 200 East Area approximately 5.5 miles (9 kilometers) from the Columbia River, which has been proposed as a Wild and Scenic River. Waste Receiving and Processing clearly is not within the viewshed of users of the Columbia River.

2.5.2.2.2 Parks, Recreation Areas, National Monuments. Waste Receiving and Processing is situated over 500 feet (152 meters) from the nearest state or federally designated park, recreation area, or national monument.

2.5.2.2.3 Wilderness Areas. Waste Receiving and Processing is located approximately 500 feet (152 meters) from any Wilderness Areas as defined by the *Wilderness Act of 1964*.

2.5.2.2.4 Farmland. Waste Receiving and Processing is a minimum of 500 feet (152 meters) from any commercial or private prime farmland.

2.5.2.3 Residences and Public Gathering Places. This section discusses factors affecting residences and public gathering places. Waste Receiving and Processing is located over 500 feet (152 meters) from residences and public gathering places.

2.5.2.3.1 Incineration. Incineration is not a process used at Waste Receiving and Processing. Therefore, this criterion is not applicable.

2.5.2.3.2 Land Use Compatibility. The Hanford Facility conforms with local land use zoning designation requirements.

2.5.2.3.3 Archeological Sites and Historic Sites. No places or objects listed on, or proposed for, national, state, or local preservation registers are known to be on or next to Waste Receiving and Processing. There are no known archaeological, historical, or Native American religious sites on or next to Waste Receiving and Processing.

9413279.1320

3.0 TEN-YEAR COMPLIANCE HISTORY

Appendix C summarizes Notice of Compliance Violations and the associated responses. This summary and the correspondence associated with notices of compliance violations can be obtained by contacting the following:

Public Access Room H6-08
Westinghouse Hanford Company
P.O. Box 1970
Richland, Washington 99352
(509) 372-3411.

4.0 JUSTIFICATION OF NEED

In May 1989, the U.S. Department of Energy along with Ecology and the EPA formally entered into an agreement known as the *Hanford Federal Facility Agreement and Consent Order* (Tri-Party Agreement) (Ecology et al. 1992) for the purpose of the Hanford Facility gaining compliance with federal, state, and local laws concerning the management of waste. The operation of Waste Receiving and Processing supports Tri-Party Agreement milestones M-18-00, M-19-00, and M-20-12 by providing a means to store and treat mixed waste.

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

The current capacity for treating, storing, and/or disposing of mixed waste is limited within Washington State and the Hanford Facility. Waste Receiving and Processing will have the means to treat and store mixed waste.

6.0 REFERENCES

6.1 DOCUMENTS

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

DOE, 1987, *Final Environmental Impact Statement: Disposal of Hanford Defense High-Level, Transuranic and Tank Wastes*, Vol. 1-5, DOE/EIS-0113, U.S. Department of Energy, Washington, D.C.

DOE, 1988, *Site Characterization Plan, Consultation Draft*, DOE/RW-0164, Vol. 1, U.S. Department of Energy, Washington, D.C.

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*, Vols. 1 through 3, DOE/RL 88-21, U.S. Department of Energy-Richland Operations Office, Richland, Washington.

Ecology, EPA, and DOE, 1992, *Hanford Federal Facility Agreement and Consent Order*, 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.

NRC, 1982, *Safety Evaluation Report (Related to the Operation of WPPSS Nuclear Project) No. 2*, NUREG-0892 Supplement No. 1, U.S. Nuclear Regulatory Commission, Washington, D.C.

PNL, 1992, *Hanford Site National Environmental Policy Act (NEPA) Characterization*, PNL-6415, Revision 5, Pacific Northwest Laboratory, Richland, 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.

WHC, 1991, *Geology and Hydrology of the Hanford Site: A Standardized Text for Use in Westinghouse Hanford Company Documents and Reports*, WHC-SD-ER-TI-003, Westinghouse Hanford Company.

9413279.1372

6.2 FEDERAL AND STATE ACTS

Endangered Species Act of 1973, as amended, 16 USC 1531 et seq.

Resource Conservation and Recovery Act of 1976, as amended, 42 USC 6901 et seq.

Safe Drinking Water Act, 1974, as amended, 42 USC 399f.

State Environmental Policy Act of 1971, RCW 43.21c.

Wilderness Act of 1964, as amended, 16 USC 1131-1136 et seq.

6.3 REVISED CODE OF WASHINGTON AND WASHINGTON ADMINISTRATIVE CODE

79.70 RCW, *Natural Area Preserves*.

WAC 173-303, *Dangerous Waste Regulations*.

6.4 U.S. DEPARTMENT OF ENERGY ORDERS

5481.1B, *Safety Analysis and Review System*.

6430.1A, *General Design Criteria*.

This page intentionally left blank.

94H3279.1329

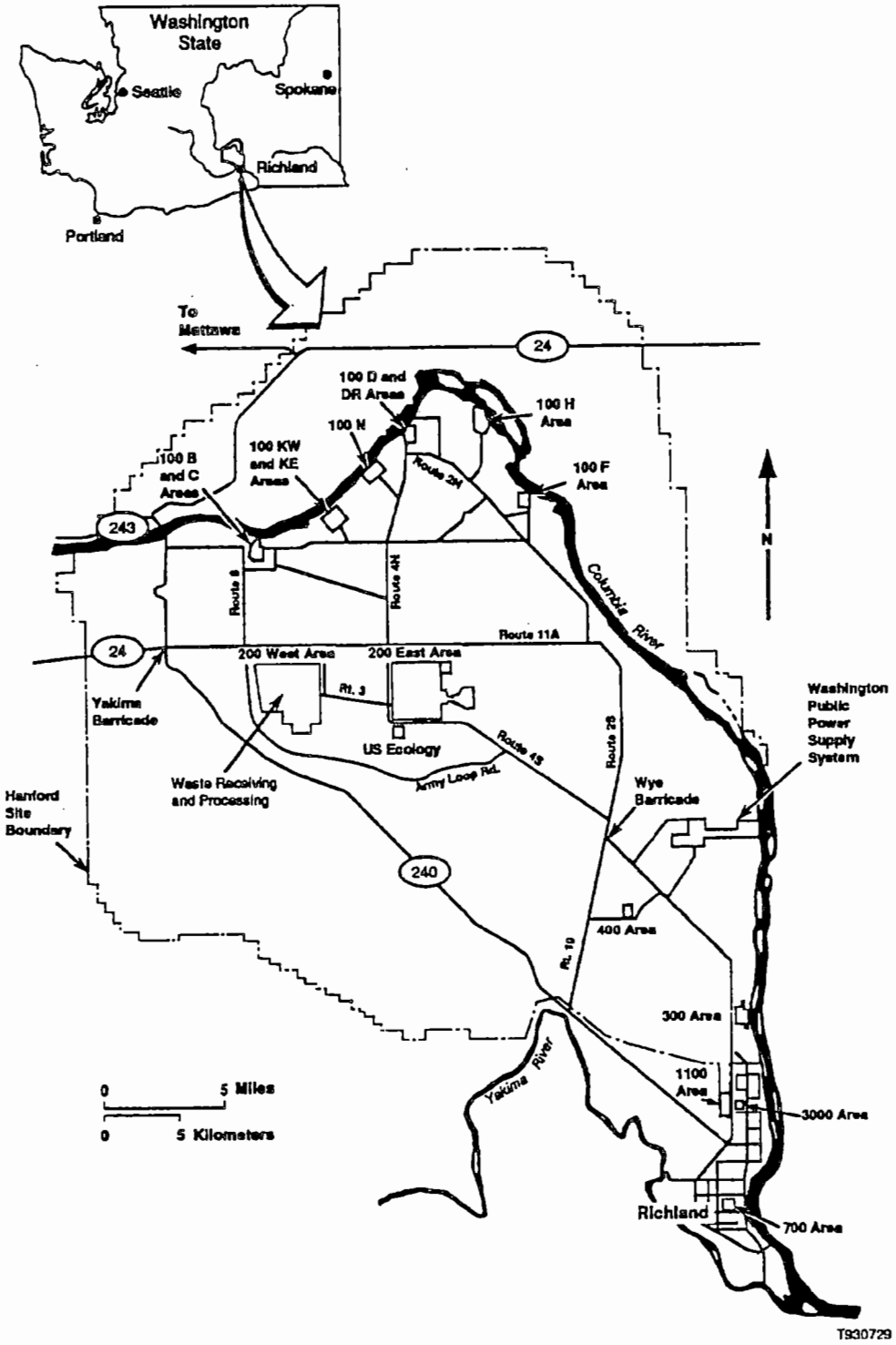


Figure 1. Hanford Site Map.

