Section B
Facility Description and General Provisions

Section B — Facility Description and General Provisions

Contents

Section **Page**

1. Introduction 3

2. General Description [806(4)(a)(i)] 3

3. Facility Description 4
3.1. BPA Ross Complex Location 4
3.2. HMB Operations 4
3.3. HMB Description 5
3.4. Area A – Drain and Flush/Tank Truck Loading (Rooms 115 and 116) 6
3.5. Area B – Covered Storage Area (Room 113) 7
3.6. Area C – Dangerous Waste Management Area (Permitted Unit) 7
3.7. Area D—Service Addition 8
3.8. Dangerous Waste Management from Off Site 8
3.9. Waste Generated at the BPA Ross Complex 8
3.10. General Description of Generation Points at the BPA Ross Complex 9

4. Topographic, Floodplain, and Windrose Maps 10

5. Seismic Considerations 11

6. Traffic Information 11

Table

(Located at end of text)

B-1 Wastes and Waste-Generating Activities at the BPA Ross Complex B-14

Figures

(Located at end of text)

B-1 BPA Ross Complex Boundary B-25
B-2 HMB B-27
B-3 Topographic Map B-29
B-4 Floodplain Map B-31
B-5 5-Year Windrose B-33

Attachments

(Located at end of text)

B-1 Correspondence with Washington Department of Ecology
B-2 EA/FONSI/Documents
B-3 CERCLA Delisting of BPA Ross Complex 61 FR 49690

Section B — Facility Description and General Provisions 806(4)(a)(i), (x), (xi), (xviii)

1. Introduction

1.1. This section provides a general description of the Hazardous Materials Building (HMB), processes at the Bonneville Power Administration (BPA) Ross Complex, its location and on-site operations, and the dangerous waste management activities conducted there.

1.2. Within the HMB, there are specific, dangerous waste management units that are the subject of this Dangerous Waste final status, or Resource Conservation and Recovery Act (RCRA) Part B permit (Permitted Unit).

2. General Description [806(4)(a)(i)]

2.1. The BPA Ross Complex is a federal government-owned facility operated by the Bonneville Power Administration, a distinct, self-contained federal agency under the U.S. Department of Energy (DOE). The BPA Ross Complex is an active facility that serves as the control center for the generation and transmission of electricity throughout the Pacific Northwest. Since its construction in 1939, the BPA Ross Complex has served as a headquarters for research and testing; maintenance, construction, and operations activities; and waste handling and storage facilities for BPA. The facility also includes a fully operational electrical substation, warehousing operations, and investment recovery operations.

2.2. Maintenance activities at the BPA Ross Complex routinely involve the storage and handling of organic and inorganic compounds, including polychlorinated biphenyls (PCBs), paints, solvents, used oil, and inorganic salts such as sand-blast grit.

2.3. The HMB is a centralized waste management facility serving the entire multi-state BPA service area. This area includes small or very small quantity generator facilities primarily in Oregon, Washington, Idaho, western Montana, northern California and northwestern Wyoming. The HMB is used to accumulate, store, and arrange for off-site recycling and disposal of dangerous wastes, PCBs, and electrical equipment.

2.4. The HMB receives and manages used oil, dangerous waste, and PCB-containing wastes that are generated by BPA both at the BPA Ross Complex and throughout BPA's service area. These wastes are generated from construction and maintenance activities at facilities owned, operated, or maintained by BPA.

2.5. BPA separates its dangerous waste materials into two categories: routinely generated dangerous wastes regulated by the State of Washington Dangerous Waste rules (173-303 WAC), and PCB solid and liquid wastes regulated under the Toxic Substances Control Act (TSCA). Dangerous waste and TSCA-regulated waste management activities are located in the HMB in separate waste management units.

2.6. The HMB also receives cleanup debris and maintenance wastes that are not regulated as either a dangerous waste or TSCA material. Attachment B-1 includes correspondence with the Washington Department of Ecology (Ecology) regarding such wastes. As noted in the correspondence, these wastes are exempted from dangerous waste listing, however, they are still subject to designation and are evaluated for dangerous waste characteristics. These wastes are typically contaminated with total petroleum hydrocarbon (TPH) and less than 50 parts per million (ppm) PCB and do not exhibit dangerous waste characteristics. Non-dangerous waste material is accumulated in the TSCA storage portion of the facility until it is shipped to a permitted solid waste disposal facility.

2.7. BPA's Investment Recovery Center (IRC) stores and processes surplus property for recycling or disposal.

2.7.1. Surplus property includes non-liquid-filled utility equipment, scrap metal, vehicles, and non-specialty equipment such as generators. Property is surplused using scrap metal recyclers for equipment and metals and through auctions and sales for reusable tools and equipment. IRC also collects e-waste that is sent to an off-site recycler.

2.7.2. Universal waste, such as mercury switches and batteries, are removed from electrical equipment and e-waste. These materials are collected and sent to the HMB for consolidation and shipment to an off-site recycling or disposal facility.

3. Facility Description

3.1. BPA Ross Complex Location

3.1.1. The BPA Ross Complex covers approximately 250 acres and is located within the city limits of Vancouver, in Clark County, Washington, as shown in Figure B-1, BPA Ross Complex Boundary.

3.1.2. The BPA Ross Complex address is 5411 NE Highway 99, Vancouver, Washington 98663. The mailing address is PO Box 491, Vancouver, Washington 98666.

3.1.3. The HMB is centered at Lat/Long 45.663 North 122.654 West. This can be entered into an application such as GoogleEarth as 45.633 -122.654 for geospatial navigation to the Site. Public Land Survey System (PLSS) coordinates are NE ¼ of the NW ¼ of Section 14 of Township 2 North and Range 1 East.