THIS PAGE INTENTIONALLY
LEFT BLANK

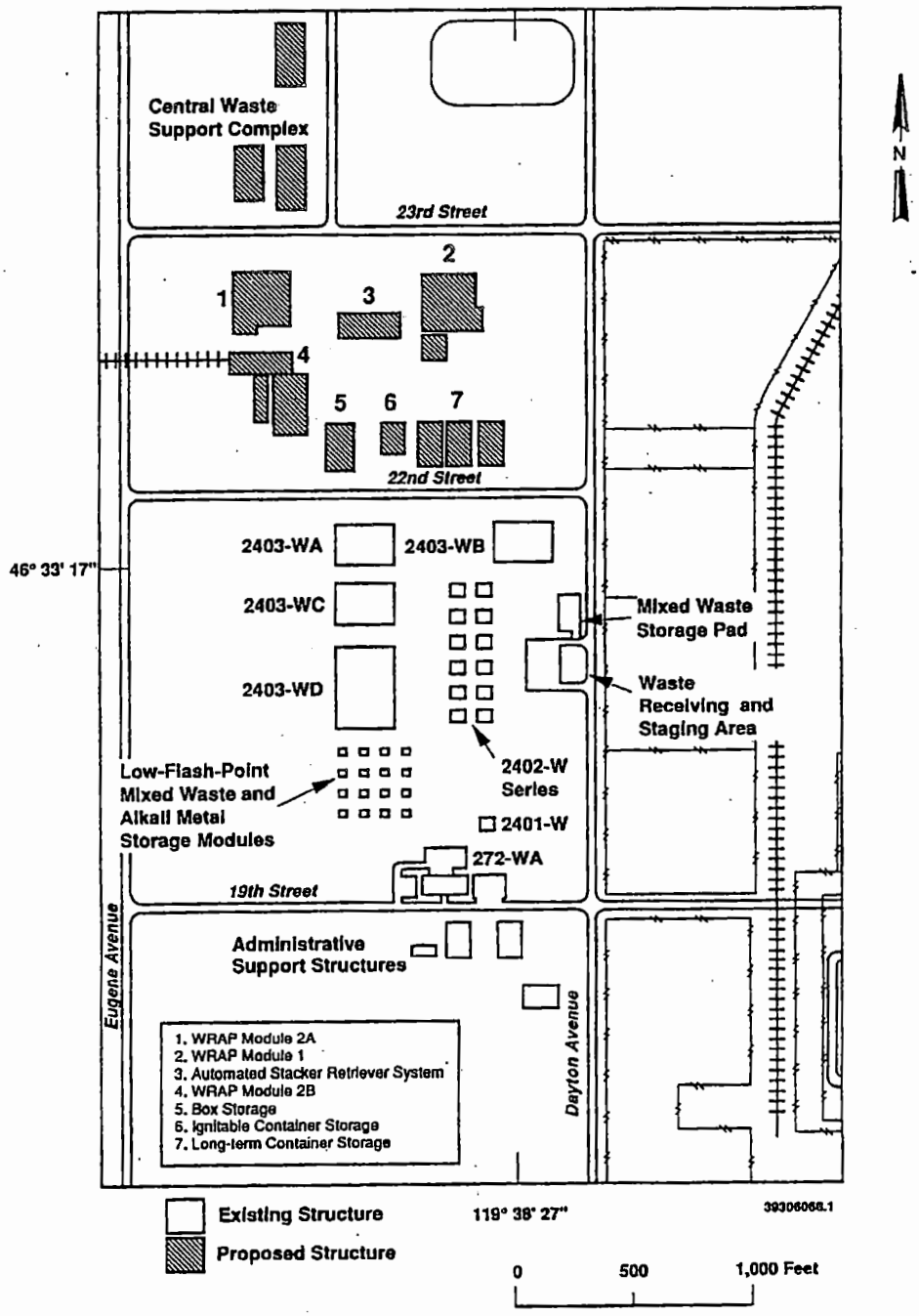


Figure 2. 200 Area West Partial Site Plan Referencing Location of Waste Receiving and Processing.

THIS PAGE INTENTIONALLY
LEFT BLANK

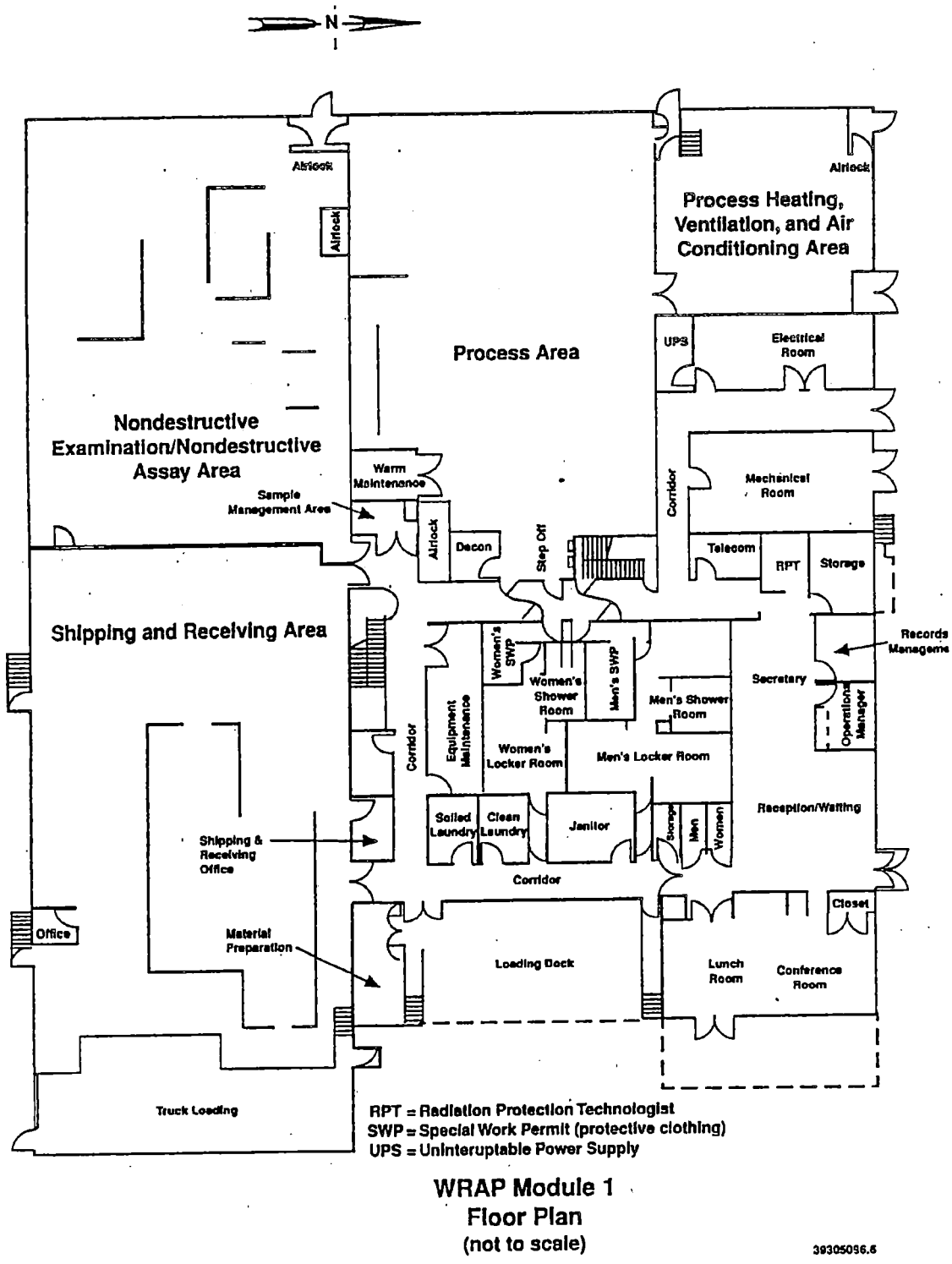
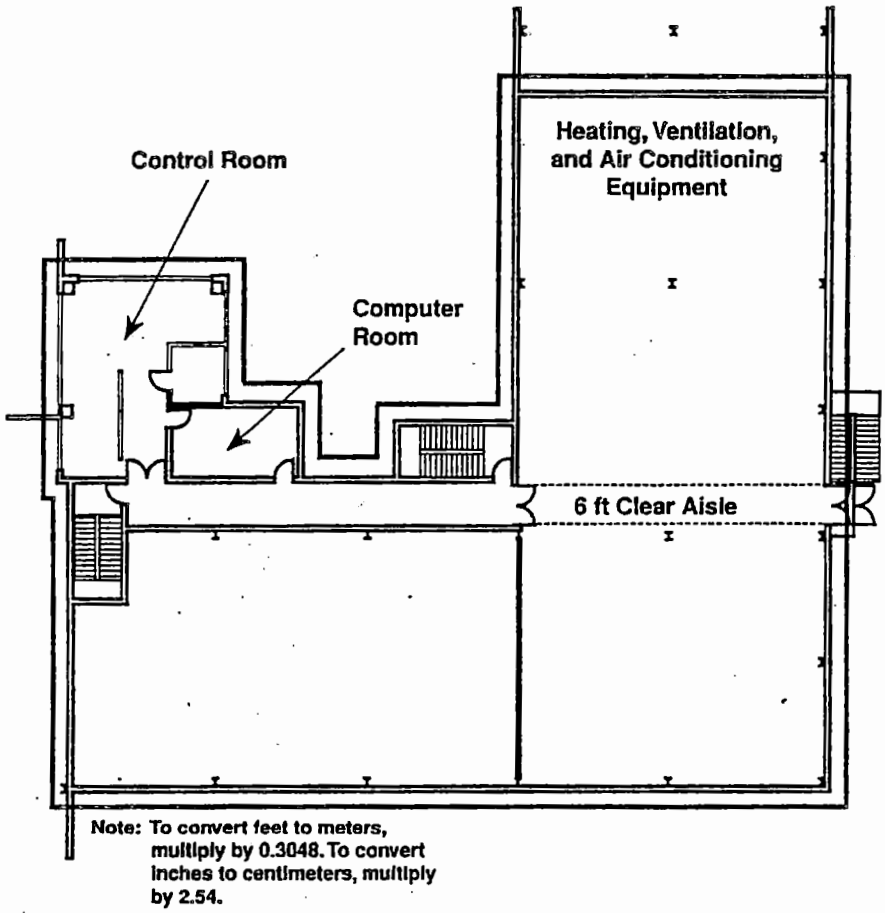


Figure 3. Waste Receiving and Processing Module 1 Floor Plan.

THIS PAGE INTENTIONALLY
LEFT BLANK

9413279.1328



Plan-Upper Level
(not to scale)

39305096.1

Figure 4. Plan - Upper Level.

THIS PAGE INTENTIONALLY
LEFT BLANK

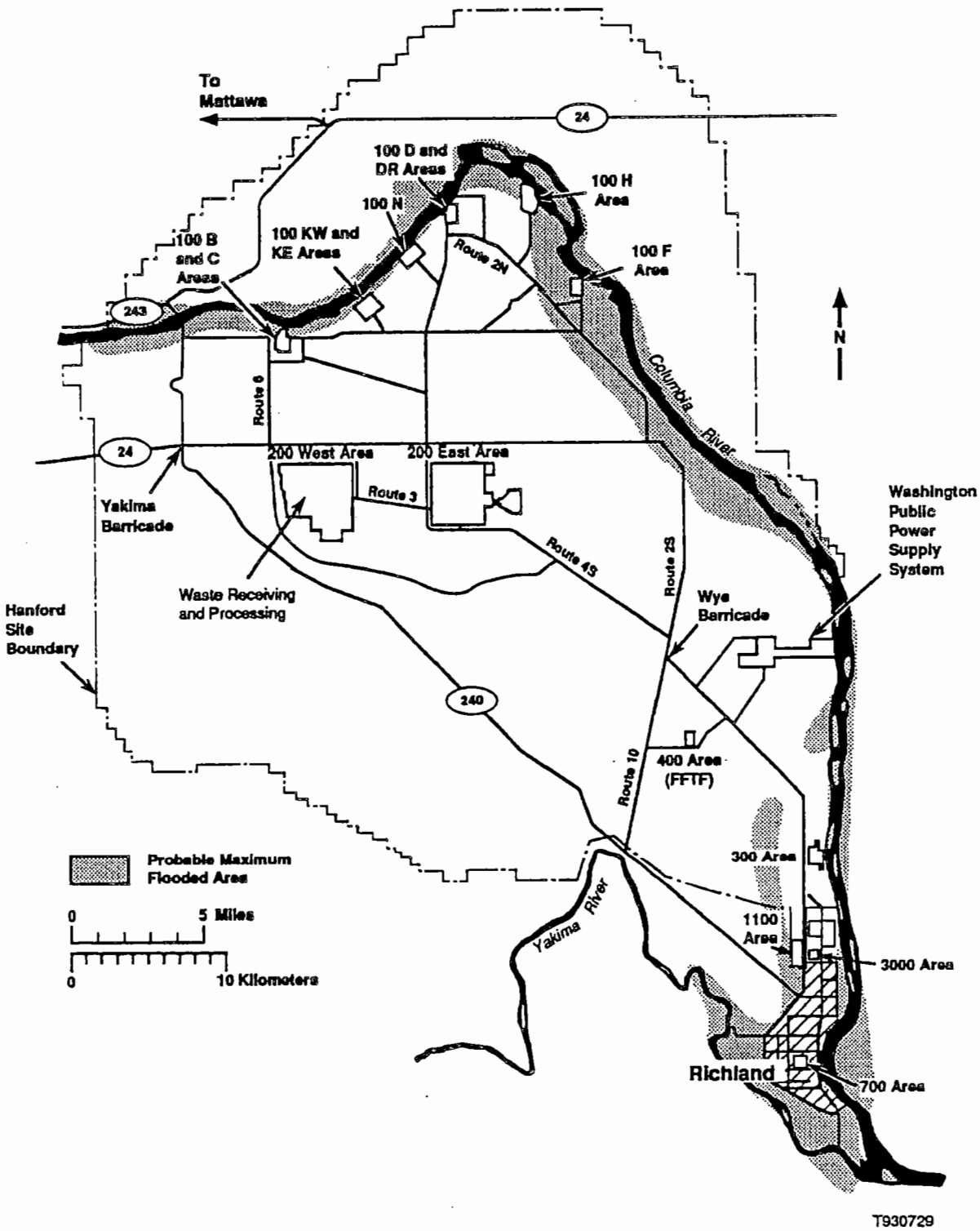
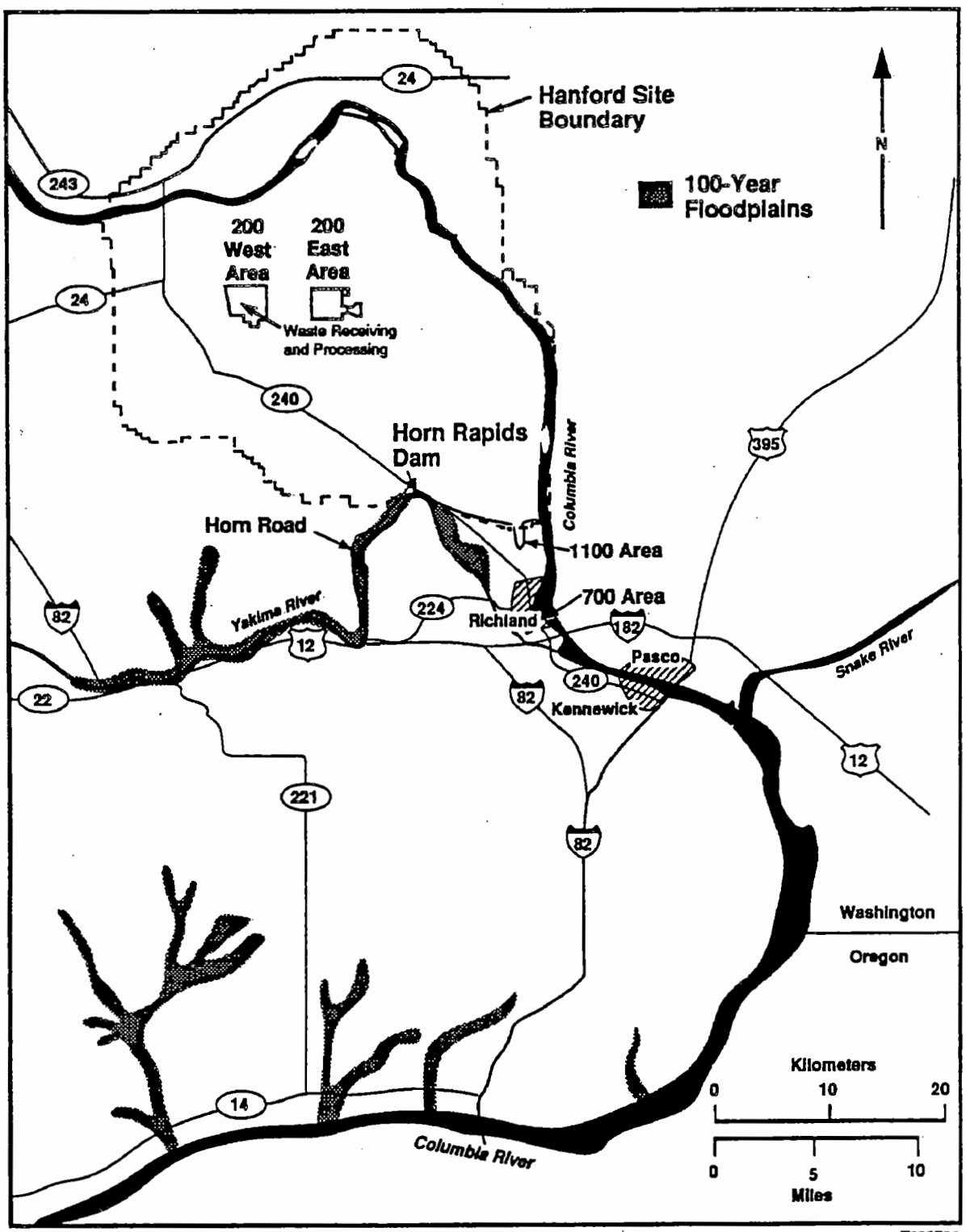


Figure 5. Columbia River Floodplain.

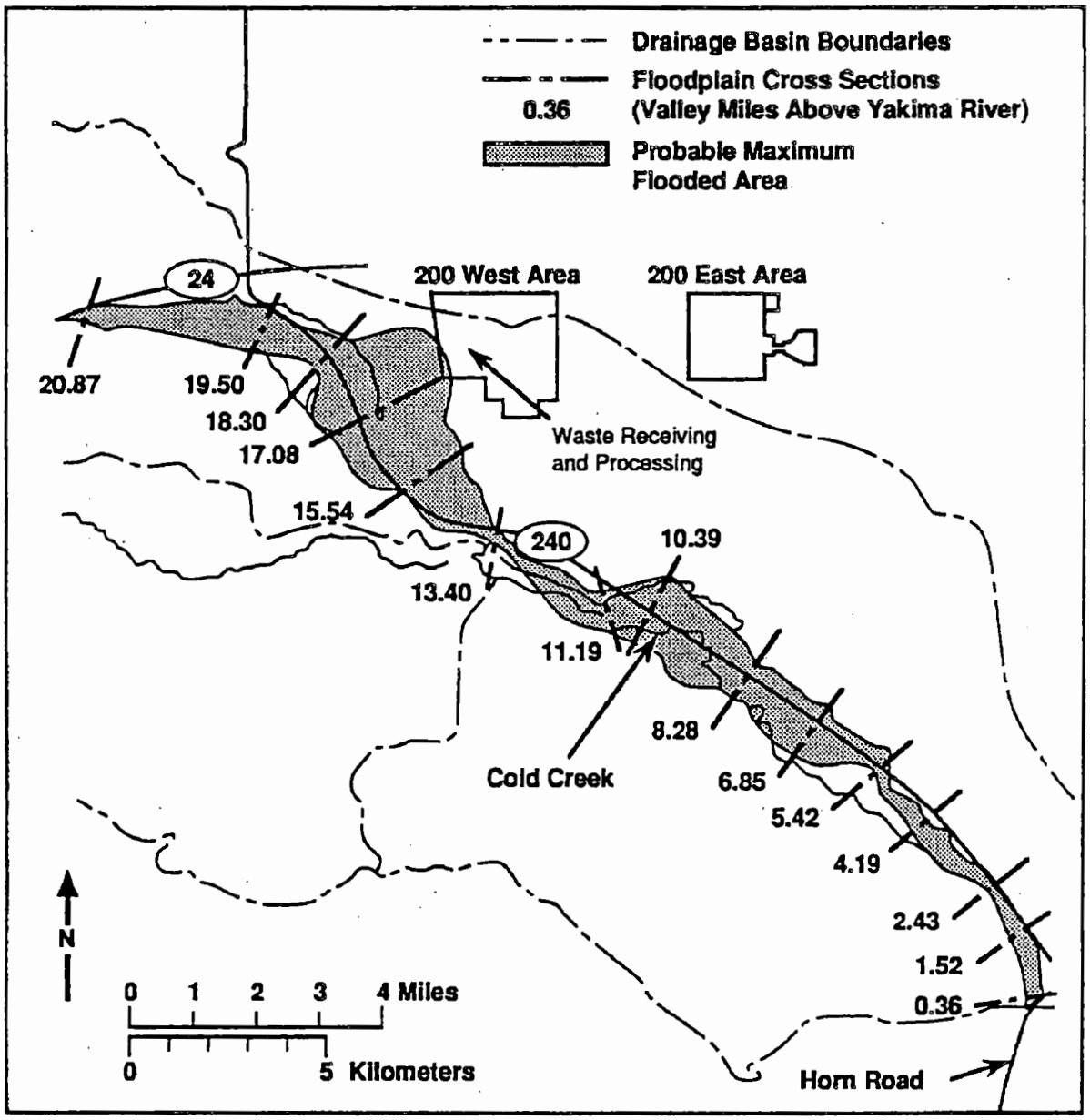
THIS PAGE INTENTIONALLY
LEFT BLANK



T930729

Figure 6. Yakima River Floodplain.

THIS PAGE INTENTIONALLY
LEFT BLANK



T930729

Figure 7. Cold Creek Watershed Floodplain.