3.1.4. The BPA Ross Complex is bounded to the West by Highway 99 and a lightly populated residential district, to the North by Cold Creek Canyon and the Hazel Dell residential community, to the East by the Minnehaha residential community, and to the South by Burnt Bridge Creek and a residential area.

3.2. HMB Operations

3.2.1. The HMB houses various activities related to the management of oil-filled electrical equipment, used oil, PCBs, and dangerous wastes. Dangerous waste categories managed within the Permitted Unit include organic and inorganic wastes that are

listed as dangerous wastes (primarily from non-specific sources), exhibit certain hazardous or dangerous characteristics

3.2.2. Wastes generated throughout the BPA service area are transported, primarily by BPA, to the BPA Ross Complex for consolidation, processing,[1] and storage prior to shipment to a permitted off-site waste management facility. This management methodology allows for consolidation of wastes. In addition, this methodology provides the opportunity for more economical waste management through off-site vendors and provides the opportunity to more effectively manage the inherent risks associated with dangerous and toxic wastes through third parties.

3.2.3. This Part B permit applies only to the Permitted Unit (Area C, Figure B-2), which is the portion of the HMB used to manage dangerous wastes. This permit application does not apply to areas of the HMB that are used to manage TSCA-regulated waste (Areas A & B, Figure B-2).

3.3. HMB Description

3.3.1. BPA's HMB consists of a primary structure that was constructed in 1993 and a secondary Service Addition added in 2023. This building was designed and built for the sole purpose of handling and processing dangerous wastes and PCBs. The HMB is currently used for the storage of dangerous waste (includes used oil, spent antifreeze, and universal wastes) and TSCA solid and liquid wastes prior to shipment to a permitted off-site recycling facility or waste management facility. An ancillary function is the appraisal, testing, conditioning and maintenance of electrical equipment. The dangerous and TSCA waste storage areas in the building are operated for the primary purpose of storage, pending shipment to off-site recycling or treatment, storage, and disposal facilities.

3.3.2. The Permitted Unit was designed to receive and remove wastes at the truck loading and unloading area. This area is surfaced with concrete and is covered with a roof. The approach to the loading and unloading area is surfaced with asphalt. The loading and unloading area was designed and built with a secondary containment system to capture any liquid material should a release occur in this area.

3.3.3. The TSCA portion of the building (Areas A & B) are used to store electrical equipment scheduled for disposal or reuse; provide draining and flushing of electrical equipment; and store the oil drained from the equipment. Removal of mineral oil dielectric fluid (MODF) is conducted on site at the HMB and other buildings at the BPA Ross Complex. MODF may contain varying concentrations of PCBs. MODF may be reused in electrical equipment or shipped off site for disposal, energy recovery, or dechlorination and reuse. Off-site management options for used oil are dictated by federal PCB disposal regulations and Washington State used oil

[1] Administratively processed – no treatment occurs.

management regulations (WAC 173-303-515). Management of MODF in compliance with the federal PCB disposal regulations allows for the exemption of MODF that would otherwise be regulated as a Washington State-only listed dangerous waste. See Attachment B-1 for copies of correspondence with the Washington Department of Ecology confirming this exemption.

3.3.4. Within the dangerous waste-permitted portion of the HMB, BPA consolidates and compacts wastes in a specially designed and constructed Bulking Room. These activities are addressed in other sections of this permit application. The HMB is divided into four main areas, as shown in Figure B-2, and are described as follows.

3.4. Area A – Drain and Flush/Tank Truck Loading (Rooms 115 and 116)

3.4.1. Area A consists of Room 115 (Drain and Flush) and Room 116 (Tank Truck Loading).

3.4.2. In Room 115, electrical equipment is drained of MODF and flushed with mineral oil prior to shipment to an off-site recycling or disposal facility (for example, equipment that at one time contained PCBs at greater than or equal to 50 ppm).

3.4.3. MODF that has been drained from electrical equipment is managed according to the PCB content of the oil.

3.4.4. Draining and flushing is a batch-type process with process equipment, pumps, valves, and associated equipment operated manually.

3.4.5. The drain and flush area (Room 115) is divided into four drain bays, as described in Section D, based on the concentration of PCBs in the equipment to be drained:

- Bay One – Oil containing less than 2 ppm PCB
- Bay Two – Oil containing 2 ppm to 49 ppm PCB
- Bay Three – Oil containing less than 2 ppm PCB
- Bay Four – Oil containing 50 ppm or greater PCB

3.4.6. Four aboveground storage tanks used to store the PCB-containing oil are located in Room 115. The tanks in Bay One through Bay Three have a capacity of 1,000 gallons each. The Bay Four tank has a capacity of 500 gallons.

3.4.7. The tanks are operated according to the used oil and PCB regulatory requirements and are separate and distinct from the active dangerous waste management storage operations:

- Bay One Tank 1 – Oil contains less than 2 ppm PCB
- Bay Two Tank 2 – Oil contains 2 to 49 ppm PCB
- Bay Three Tank 3 – Oil contains less than 2 ppm PCB
- Bay Four Tank 4 – Oil contains 50 ppm or greater PCB

3.4.8. Oil accumulated in the Room 115 Storage Tank Bays One, Two, and Three are pumped into one of two 10,000-gallon oil storage tanks housed in the Tank Truck Loading area (Room 116). The tanks are located above ground within secondary containment.