THIS PAGE INTENTIONALLY
LEFT BLANK

APPENDICES

A LOCATION MAPS

B STATE ENVIRONMENTAL POLICY ACT ENVIRONMENTAL CHECKLIST

C SUMMARY OF NOTICES OF COMPLIANCE VIOLATIONS AND THE U.S. DEPARTMENT OF ENERGY, RICHLAND OPERATIONS OFFICE RESPONSES

9413279.1332

This page intentionally left blank.

94127279.1334

APPENDIX A

LOCATION MAPS

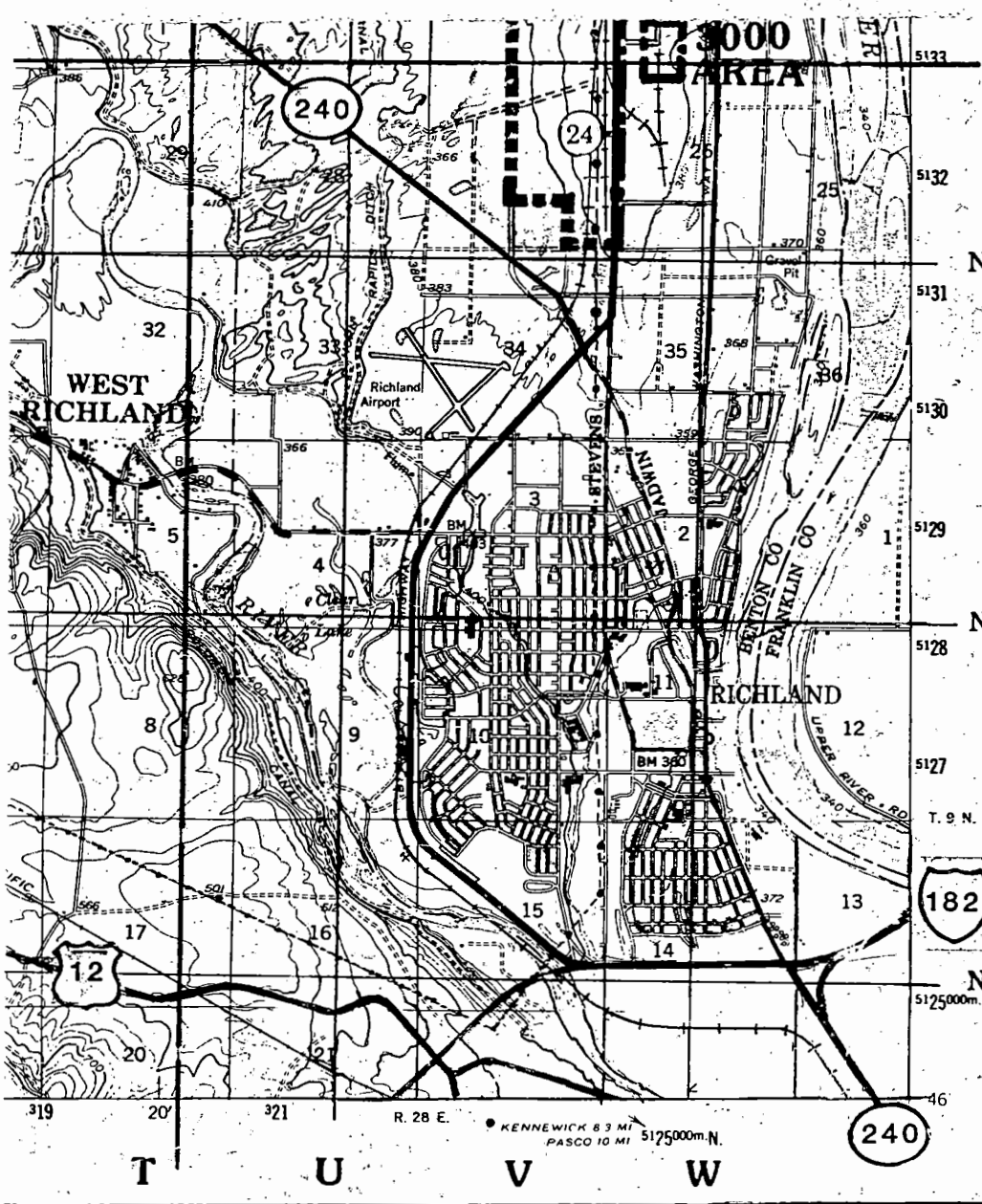
94J279.1231

APPENDIX A

CONTENTS

H-6-958	General Overview of Hanford Site.
H-13-000002	Waste Receiving and Processing Topographic Map.

9413279.1335



DRAWING APPROVALS	DATE
APPD FOR QUALITY ASSURANCE	
APPD	7/84
APPD	13 Mar 89
APPD	5-17-89
RESPONSIBLE ENGINEER R. L. MARTELL	3/89
DRAFTING APPD	
CHECKED	3/3/89
DRAWN K. D. JUNT	3/89