3.4.9. Each 10,000-gallon tank is divided into two sections of 5,000 gallons each. The tanks are operated according to the federal and state used oil and PCB regulatory requirements and are separate and distinct from the active dangerous waste management storage operations:

- Tank 1A and 1B – Oil containing less than 2 ppm PCB
- Tank 2A and 2B – Oil containing 2 to 49 ppm PCB
- Tank 3A and 3B – New oil containing less than 2 ppm PCB

3.5. Area B – Covered Storage Area (Room 113)

3.5.1. Room 113 is used for storage of electrical equipment for reuse and disposal. Once equipment designated for disposal has been drained of MODF and flushed (Room 115, if required), it is returned to Room 113 for storage until the equipment is shipped to an off-site facility for salvage or disposal. Equipment that is designated for reuse is rehabilitated and returned to warehouse stock.

3.5.2. Universal waste batteries generated at the BPA Ross Complex and received from field locations are also stored here. The BPA Ross Complex is a large quantity handler of universal waste that both generates and receives waste from small quantity handlers of universal waste located in field locations.

3.5.3. Non-hazardous TSCA waste will also be stored in the western portion of the room.

3.6. Area C – Dangerous Waste Management Area (Permitted Unit)

3.6.1. The Permitted Unit consists of the Covered Loading and Unloading Area, Dangerous Waste Storage Area (Rooms 100 and 102), Electrical Work (Room 101), Shipping and Receiving Area (Room 103), and Bulking Room (Room 104).

3.6.2. The Covered Loading and Unloading Area is used for acceptance of waste generated off site and for shipment of waste for off-site recycling, storage, treatment, or disposal.

3.6.3. The Dangerous Waste Storage Area (Rooms 100 and 102) is located in the southeast section of the building and is used for storing containerized dangerous waste. The area is divided into separate storage areas for ignitable, reactive, acids, bases, or toxic wastes. Listed wastes generally consist of flammable solvents. These wastes are stored with other compatible wastes.

3.6.4. Room 101 is being used as a mixed use work and office area for electricians. Dangerous wastes are not stored in this room. There is however, a containment trench for this room that was part of the original building design to allow for possible future dangerous waste storage. The containment trench runs continuously

through the wall and is hydraulically tied to the containment trench in the adjacent Shipping and Receiving Room 103. For this reason, Room 101 is included as part of the Permitted Unit.

3.6.5. The Shipping and Receiving Area (Room 103) is used for receiving waste once containers are unloaded, for confirmation of the shipment and shipping paper processing, and transfer to storage. Similarly, when waste is shipped, the area functions as an interim transfer location during movement of containerized wastes from the storage area to transport vehicles.

3.6.6. The Bulking Room (Room 104) is used for consolidating similar waste into drums. Waste consolidation is performed as an efficiency measure when partially filled containers are received or when a number of small containers can be conveniently packaged into a single, larger container.

3.6.7. All HMB administrative functions take place in the Office Area. The Office Area includes HMB staff offices (Room 107), a Locker Room (Room 105), Restrooms (Rooms 109 and 112), Storage Room (Room 110), and Utility Room (Room 111). No dangerous waste management activities take place in the Office Area.

3.7. Area D—Service Addition

A Service Addition was completed in 2024 to allow some of the functions of the 1939 Untanking Tower (Ampere Building) that is being assessed for demolition. This Service Addition stands approximately 6 inches to the North of Room 101 the 1992 Z-1255 building. Primary Contractor is Mortenson Construction with Degenkalb as the Engineer of Record. Electrical Equipment will be maintained in this addition.

3.8. Dangerous Waste Management from Off Site

3.8.1. Dangerous wastes managed at the Permitted Unit are generated by BPA either at the BPA Ross Complex or within BPA's service area. No dangerous waste is generated at the Permitted Unit. For the most part, wastes generated at the BPA Ross Complex are representative of dangerous wastes that are generated by BPA generators outside the BPA Ross Complex.

3.8.2. Upon arrival at the BPA Ross Complex, wastes generated off site are transported directly to the Permitted Unit's Covered Loading and Unloading Area.

3.8.3. Dangerous waste received at the Permitted Unit is processed by a BPA HMB Material Handler. Detailed procedures for accepting, logging, storing, tracking, and shipping dangerous waste are presented in Sections C and D of this permit application.

3.9. Waste Generated at the BPA Ross Complex

3.9.1. Dangerous waste generated on site is accumulated in satellite accumulation areas central accumulation areas in accordance with Dangerous Waste regulations for generators and subsequently transferred to the Permitted Unit within the accumulation time limit.

3.9.2. Once received at the HMB, wastes generated at the BPA Ross Complex are managed in the same manner as wastes received from off site.

3.10. General Description of Generation Points at the BPA Ross Complex

3.10.1. Generation points located at the BPA Ross Complex are described in the following subsections. A tabular summary of routine wastes generated at the facility is provided in Table B-1.

3.10.2. Service Addition HMB (Z-1255): Electricians maintain BPA high-voltage electrical equipment.

3.10.3. MHQ Maintenance Building (Z-1558): Substation Maintenance provides preventive and corrective maintenance activities on BPA's high-voltage equipment and replacement of equipment to ensure reliable performance of the high-voltage switching, transmission, and reactive equipment installed in substation yards.

3.10.4. Technical Services Building (Z-1592): There are three primary work groups in this building. Power System Control (PSC) designs, installs, and operates telecom and control systems. PSC also conducts electronic testing and repair of telecom and control equipment. System Protection Control (SPC) provides preventive, corrective, and emergency maintenance on relays, revenue meters, substation control systems, and various types of substation monitoring and control equipment. The Protection and Control Laboratory evaluates the design of new equipment or methods to better protect, control, or meter the power system; modifies used protection and control equipment to perform new functions; refurbishes equipment for return to service; and performs quality assurance tests on new protection and control equipment.

3.10.5. Switchboard Shop—Warehouse Building (Z-759): The Switchboard Shop constructs electronic and electrical rack and panel assemblies for installation on the BPA power system.

3.10.6. Investment Recovery Center (Z-761): The IRC receives and sorts equipment and materials from field locations to be recycled or repurposed for use within the BPA system.

3.10.7. Testing and Energization Shop—Construction Services Building (Z-610): The work at this shop ensures that the high-voltage facilities and control and communication systems constructed by BPA are satisfactorily integrated into the BPA transmission system.

3.10.8. Chemistry and Calibration Lab (Z-1596): The Instrumentation and Standards Laboratory provides calibration and repair services for BPA's test instruments; performs quality assurance tests on new test instruments; manages the instrument loan pool; develops measurement systems and prototype instrumentation; and performs special tests and studies. The Chemistry Laboratory conducts analysis of dielectric fluid for operational purposes and for determination of PCB content. Primarily (for the purposes of this application), the Chemistry Laboratory conducts analysis of BPA solid waste from on-site and off-site generators to determine or

confirm the wastes' regulatory status and provides as-needed chemistry consulting expertise.

3.10.9. Civil and Mechanical Laboratories—Soils Laboratory and Mechanical Laboratory Building (Z-686): The Civil and Mechanical Laboratories provide materials, structural, civil, and mechanical testing services to address design, construction, and operation and maintenance of the BPA system. Testing includes structural strength, vibration and noise, high current heat cycle, energy conservation, metallurgy, materials acceptance, and line maintenance tool design.

3.10.10. High Voltage Laboratory—Carey Test Laboratory Building (Z-760): The High Voltage Laboratory provides electrical testing and consultation services and supports BPA's transmission technology research and development by initiating and performing laboratory investigations and demonstration projects.

3.10.11. Heavy Mobile Equipment Garage—Fleet Services Building (Z-1579): The garage provides maintenance and repair for BPA-owned and General Service Administration-leased heavy mobile equipment, engine generators for BPA microwave power system control facilities, and selected items of work equipment containing engines.

3.10.12. Paint Shop—Plant Services Building (Z-671): The Paint Shop is located within the Plant Services Building (PSB) which also houses a 90-day dangerous waste storage area. The shop prepares surfaces for painting by sandblasting, scraping, and sanding, then applying a surface coating to a variety of parts and equipment. Located east of the Paint Shop in the Z-1091 Paint Thinner Storage Building, is a recycling (distillation) unit for lacquer thinner. This distillation unit is not expected to function in the foreseeable future.

3.10.13. Construction Shops—Plant Services Building (Z-671): The Construction Shops include the Carpenter Shop, Small Tool Repair Shop, Plumbing Shop, Welding Shop, Machine Shop, and Sheetmetal Fabrication Shop; all of these shops perform various support functions. These facilities build, repair, and manufacture items used within the BPA service area.

4. Topographic, Floodplain, and Windrose Maps

4.1. Figure B-3, the facility topographic map, presents the following information:

- Contours
- Facility legal boundaries
- Map scale, orientation, and date
- Surface waters
- Surrounding land use
- Backup water supply wells on site (currently none in service)

- Buildings and structures
- Location of hazardous waste management unit
- Facility access roads
- Site storm drainage patterns in the vicinity of the HMB

4.2. Figure B-4 depicts floodplains in the vicinity of the site. The facility complex, including the HMB, is located outside the 100-year floodplain and within zone C, except for a small portion of the southwestern corner of the facility.

4.3. Figure B-5 is a 5-year windrose for the vicinity of the site.

5. Seismic Considerations

5.1. The HMB was designed to meet seismic zone 3 standards, as provided in the 1991 Uniform Building Code per Final Design Solution for the Hazardous and Toxic Materials Handling Facility, CH2M Hill, March 17, 1992. The 2023 HMB Service Addition was designed to meet ASCE 7 code requirement.

6. Traffic Information

6.1. Access to the BPA Ross Complex is typically from state Highway 99 via Interstate Highway 5 (I-5). Traffic lights are located at the entrance to the facility on Highway 99. Stop signs are located on site at appropriate intersections (Figure B-1).

6.2. The public currently uses N.E. Ross Street, which runs east and west within the facility, and N.E. 15th Avenue, which runs north and south and terminates as a public right-of-way at N.E. Ross Street.

6.3. From Highway 99 to the HMB, traffic typically proceeds to N.E. Ross Street. From N.E. Ross Street, traffic proceeds east to the eastern entry and unnamed private BPA roadway heading north to the northern private road (North Road) and west to the HMB. Vehicles leaving the HMB typically travel west on North Road to Highway 99 and then to I-5.

6.4. All site roadways have an asphalt surface. Private vehicles not on official business are limited to travel to and from designated parking areas and are not permitted in work areas. Large and oversized loads have a leading flag person to ensure the safety of all traffic that may be encountered.

6.5. Traffic at the facility carrying dangerous waste to and from the Permitted Unit is accomplished by light, medium, and heavy vehicles that are both BPA- and contractor-owned.

6.6. Typically, incoming dangerous waste shipments are transported on BPA-owned vehicles and outgoing dangerous waste shipments would typically be conveyed by contractor vehicles. At times there is a combination of BPA- and contractor-owned vehicles used to transport dangerous waste off site.