U. S. Department of Energy
Richland Operations Office

Westinghouse Hanford Company

GENERAL OVERVIEW OF HANFORD SITE

SCALE	BLDG NO	INDEX NO.
AS SHOWN	600 GEN	0100

CLASSIFICATION	BY	DRAWING NO	SHEET NO.	SHEETS
NONE	NOT REQ'D	H-6-958	1	1

THIS PAGE INTENTIONALLY
LEFT BLANK

A. NASH	4-25-91
TILLEY	5-30-91
SAMS	5-30-91
BOWMAN	5-30-91

DATE

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

WASTE RECEIVING AND PROCESSING SITE TOPOGRAPHIC MAP

SIZE	BLDG NO	INDEX NO	DWG NO	REV
F	2336-W	0110	H-13-000002	2

SCALE 1:2000 | EDT 145795 | SHEET 1 OF 2

CHK PRINT ☐ DATE | COMMENT PRINT ☐ DATE

1

DWG NO H-13-000002 SH 1 OF 2 REV 2

A

THIS PAGE INTENTIONALLY
LEFT BLANK

3-000002 SH-1 FOR LEGEND NOTES & WIND ROSE

	DATE
KAMPPI	4-25-91
.D. TILLEY	5-30-91
J.T. SAMS	5-30-91
R.C. BOWMAN	5-30-91
MPLEMENTATION	
DATE	

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

WASTE RECEIVING AND PROCESSING SITE TOPOGRAPHIC MAP

SIZE	BLDG NO	INDEX NO	DWG NO	REV
F	2336-W	0110	H-13-000002	2

SCALE 1:2000 | EDT 145795 | SHEET 2 OF 2

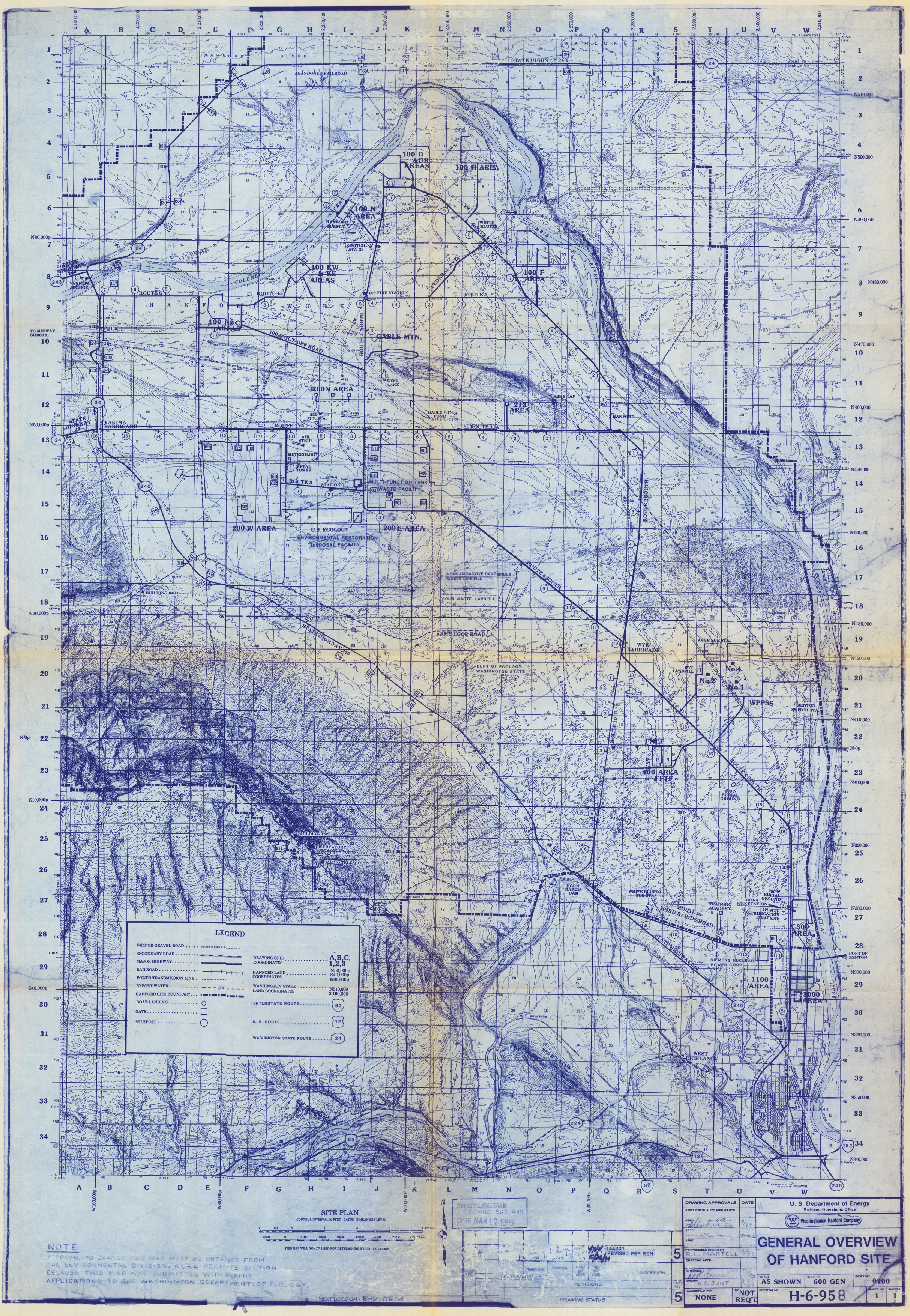
CHK PRINT ☐ DATE | COMMENT PRINT ☐ DATE

A

DWG NO H-13-000002 SH 2 OF 2 REV 2

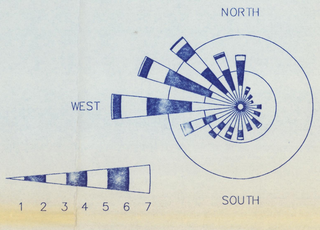
1

THIS PAGE INTENTIONALLY
LEFT BLANK


100 D &DR AREAS
100 H AREA
100 N AREA
100 KW & KE AREAS
100 F AREA
100 B&C AREAS
GABLE MTN.
200N AREA
213 AREA
200 W AREA
200 E AREA
U.S. ECOLOGY ENVIRONMENTAL RESTORATION DISPOSAL FACILITY
NONRADIOACTIVE DANGERIOUS WASTE LANDFILL
SOLID WASTE LANDFILL
DEPT OF ECOLOGY WASHINGTON STATE
WYE BARRICADE
WPPSS
No.1
No.2
No.4
400 AREA FFTF
300 AREA
1100 AREA
3000 AREA
HANFORD
RICHLAND
WEST RICHLAND
PORT OF BENTON
SIEMENS NUCLEAR POWER CORP
HORN RAPIDS DAM
YAKIMA BARRICADE
VERNITA BRIDGE
STATE HIGHWAY 24
STATE HIGHWAY 240
ROUTE 4 SOUTH
ROUTE 10
ROUTE 11A
ROUTE 3
ROUTE 6
ROUTE 1
ROUTE 4 NORTH
100-C CUT-OFF ROAD
ARMY LOOP ROAD
HORN RAPIDS ROAD
COLUMBIA RIVER
YAKIMA RIVER
RED MOUNTAIN
BUILDING 648
BUILDING T52C-6
OBSERVATORY
RADIO REPEATER STATION
RADIO TELESCOPE
WHITE BLUFFS SUB STA.
TRAINING ACADEMY
3709-A FIRE STATION
IN-SITU VITRIFICATION TEST SITE
BENTON SWITCH STA.
ASHE SUB STA.
ABANDONED RAILROAD
LEGEND
DIRT OR GRAVEL ROAD
SECONDARY ROAD
MAJOR HIGHWAY
RAILROAD
POWER TRANSMISSION LINE
EXPORT WATER
HANFORD SITE BOUNDARY
BOAT LANDING
GATE
MILEPOST
DRAWING GRID COORDINATES A,B,C, 1,2,3
HANFORD LAND COORDINATES N50,000p S40,000p W80,000p
WASHINGTON STATE LAND COORDINATES N510,000 2,190,000
INTERSTATE ROUTE 82
U. S. ROUTE 12
WASHINGTON STATE ROUTE 24
SITE PLAN
CONTOUR INTERVAL 20 FEET DATUM IS MEAN SEA LEVEL
THIS MAP WILL NOT BE USED FOR DETERMINING EXACT LOCATIONS
OFFICIAL RELEASE BY WHC
DATE MAR 17 1989
NOTE
APPROVAL TO CHANGE THIS MAP MUST BE OBTAINED FROM THE ENVIRONMENTAL DIVISION, RCRA PERMITS SECTION BECAUSE THIS MAP WAS SUBMITTED WITH PERMIT APPLICATIONS TO THE WASHINGTON DEPARTMENT OF ECOLOGY.
NEXT USED ON: END ITEM
144201 REVISED PER ECN
DRAWING APPROVALS
DATE
APPD FOR QUALITY ASSURANCE
RESPONSIBLE ENGINEER R.L. MARTELL
DRAFTING APPD
CHECKED
DRAWN K.D. JUNT
CLASSIFICATION NONE
BY NOT REQ'D
U. S. Department of Energy
Richland Operations Office
Westinghouse Hanford Company
GENERAL OVERVIEW OF HANFORD SITE
SCALE AS SHOWN
600 GEN
INDEX NO. 0100
DRAWING NO. H-6-958
SHEET NO. 1
SHEETS 1

WIND ROSE FOR: 200W AREA
% CALM WINDS = .9

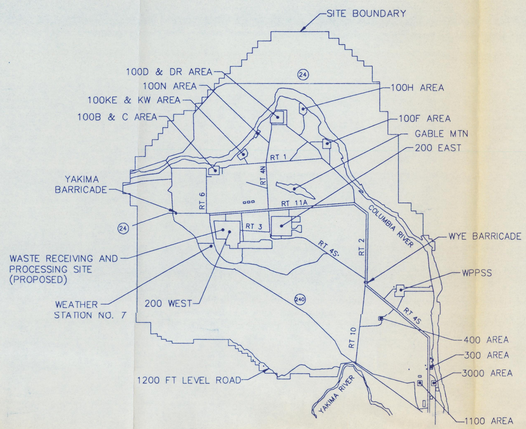
PERIOD COVERED
12/01/85 – 12/31/87
STATION NO.7



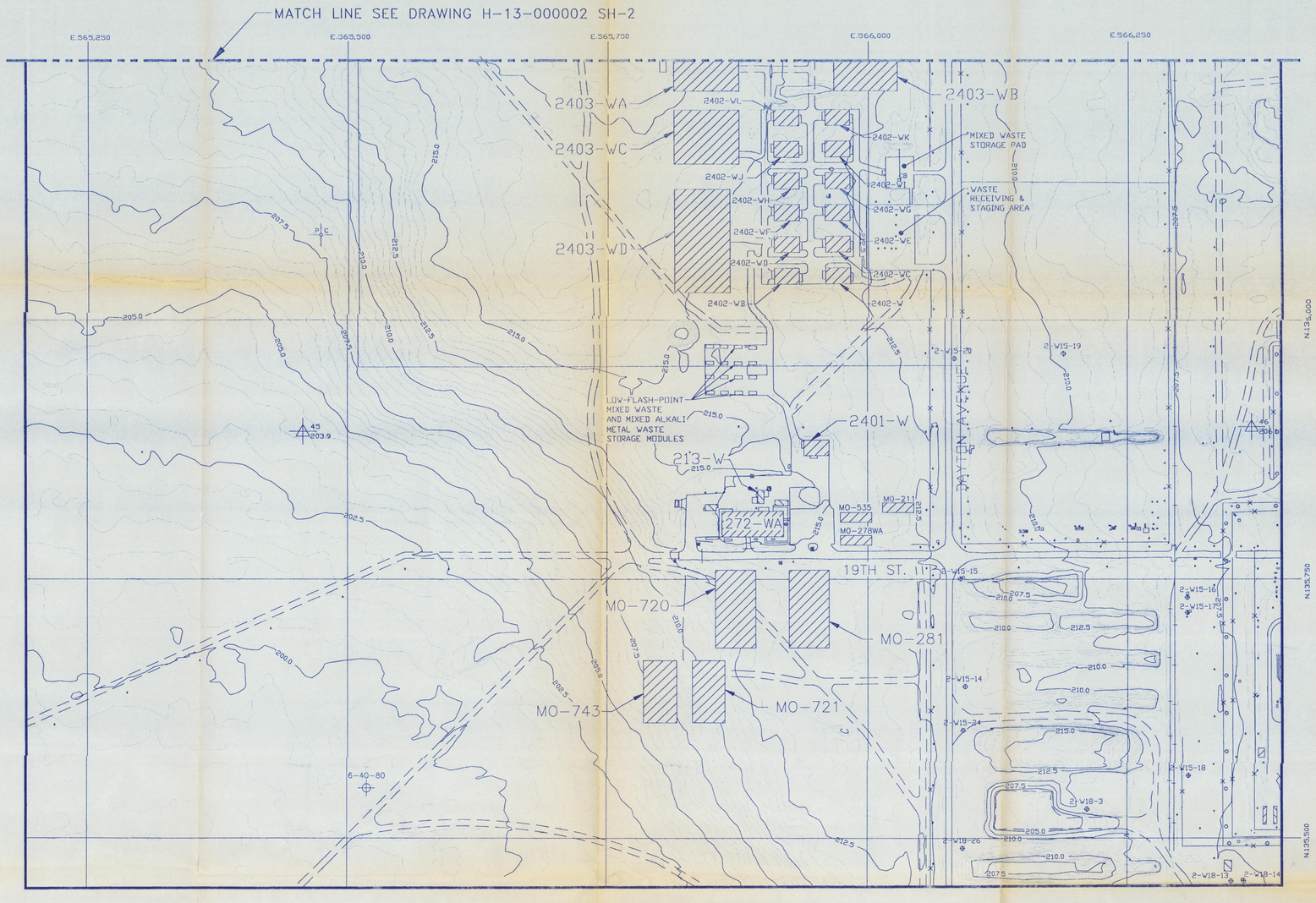
PADDLES INDICATE DIRECTION WIND IS COMING FROM.
RADIAL GRIDS REPRESENT 5.0% AND 10.0% OCCURRENCE.

WIND CLASS	MILES/HOUR
1--------	>1.0 - 3.0
2--------	4.0 - 7.0
3--------	8.0 - 12.0
4--------	13.0 - 18.0
5--------	19.0 - 24.0
6--------	25.0 - 31.0
7--------	32.0 +

WIND ROSE



KEY PLAN
SCALE: NONE



LEGEND

E.576,250 N.136,000	WASHINGTON STATE COORDINATES (METERS)	216-A-42	CRIB
	INTERMEDIATE CONTOUR	218-E-10	BURIAL GROUND
215.0	INDEX CONTOUR (METERS)	242-A	BUILDING
	FENCE	2-E-25-25 200-E-25-25	WELL
	POST & CHAIN FENCE	FB	CATCH BASIN
	PERIMETER FENCE		POWER/ UTILITY POLE
	DIRT ROAD OR TRAIL		MISCELLANEOUS POST
	PAVED ROAD		TREES
	BUILDINGS		LIGHT POLE
	TANKS		PIPELINE
	RAILROAD		STEAMLINE
24	STATE HIGHWAY		WASTE TRANSFER LINE
ROUTE 3	HANFORD HIGHWAY	24" EW	EXPORT WATER LINE
	PROPOSED WASTE RECEIVING AND PROCESSING BUILDINGS	4" RW	RAW WATER LINE
		4" SW	SANITARY WATER LINE

GENERAL NOTES

1. THIS MAP IS BASED ON AERIAL PHOTOGRAPHY FLOWN ON 6-24-89. THE TOPOGRAPHIC MAP WAS PREPARED BY MERRICK & COMPANY AND CERTIFIED TO MEET NATIONAL MAP ACCURACY STANDARDS. OFFICIAL COPIES OF THE MERRICK MAPS THAT SHOW THE CERTIFICATE ARE LOCATED IN THE WESTINGHOUSE HANFORD ENGINEERING FILES AS DRAWING NUMBERS H-2-79476 SHEET 1 AND H-2-79477 SHEET 1 THRU 37. THE NAMES OF PHYSICAL FEATURES AND THE TITLE BLOCK OF THE H-6-10101 THROUGH H-6-10137 MAPS WERE ADDED BY WESTINGHOUSE HANFORD COMPANY.