END SECTION B TEXT (TABLE, FIGURES AND ATTACHMENTS TO FOLLOW)

Tables – Section B

Table B-1 Wastes and Waste-Generating Activities at BPA Ross Complex				
	Activity/Waste Stream	**Waste Stream Location**	**Waste Designation**	**Management Disposal**
Hazardous Materials Building (HMB—Z-1255)	PCB/non-hazardous solvent-contaminated solids (sorbents). (50 ppm or greater PCB) (generated in Drain and Flush Bay)	Rm 113	IWS-142 Solid Waste/TSCA	Via HMB
	Oil/non-hazardous solvent-contaminated solids (sorbents). (< 50 ppm PCB) (generated in Drain and Flush Bay)	Rm 113	IWS-143 Solid Waste/TSCA	Via HMB
Service Addition (HMB addition—Z-1255): Maintain BPA high-voltage electrical equipment, including transformers, reactors, circuit breakers, and bushings.	Non-hazardous solvent-contaminated solids (sorbents) used during maintenance, testing, and cleanup of electrical equipment. (2-49 ppm PCB) (55 gal.)	In Service Addition near filter press apparatus	IWS-143	Via HMB
	Oil and non-hazardous solvent-contaminated solids (sorbents) used during maintenance, testing, and cleanup of electrical equipment. (<2 ppm PCB) (55 gal.)	In Service Addition near filter press apparatus	IWS-144 Solid Waste/TSCA	Via HMB
	Spent sandblast media	One unit in Service Addition and one in Room 113	Tested each time	Via HMB
	Spent molecular sieves, activated alumna, sulfur hexafluoride arc products, and contaminated solids. (55 gal.) No satellite area—taken to HMB as generated.	NA	IWS-444 D005, D007, D011, WSC2	Via HMB
	Insulating oil (2-49 ppm PCB)	Service Addition near filter press apparatus	IWS-113 Used Oil	Via HMB
	Insulating oil (< 2 ppm PCB)	Service Addition near filter press apparatus	IWS-114 Used Oil	Via HMB
	Used compressor oil (55 gal.). Non-hazardous used oil.	Near filter press apparatus	IWS-115 Used Oil	Via HMB
	Aerosol Cans	Service Addition and HV Shop	IWS-007	Via HMB
	Universal waste batteries	Service Addition and HV Shop	IWS-005	Via HMB
	Oil-contaminated water from condensation of filter press. Non-hazardous waste.	Outside building at filter press exhaust	Unnumbered waste stream	Via HMB

Table B-1
Wastes and Waste-Generating Activities at BPA Ross Complex

	Activity/Waste Stream	Waste Stream Location	Waste Designation	Management Disposal
Substation Maintenance (Maintenance HQ—Z-1558): Perform preventive and corrective maintenance activities on BPA's high-voltage equipment and provide replacement of equipment to assure reliable performance of the high-voltage switching, transformation, and reactive equipment installed in substation yards.	Spent sandblast media. Metal parts are blasted to remove rust.	Shop adjacent to blast unit	Tested each time	Via HMB
	Used insulating oil from cleanup and maintenance of electrical equipment with less than 50 ppm PCB. (Waste from Ross District)	Outside storage building	IWS-113 Used Oil	Via HMB
	Aerosol Cans	Storage Container to West of MHQ Maint.	IWS-007	Via HMB
	Used compressor oil (55 gal.). Non-hazardous used oil.	Outside storage building	IWS-115 Used Oil	Via HMB
	Used oil and d-limonene solvent-contaminated solids used during maintenance, testing, and cleanup of electrical equipment. (2-49 ppm PCB) (Waste from Ross District)	Outside storage building	IWS-143 Solid Waste/TSCA	Via HMB
Power System Control (PSC) (Technical Services Building Z-1592): Design, install, and operate telephone communications and control systems and conduct electronic testing and repair of telecommunications and control equipment.	Aerosol Cans	Shop	IWS-007	Via HMB
System Protection Control (SPC) (Technical Services Building Z-1592):: Provide preventive, corrective, and emergency maintenance on relays, revenue meters, sub-station control systems, and various types of substation monitoring and control equipment.	Aerosol Cans	Shop	IWS-007	Via HMB
	Small PCB capacitors removed from dismantled control equipment	Rare generation—no satellite accumulation; waste taken directly to HMB	Knowledge of waste Solid Waste/TSCA	Via HMB
	Universal waste batteries	Shop	IWS-005	Via HMB
Switchboard Shop Warehouse Building—Z-759: Construct control systems and equipment for use on the BPA power system.	Aerosol Cans	Shop	IWS-007	Via HMB

Table B-1 Wastes and Waste-Generating Activities at BPA Ross Complex				
	Activity/Waste Stream	**Waste Stream Location**	**Waste Designation**	**Management Disposal**
Testing and Energization Shop (Construction Services Building—Z-610): Ensures that high voltage facilities and control and communication systems constructed by BPA are satisfactorily integrated into the BPA transmission system.	NA—Provide testing services. No hazardous waste generation.	NA	NA	NA
Instrumentation and Standards Laboratory (Chemistry and Calibration Lab Z-1596): Provides calibration and repair services for BPA's test instruments; performs quality assurance tests on new test instruments; manages an instrument loan pool; develops measurement systems and prototype instrumentation; and performs special tests and studies.	Non-hazardous wipes and cotton -tipped swabs with isopropyl alcohol	NA	Solid Waste	Solid waste landfill
	Circuit boards	Shop	NA	Recycled via IRC
	Universal waste batteries	Shop	IWS-005	Via HMB
	Aerosol Cans	Shop	IWS-007	Via HMB
Protection and Control Laboratory (Technical Services Building Z-1592): Evaluates the design of new equipment or methods to better protect, control, or meter the power system; modifies used protection and control equipment to perform new functions; refurbishes retired equipment for return to service; and performs quality assurance tests on new protection and control equipment.	Aerosol Cans	Shop	IWS-007	Via HMB
	Non-hazardous wipes	NA	Solid Waste	Solid waste landfill

Table B-1
Wastes and Waste-Generating Activities at BPA Ross Complex

	Activity/Waste Stream	Waste Stream Location	Waste Designation	Management Disposal
Civil, Mechanical and Geotechnical Laboratories (Mangan Lab Z-686): Provides materials, structural, civil, and mechanical testing services to address design, construction, operation, and maintenance of the BPA system. Testing includes structural strength, vibration, noise, high current heat cycle, energy conservation, metallurgy, materials acceptance, and line maintenance tool design.	NA—Provide testing services. No hazardous waste generation/ accumulation.	NA	NA	NA
	Aerosol Cans	Shop	IWS-007	Via HMB
	Non-hazardous wipes	NA	Solid Waste	Solid waste landfill
High Voltage Laboratory (Carey Test Lab—Z-760): Provides electrical testing and consultation services and supports BPA's transmission technology research and development by initiating and performing laboratory investigations and demonstration projects.	NA—Provide testing services. No hazardous waste generation/ accumulation.	NA	NA	NA

Table B-1
Wastes and Waste-Generating Activities at BPA Ross Complex

	Activity/Waste Stream	Waste Stream Location	Waste Designation	Management Disposal
Chemistry Services (Chemistry Calibration Lab Z-1596) Provides chemical testing and consultation services to address environmental and regulatory issues for the operation and maintenance of the BPA system; assists in the evaluation and implementation of new products and processes, and addresses safety concerns and issues.	90-day generator storage building (RCRA) stores waste from benchtop satellite accumulation areas.	Lab storage shed; CCL		Via HMB
	30-day storage building (TSCA)	Lab storage shed; CCL		Via HMB
	Used oil storage	Lab storage shed;		Via HMB
	Waste isooctane in 2 mL vials from hydrocarbon analysis (very minimal waste generation—vials placed in Annex waste stream IWS-511).	Instrumentation room at Gas Chromatograph	IWS-511 D001	Via HMB
	TCLP extract, nitric acid from ICP metals analysis. DW satellite accumulation area. (5 gal.)	Instrumentation room at ICP Instrument	D002, D004, D005, D006, D007, D008, D009, D010, D011	Via HMB
	Used oil from gas and oil analysis	Main Lab at Head Space Analyzer and Gas and Oil Station	IWS-113 Used Oil	Via HMB
	Spent safety solvent used for washing gas and oil testing cylinders. No satellite accumulation. Waste stream when spent (approx. biannually) is placed directly into 90-day storage area.	Under hood on north side of main lab	Unnumbered waste stream	Via HMB
	Waste Karl Fischer reagent and oil from oil/water testing. DW satellite accumulation area. (1 gal.)	Main lab at Aquatest instrument	IWS-513 D001, D022 WT01, WP01 ORU004	Via HMB
	Spent titration solution consisting of toluene and isopropanol used in testing for neutralization number. DW satellite accumulation area. (1 gal.)	Main lab at titrating station	IWS-514 D001, F005, WT01, ORU220	Via HMB
	Waste isooctane from TPH analysis. DW satellite accumulation area. (1 gal.)	At Accelerated Solvent Extraction Instrument in Annex	D001	Recycled in-house via RU-CL-1
	Waste isooctane from PCB in oil analysis. (5 mL vials)	Under hood in main part of Annex	D001	Recycled in-house via RU-CL-1
	Waste Isooctane and oil mixture from PCB testing. >500 ppm PCB (2 mL vials)	(TSCA Waste Stream) Located in main part of laboratory	IWS-511 D001	Via HMB

Table B-1
Wastes and Waste-Generating Activities at BPA Ross Complex

	Activity/Waste Stream	Waste Stream Location	Waste Designation	Management Disposal
	Rags, sorbents, cups, and soil samples with PCB >50 ppm	(TSCA Waste Stream) Main Annex moved to 85-gal. salvage drum in 30-day storage area	IWS-142 Solid/TSCA Waste	Via HMB
Fleet Services Building (Z-1579): Provide routine maintenance and repair to BPA-owned and GSA-leased heavy mobile equipment, engine generators for BPA microwave power system control facilities, and selected items of work equipment containing engines.	Used compressor, lubricating, motor oil, and power steering fluids. Used oil collection tank	Larger tank on West Side of Building (750 gal. UL-142 tank)	IWS-115 Used Oil	Recycled by Clean Harbors or other authorized contractor service
	Waste unleaded gasoline. No satellite area—generated only on occasion.	NA	IWS-712 D001, D018	Via HMB
	Spent antifreeze (55 gal.)	West Side of Building Interior	IWS-713 non-dangerous waste when recycled	Recycled by Clean Harbors
	Parts Washer Solvents	NA—no satellite area		Recycled by Clean Harbors or other authorized contractor service
	Contaminated shop rags	Main bay	NA	Recycled at Industrial Laundry
	Used Oil filter collection (85 gal.)	West Side of building	Used Oil	Via HMB
	Used automotive batteries	Parts area (East side)		Recycled via Vendor
	Spent sandblast grit. No satellite area—waste removed from unit following testing and disposed accordingly	NA	Characterized each time	Solid waste landfill or HMB
	Used tires	NA	NA	Recycled via IRC
	Scrap metals	NA	NA	Recycled via IRC
	Aerosol Cans	Two labeled drums on floor at point of generation	IWS-007	Via HMB
Paint Shop (Maintenance and Construction Services Building—Z-671): Prepare surfaces for painting by sandblasting, scraping, sanding, and applying surface coatings to a variety of BPA equipment and facilities.	Spent sand blast media	SA-PA-1 One DW Satellite Accumulation Area inside Blast Shed	Sampled every time D006, D007, D008, typically non-DW	Via HMB
	Spent water based Aerogreen 4110 from panel wash tank	Z-1091 Paint Thinner Storage	As sampled. Typically non-haz	Via HMB
	Spent lacquer thinner from cleaning paint guns	Z-9130 Flammable Storage Container	IWS-311	Via HMB