2. WASHINGTON COORDINATE SYSTEM: THE OFFICIAL STATE PLANE COORDINATE SYSTEM AS DEFINED BY THE REVISED CODE OF WASHINGTON (RCW). THE HANFORD SITE LIES WITHIN THE WASHINGTON COORDINATE SYSTEM, SOUTH ZONE. THIS GRID COVERS THE ENTIRE SITE AND USES X (EASTINGS) AND Y (NORTHINGS) COORDINATES.

   HORIZONTAL DATUM: NAD-83 LAMBERT PROJECTIONS

   VERTICAL DATUM: NATIONAL GEODETIC SURVEY DATUM AS PROVIDED BY KAISER ENGINEERS - HANFORD.
   COORDINATES ARE SHOWN AS METERS.
   CONTOURS ARE SHOWN AS 1/2 METERS.

3. HANFORD PLANT GRID: A LOCAL GRID SYSTEM WITH ITS INITIAL POINT NORTHEAST OF THE 400 AREA. IT COVERS 200-EAST AND 200-WEST AS WELL AS GENERAL SITE WORK SUCH AS WELLS AND BURIAL GROUNDS. COORDINATES ARE SHOWN AS FEET.

4. THE PARTIAL PLAN A SHOWS THE PROPOSED LOCATIONS OF THE WASTE RECEIVING AND PROCESSING MODULES 1, 2A, AND 2B (SEE H-13-000002, SHEET 2).

SITE PLAN
SCALE: 1:2000

0 20 40 80 120 160 METERS

1 cm = 20 meters
PHOTO DATE: 6-24-89
CONTOUR INTERVAL: 0.5 meter

DWG NO	TITLE
H-13-000003	CENTRAL WASTE COMPLEX TOPOGRAPHIC MAP
H-6-10118	TOP-MAP 200E/200W MAP
REF NUMBER	TITLE

DRAWING TRACEABLILITY LIST — REFERENCES

NEXT USED ON

REV NO	DESCRIPTION	REV BY DATE	CHK BY DATE	DFTG APVD DATE	COG ENGR	OTHER	OTHER
2	REVISION PER ECN 194083	JWV 1-94					
1	REVISION PER ECN 121261	BRK 9-91	GDT 9-91	JTS 9-91	JRB 9-91	DRC 9-91	

MFD REV REL — REVISIONS — APPROVALS BY/DATE

CADFILE N000002A — CADCODE DOS:6.0:ACD2:12.0:SS

		DATE
DRAWN	PAT A. NASH	4-25-91
CHECKED	G.D. TILLEY	5-30-91
DFTG APVD	J.T. SAMS	5-30-91
COG ENGR	R.C. BOWMAN	5-30-91
QA		
OTHER		
OTHER		
OTHER		
APVD FOR IMPLEMENTATION		
BY FOR		DATE

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

WASTE RECEIVING AND PROCESSING SITE TOPOGRAPHIC MAP

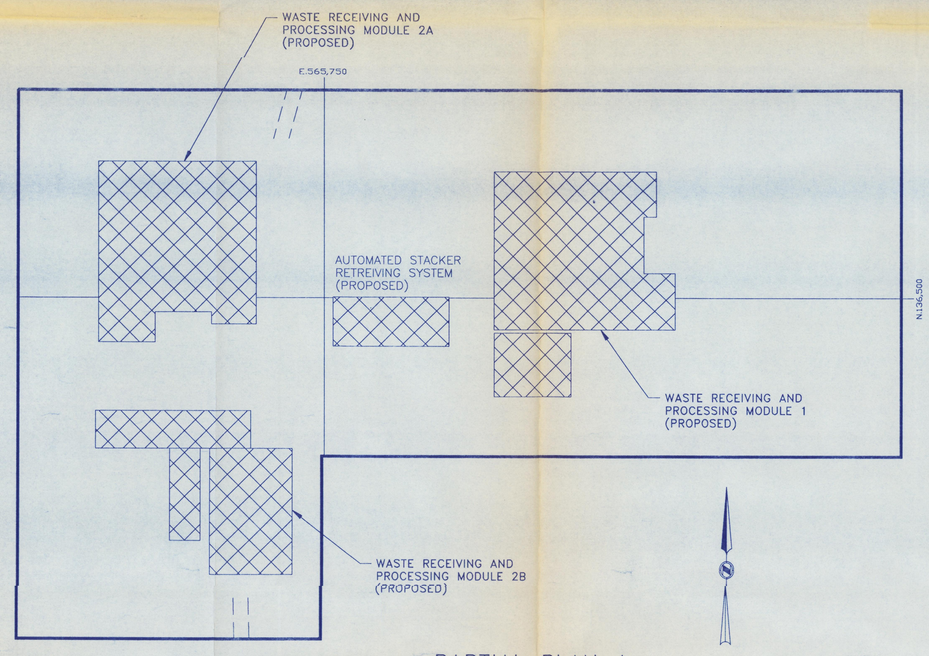
SIZE	BLDG NO	INDEX NO	DWG NO	REV
F	2336-W	0110	H-13-000002	2

SCALE 1:2000 — EDT 145795 — SHEET 1 OF 2

CHK PRINT DATE — COMMENT PRINT DATE

DWG NO H-13-000002 SH 1 OF 2 REV 2

54-6000-027(5/89)

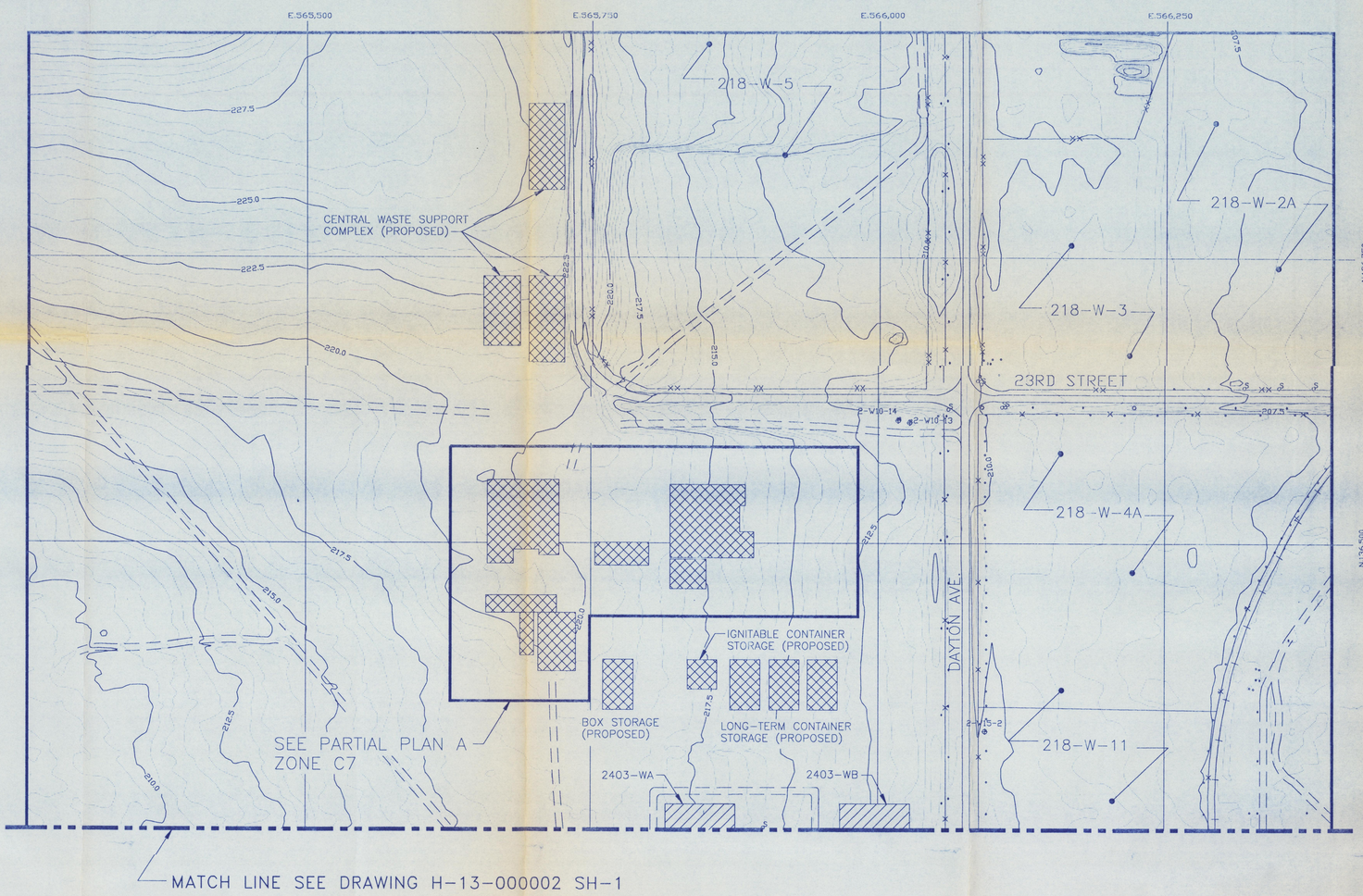


PARTIAL PLAN A

SCALE: 1:4000

0 40 80 160 240 320 METERS

1 cm = 40 meters
PHOTO DATE: 6-24-89
CONTOUR INTERVAL: 0.5 meter



SITE PLAN

SCALE: 1:2000

0 20 40 80 120 160 METERS

1 cm = 20 meters
PHOTO DATE: 6-24-89
CONTOUR INTERVAL: 0.5 meter

SEE H-13-000002 SH-1 FOR LEGEND
GENERAL NOTES & WIND ROSE

DWG NO	TITLE
DRAWING TRACEABLILITY LIST	

REF NUMBER	TITLE
H-6-10110	TOP-MAP 200E/200W AREA
REFERENCES	
NEXT USED ON	

REV NO	DESCRIPTION	REV BY DATE	CHK BY DATE	DFTG APVD DATE	COG ENGR	OTHER	OTHER
2	REVISED PER ECN 194083	JWV 1-94					
1	REVISED PER ECN 121261	BRK 9-91	GDT 9-91	JTS 9-91	JRB 9-91	DRC 9-91	

REVISIONS — APPROVALS BY/DATE

CADFILE N000002B — CADCODE DOS:6.0:ACD2:12.0:SS

		DATE
DRAWN	BR KAMPPI	4-29-91
CHECKED	G.D. TILLEY	5-30-91
DFTG APVD	J.T. SAMS	5-30-91
COG ENGR	R.C. BOWMAN	5-30-91
QA		
OTHER		
OTHER		
OTHER		
APVD FOR IMPLEMENTATION		
BY FOR		DATE

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

WASTE RECEIVING AND PROCESSING SITE TOPOGRAPHIC MAP

SIZE	BLDG NO	INDEX NO	DWG NO	REV
F	2336-W	0110	H-13-000002	2

SCALE 1:2000 — EDT 145795 — SHEET 2 OF 2

CHK PRINT ☐ DATE — COMMENT PRINT ☐ DATE

DWG NO H-13-000002 SH 2 OF 2 REV 2

54-6000-027(5/89)

APPENDIX B

STATE ENVIRONMENTAL POLICY ACT ENVIRONMENTAL CHECKLIST

The SEPA Environmental Checklist was submitted June 1991 with the NOI for Construction of Waste Receiving and Processing. Supplement 1 provides information pertaining only to Modules 1, 2A, and 2B.

AU2279 * 1239

This page intentionally left blank.

94A3279.1340

STATE ENVIRONMENTAL POLICY ACT
ENVIRONMENTAL CHECKLIST
SUPPLEMENT 1

FOR

HANFORD FACILITY, WASTE RECEIVING AND PROCESSING MODULES 1, 2A, AND 2B

REVISION 1

AUGUST 1994

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

THIS PAGE INTENTIONALLY
LEFT BLANK

A. BACKGROUND

1. Name of proposed project if applicable:

This *State Environmental Policy Act* (SEPA) *of 1971* Checklist is being submitted to support permitting of the Waste Receiving and Processing Facility (WRAP) Modules 1, 2A, and 2B (Module 1, 2A and 2B). Information contained in this checklist pertains only to these three modules. In the context of this document, 'site' refers to only the area covered by the physical structure of the unit, whereas 'Site' refers to the Hanford Site.

2. Name of applicants:

U.S. Department of Energy-Richland Operations (DOE-RL) and Westinghouse Hanford Company (Westinghouse Hanford)

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

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

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

Contact Persons:

J. E. Rasmussen, Acting Program Manager
Office of Environmental Assurance,
Permits, and Policy
(509) 376-2247

W. T. Dixon, Manager
Environmental Services
(509) 376-0428

4. Date checklist prepared:

August 1994

5. Agency requesting the checklist:

Washington State
Department of Ecology
P.O. Box 47600
Olympia, WA 98504-7600

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

The WRAP will be constructed in three different phases, beginning with the construction of WRAP Module 1. Module 1 is scheduled to begin construction March 1994 with completion scheduled for March 1996. Construction of WRAP module 2A is tentatively scheduled to begin in March 1996 with completion tentatively scheduled for September 1998. Finally, construction of WRAP Module 2B has yet to be determined. A completion date for WRAP Module 2B has yet to be determined.

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

As explained in Question number 6, WRAP is scheduled to be constructed in three phases beginning with Module 1 and ending with Module 2B.

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

- Revision 0 of this SEPA Checklist was submitted June 1991 concurrently with the *Notice of Intent for Construction of the Waste Receiving and Processing Facility*.

- The Hanford Facility Dangerous Waste (Part B) Permit Application documentation for WRAP (DOE/RL-91-16) is being prepared (Revision 1) that discusses Modules 1, 2A, and 2B.

- Permit applications for air emissions from Modules 1, 2A, and 2B will be developed as necessary.

- Analysis of the environmental effects of WRAP Module 1 was submitted to the DOE-RL in March 1991.

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 5, Pacific Northwest Laboratory, 1992, Richland, Washington), and (3) *Draft Environmental Impact Statement -Decommissioning of Eight Surplus Production Reactors at the Hanford Site, Richland, Washington*, DOE/EIS-0119D (U.S. Department of Energy, 1989, Washington, D.C.).

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

No other applications that would affect property associated with WRAP Modules 1, 2A, and 2B are known to be pending government approval.

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

Ecology is the lead agency authorized to approve the WRAP Part A, Form 3, and Part B pursuant to the requirements of Washington Administrative Code (WAC) 173-303-400 and 40 Code of Federal Regulations (CFR) Part 265 Subpart G.

Permit applications for air emissions from WRAP will be developed as necessary and submitted to the appropriate regulatory agencies for approval.

No other permits are known to be required at this time.

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

The proposed action is the operation of Modules 1, 2A, and 2B. Operation is proposed as part of the Solid Waste Operations Complex (SWOC). The SWOC consists of various treatment, storage, and/or disposal units in the 200 West Area (i.e., CWC, WRAP, and Low-Level Burial Grounds). Together, Modules 1, 2A, and 2B provide waste receipt, confirmation, repackaging, certification, treatment, and/or storage of radioactive and mixed waste from onsite generating units or from offsite generators. The following describes each module.

WRAP Module 1. The WRAP Module 1 will consists of three principal areas: a process area, a process support area, and an office administration/ reception area. Excluding parking areas, circulation, air locks, stairways, and other similar areas, Module 1 occupies a total area of 49,000 square feet (4,550 square meters).

Module 1 will provide the ability to examine, treat, and certify contact-handled transuranic waste, contact-handled low-level waste, and contact-handled mixed waste in containers (drums and boxes). Module 1 will support nondestructive examination and assay of the contact-handled waste. The process area is designed to support sorting, sampling, and repacking of waste. Incoming waste will consist of newly generated containers and 37,700 containers retrieved from storage. Some waste could be returned to storage if Module 1 cannot provide the proper treatment.

Module 1 will contain radioactive and mixed waste that, if released, potentially could expose offsite personnel beyond established limits. For this reason, Module 1 will have a containment system that will provide primary and secondary containment of the radioactive and/or mixed waste.

Module 2A. Module 2A will be housed within a pre-engineered metal building, having a total area of approximately 45,000 square feet (4,181 square meters). Module 2A will consist of three principal areas: a process area, a process support area, and an office administration/ reception area.

The primary mission of Module 2A is to nonthermally treat contact-handled low-level waste, and to certify and package the waste for disposal. Module 2A will provide waste receipt, confirmation, repackaging, certification, treatment, and/or storage of radioactive and/or mixed waste from onsite or from offsite sources.

Module 2A will be linked to Module 1 and the CWC via a transfer corridor for waste receipt and shipment. Waste always will be received from and transferred to the adjacent CWC. The incoming waste will be previously characterized contact-handled low-level waste.

Primary containment will prevent direct physical contact between the radioactive and/or mixed waste and personnel and will be provided by equipment process enclosures and the ventilation systems. Secondary containment will prevent release of radioactive and/or mixed waste to the environment and will be provided by the building shell and the secondary ventilation system.

Module 2B. Module 2B will be located in the 200 West Area. The elevation of Module 2B will be approximately 700 feet (213 meters) above mean sea level. Module 2B currently is envisioned to treat, characterize, certify, and ship remote-handled transuranic waste, low-level waste, and mixed waste in containers that are too large, too heavy, or too contaminated for Module 1 or Module 2A processing. The design and handling capacity of Module 2B currently is being developed; therefore, no design data are available to describe this module.

12. Give the location of the proposal. Give sufficient information for a person to understand the precise location of the 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.

The WRAP will be located in the 200 West Expansion Area west of Dayton Avenue and south of 23rd Street of the Hanford Site, approximately 25 miles (40 kilometers) north of Richland, Washington. Maps and plans of the 200 Areas and WRAP are contained in the *Notice of Intent for Construction of the Waste Receiving and Processing Facility* with which this SEPA Checklist is being submitted. The WRAP is located in the southwest 1/4, southwest 1/4, northwest 1/4, section 1, township 12N, range 25E.

B. ENVIRONMENTAL ELEMENTS

TO BE COMPLETED BY APPLICANT | **EVALUATIONS FOR AGENCY USE ONLY**

1. Earth

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

Flat.

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

TO BE COMPLETED BY APPLICANT

EVALUATIONS FOR AGENCY USE ONLY

The approximate slope of the land at WRAP is less than two percent.

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

The soil at the location of WRAP consists primarily of silty, sandy gravel.

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

No.

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

Excavation will be required for WRAP Modules 1, 2A, and 2B and trenching will be required for the underground utilities. Excavated material will be stockpiled for use as backfill. This excavation material also will be used, as required, for finish grading to blend the materials into the existing flat topography and to provide drainage away from all buildings.

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

Erosion due to wind and/or precipitation occurs.

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

Approximately 80 percent of WRAP will be covered with impervious surfaces. No changes are planned.

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

To control the amount of dust generated by construction activities, water trucks will be available to periodically spray the affected area. Paved access roadways and graveled parking areas

TO BE COMPLETED BY APPLICANT | **EVALUATIONS FOR AGENCY USE ONLY**

will be provided to minimize erosion because of vehicular traffic.

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.**

Minor amounts of vehicular exhaust will be generated by construction equipment and vehicles used by building personnel to gain access to the site. Minor amounts are expected because these are conditions experienced on current exposed excavation sites. Some dust will be generated during the construction phase. When the project is complete, air emissions will result.

Radioactive and hazardous air emissions might be generated as a result of the operation of Module 1 and 2A. Air emissions also might result from the thermal treatment operations that might be conducted within Module 2B.

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?**

To control the amount of dust generated by construction activities, water trucks will be available to periodically spray affected areas.

Modules 1, 2A, and 2B will have a containment system that will provide primary and secondary containment of the radioactive and/or mixed waste. A sophisticated ventilation system will use airlocks, pressure and temperature differentials, continuous air monitoring and surveillance equipment, and air scrubbers and filters to ensure that air emissions remain within applicable regulatory limits and guidelines.

TO BE COMPLETED BY APPLICANT

EVALUATIONS FOR AGENCY USE ONLY

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.

None.

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

Does not apply.

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.

None.