Table B-1 Wastes and Waste-Generating Activities at BPA Ross Complex				
	Activity/Waste Stream	**Waste Stream Location**	**Waste Designation**	**Management Disposal**
	Paint-contaminated rags, downdraft filters, and sorbents from painting operations	DW satellite accumulation area	IWS-341 D007, D008	Via HMB
	Lacquer thinner distillation unit	Z-9130 Flammable Storage Container	NA	NA; has not operated after 2016
	Dust from Pauli and Griffin Bead Blast Unit	55-gal. drum next to unit	Non-hazardous	Via HMB
	Cured urethane and epoxy paints	Z-9130 Flammable Storage Container	Non-hazardous	Via HMB
	Excess Powder from Powder Coat	Powder Booth	Non-hazardous	Part D Landfill
Construction Shops (Plant Services Building—Z-671; Welding Shop; Machine Shop, and Sheetmetal Fabrication Shop, Facilities Maintenance.	PSB central 90-day storage area	Used to store blast media, machine coolants, and other wastes from shops pending analysis	Mix of DW, RCRA and Non-Hazardous wastes	Via HMB
	Lacquer thinner contaminated rags from cleanup of metal surfaces	SA-SP-1 DW satellite accumulation area in welding shop (55 gal.)	D001	Via HMB
	Aerosol Cans—accumulation area	BP-SP-1 Outside tool crib	IWS-007	Via HMB
	Spent Machine Coolant	90-Day Storage area	IWS-912	Via HMB
	Spent cleaning acid solution from cleaning metal parts	Tank located in Welding Shop; no satellite area. Waste taken directly to 90-day storage area when generated	D002	Via HMB
	Parts washing fluids and filters: One part washer in Machine Shop	NA—no satellite area .	Sampled each time	Via HMB
	Oil -contaminated rags and sorbents <2 ppm PCB	Machine Shop (55 gal. drum)	IWS-144 Non-hazardous	Via HMB
	Off-spec gasoline for recycling	DW Satellite Accumu-lation Area SA-SP-3	IWS 712	Via HMB
	Scrap metal	Bins located in Machine Shop	NA	Recycled via scrap metal processers
	Water Jet Mud from cutting	Profiled waste taken immediately offsite via truck to disposal facility	Tested each time; 2x per year waste stream	Via service provider such as Cowlitz Clean Sweep

Table B-1
Wastes and Waste-Generating Activities at BPA Ross Complex

	Activity/Waste Stream	Waste Stream Location	Waste Designation	Management Disposal
Investment Recovery Center – (Z-761) Storage and processing of surplus property for recycling or disposal.	E-Waste Collection Center	E-Waste Collection Building		Via IRC contracts