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

No.

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

No.

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.

No.

TO BE COMPLETED BY APPLICANT

EVALUATIONS FOR AGENCY USE ONLY

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.

No.

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.

A septic tank and drain field will be provided to receive sanitary waste from the restrooms, changerooms, showers, and lunchroom. The septic system will be designed with sufficient capacity to accommodate the work force.

The WRAP will provide the means to collect all liquid waste, retain the waste, sample the waste, treat and store the waste, and also could transfer any radioactive and/or mixed liquid waste to other onsite liquid treatment and disposal systems if deemed necessary. The WRAP will not dispose of any contaminated liquids to the soil column.

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.

Precipitation run-off in the shipping/receiving area will drain by way of floor drains to a sump. Liquid collected in the sump will be tested and, if contaminated, will be pumped to the liquid waste collection system.

TO BE COMPLETED BY APPLICANT

EVALUATIONS FOR AGENCY USE ONLY

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

Nonradioactive, nondangerous waste will be released to the soil column by way of the septic system and a system of floor drains. The WRAP will be designed to preclude the release of radioactive and/or mixed waste to ground or surface waters. Although a spill of this waste is highly improbable, if released to the soil, this waste eventually could enter the groundwater approximately 260 feet (79 meters) below the WRAP.

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

None.

4. Plants

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

___ deciduous tree: alder, maple, aspen, other
___ evergreen tree: fir, ceder, 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

The vegetation on the site consist of sagebrush, forbs, and other common central Washington desert plant species.

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

Grasses, shrubs, and forbs will be removed from building sites and areas to be paved.

940727.1350

TO BE COMPLETED BY APPLICANT

EVALUATIONS FOR AGENCY USE ONLY

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

None. However, additional information concerning endangered and threatened plants can be found in the environmental documents 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:

The area north and east of WRAP between Dayton Avenue, 23rd Street, and the WRAP will be landscaped. The landscaped areas will be provided with an irrigation system that will assist in preserving vegetation.

5. Animals

a. Indicate (by underlining) 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, songbirds, <u>other</u>
mammals: <u>deer</u>, bear, elk, beaver, <u>other</u>
fish: bass, salmon, trout, herring, shellfish, other

A variety of insects, birds, and mammals common to the Hanford Site, including pigeons, passerine birds, rodents, and lagomorphs have been observed at the proposed WRAP site. Larger mammals commonly seen in the vicinity include deer and coyote. Additional information on birds and animals can be found in the environmental documents referred to in the answer to Checklist Question A.8.

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

None. However, additional information concerning endangered and threatened species can be found in the environmental documents referred to in the answer to Checklist Question A.8.

9413279.1351

TO BE COMPLETED BY APPLICANT

EVALUATIONS FOR AGENCY USE ONLY

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

No.

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

None.

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.

Diesel fuel, gasoline, oil, and electrical power will be used to operate construction and operation equipment, to power building ventilation and lighting systems, and to provide process heating.

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:

Energy conservation guidelines outlined in the U.S. Department of Energy Order 6430.1A, "General Design Criteria," will be incorporated in the design. Each area will be subject to the air in-leakage depressurization test. The test will be done in accordance with American Society of Testing Materials E 779-87, "Standard Test Method for Determining Air Leakage Rate by Fan Pressurization". Only the depressurization test will need to be performed, and will demonstrate whether the building envelope meets the design specification for air tightness.

940727.1352

TO BE COMPLETED BY APPLICANT

EVALUATIONS FOR AGENCY USE ONLY

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.**

Yes. Review part 2 of this question for further details.

1) **Describe special emergency services that might be required.**

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

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

The WRAP will provide primary and secondary containment barriers to prevent the release of radioactive and/or mixed waste. Primary containment will prevent direct physical contact between the radioactive and/or mixed waste and personnel and will be provided by the process enclosures and the ventilation systems. Secondary containment will prevent release of radioactive and/or mixed waste to the environment and will be provided by the building enclosing the process enclosures and their ventilation system. The WRAP will be designed to withstand design-basis accidents as required by the U.S. Department of Energy Order 6430.1A.

The heating, ventilation, and air conditioning systems will be designed to meet the various operating requirements during the normal mode of operation. In the process area, including the shipping/receiving areas, the purpose of the heating, ventilation, and air conditioning systems will be to contain airborne contamination particulates generated by the waste treatment processes, and also provide for a safe and comfortable working indoor environment within the as low as reasonably achievable (ALARA) guidelines. These areas will

9413279.1353

TO BE COMPLETED BY APPLICANT | **EVALUATIONS FOR AGENCY USE ONLY**

be kept at a negative ambient air pressure with respect to the outdoors.

Fire protection systems for WRAP will be designed in accordance with U.S. Department of Energy standards and other applicable codes and standards. The WRAP will be constructed with noncombustible materials. The glovebox enclosures will be constructed of noncombustible materials with glass windows, and will contain inlet and outlet exhaust filters. The enclosures will prevent release of contamination.

b. Noise

1) What types of noise exist 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.

Excavation, construction, and operation of WRAP will increase noise levels in the immediate vicinity of the site. However, the remote location of the 200 West Area will prevent any detectable increase in noise levels off the Hanford Facility. The primary sources of noise will be heavy equipment during the construction phase and exhaust systems during the operational phase.

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

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

9412279.1354

TO BE COMPLETED BY APPLICANT

EVALUATIONS FOR AGENCY USE ONLY

8. Land and Shoreline Use

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

The Hanford Facility is a single RCRA facility identified by the U.S. Environmental Protection Agency (EPA)/State Identification Number WA7890008967 that consists of over 60 TSD units conducting dangerous waste management activities. These TSD units are included in the *Hanford Facility Dangerous Waste Part A Permit Application*. The Hanford Facility consists of all contiguous land, and structures, other appurtenances, and improvements on the land, used for recycling, reusing, reclaiming, transferring, storing, treating, or disposing of dangerous waste, which, for the purposes of the RCRA, are owned by the U.S. Government and operated by the DOE-RL (excluding lands north and east of the Columbia River, river islands, lands owned or used by the Bonneville Power Administration, lands leased or under lease obligation to the Washington Public Power Supply System, and lands owned by or leased to the state of Washington).

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

No portion of the 200 Areas has been used for agricultural purposes since 1943, if ever.

c. **Describe any structures on the site.**

Paved roads exist at the northern, southern, and eastern perimeters of the proposed site. No other structures presently exist on the site.

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

No.

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

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

TO BE COMPLETED BY APPLICANT

EVALUATIONS FOR AGENCY USE ONLY

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.

The entire Hanford Site was designated a National Environmental Research Park in 1977, for use as an outdoor laboratory for ecological research. However, the 200 Areas and WRAP, in particular, are located in a previously disturbed industrial area with little or no environmental significance.

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

No personnel will reside in WRAP. Module 1 is designed for an occupancy rate of approximately 60 fulltime personnel. The personnel requirements for WRAP Modules 2A and 2B are not determined. However, it is expected that Modules 2A and 2B will require a somewhat larger operating staff than Module 1.

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.

9413270.1356

TO BE COMPLETED BY APPLICANT

EVALUATIONS FOR AGENCY USE ONLY

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

Does not apply.

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?

WRAP Module 1 has a maximum height of approximately 50 feet (15 meters). The exact heights of Modules 2A and 2B are still being designed. However, it is not expected that the height of Modules 2A and 2B will substantially exceed the height of Module 1. The building exterior will consist of concrete, steel, and metal.

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.

941327.1357

TO BE COMPLETED BY APPLICANT | **EVALUATIONS FOR AGENCY USE ONLY**

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?

None.

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

940727.1403

TO BE COMPLETED BY APPLICANT

EVALUATIONS FOR AGENCY USE ONLY

are known to be on or next to WRAP. Additional information on the Hanford Site environment can be found in the environmental documents 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 at or next to WRAP. Additional information on the Hanford Site environment can be found in the environmental documents referred to in the answer to Checklist Question A.8.

NOTE: Pacific Northwest Laboratory recently filed a Request For Determination of Eligibility for the White Bluffs Road with the State Historic Preservation Office. If the road is found eligible, it might be necessary to determine if WRAP will have an effect on the historic property. Because the proposed site of WRAP is some distance from the road, it is not likely construction will impact the area to be preserved.

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

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

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 site is not publicly accessible, and, therefore, is not served by public transportation.

9413279.1359

TO BE COMPLETED BY APPLICANT

EVALUATIONS FOR AGENCY USE ONLY

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

The WRAP would not eliminate any parking spaces. A paved lot with 60 spaces for Module 1 personnel will be available, with spaces for automobiles, motorcycles, and handicapped parking. The number of parking spaces required for Modules 2A and 2B has yet to be determined. However, it is expected that the parking spaces created by Modules 2A and 2B substantially would not exceed the spaces created by Module 1.

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).

Some paved access roads are already in existence at the northern, southern, and eastern perimeters of the proposed site. Additional paving will be required for access to individual buildings. The roads will not be publicly accessible.

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.

Peak traffic volumes will occur at the beginning and end of regular 8-hour working shifts. Many employees, however, will use the onsite shuttle bus system that will transport employees from northern Richland to the site.

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

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

TO BE COMPLETED BY APPLICANT

EVALUATIONS FOR AGENCY USE ONLY

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):

Currently, there is an existing 13.8 kV electrical line and a 12-inch sanitary water line adjacent to the site.

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.

Electricity, sanitary water supplies, a sanitary sewer system, and telephone service will be provided. New electrical feeder lines will be brought from a new electrical substation. New pipelines extending from existing water mains and transfer pipes will provide sanitary water and necessary steam supplies. The sanitary sewer system will include a septic tank and drain field to discharge sanitary waste to the soil column.

940727.1403

SIGNATURES

The above 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.

James E. Rasmussen, Acting Program Manager — Date 7/29/94
Office of Environmental Assurance,
Permits, and Policy
U.S. Department of Energy
Richland Operations Office

W. T. Dixon, Manager — Date 7/29/94
Environmental Services
Westinghouse Hanford Company

9413279.1362

THIS PAGE INTENTIONALLY
LEFT BLANK

APPENDIX C

SUMMARY OF NOTICES OF COMPLIANCE VIOLATIONS AND THE U.S. DEPARTMENT OF ENERGY, RICHLAND OPERATIONS OFFICE RESPONSES

9413270.1363

This summary is prepared and maintained by Westinghouse Hanford Company - Environmental Services.

9407270.1333