Figures – Section B

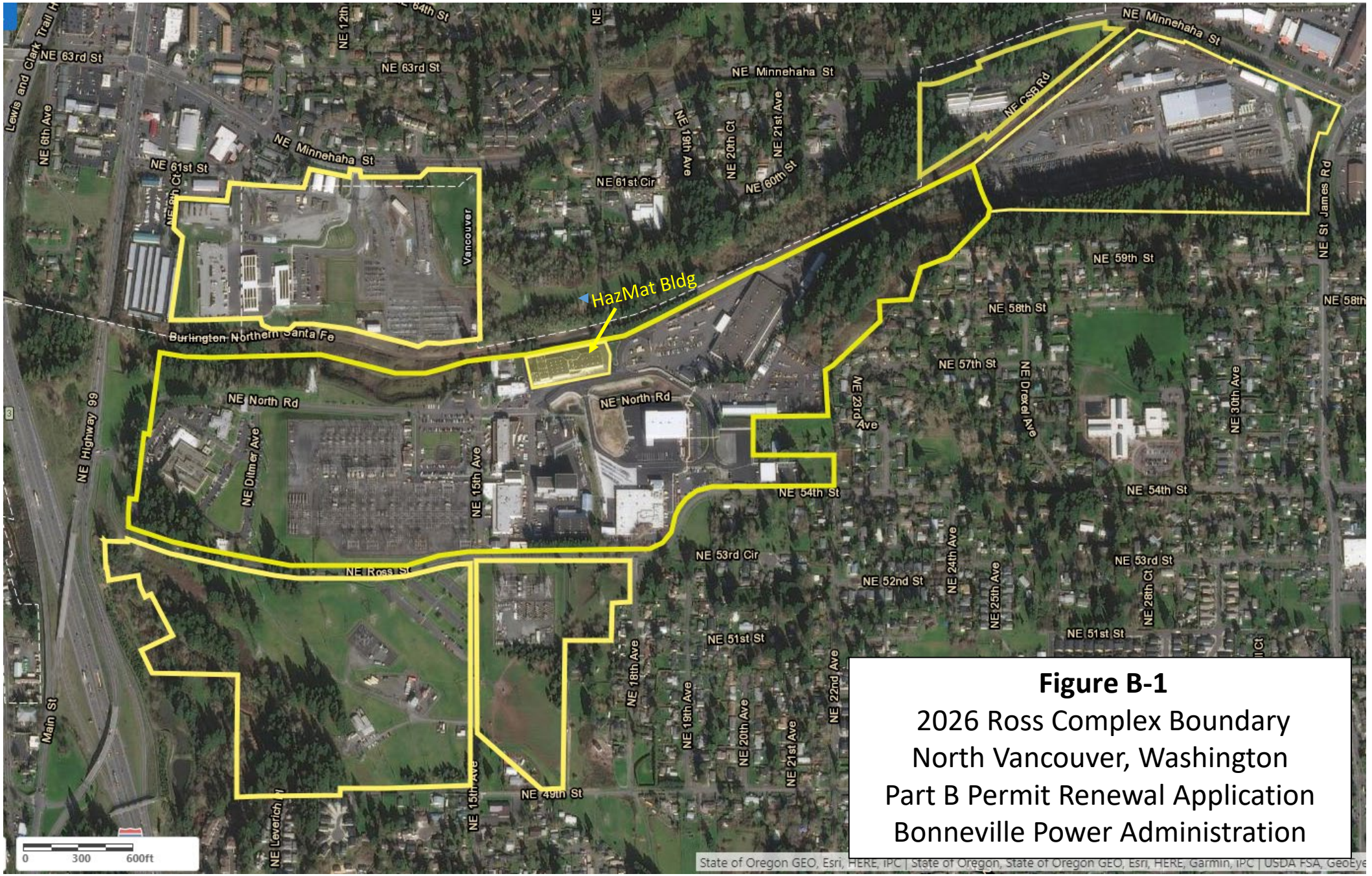


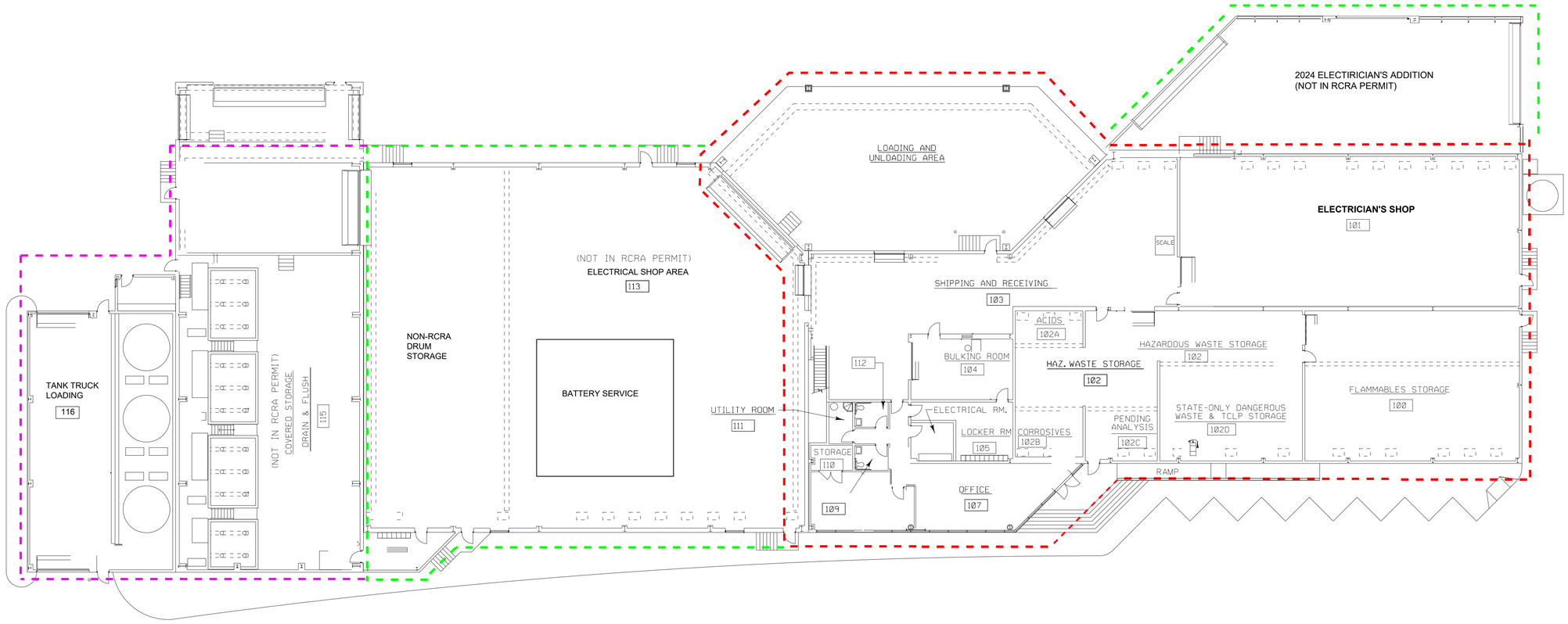
Figure B-1

2026 Ross Complex Boundary
North Vancouver, Washington
Part B Permit Renewal Application
Bonneville Power Administration

SECTION XVI: BPA ROSS HMB PART B PERMITTED PLAN

LEGEND

- EQUIPMENT DRAIN BAY
- NON RCRA STORAGE AND SHOP AREAS
- PART B PERMITTED AREA



SCALE 1/32" = 1'-0" 0 4 8 16 32 48 FT

Official Use Only

NO.		PL-6	COMPUTER REVISION ONLY	BY	DATE	APPROVED

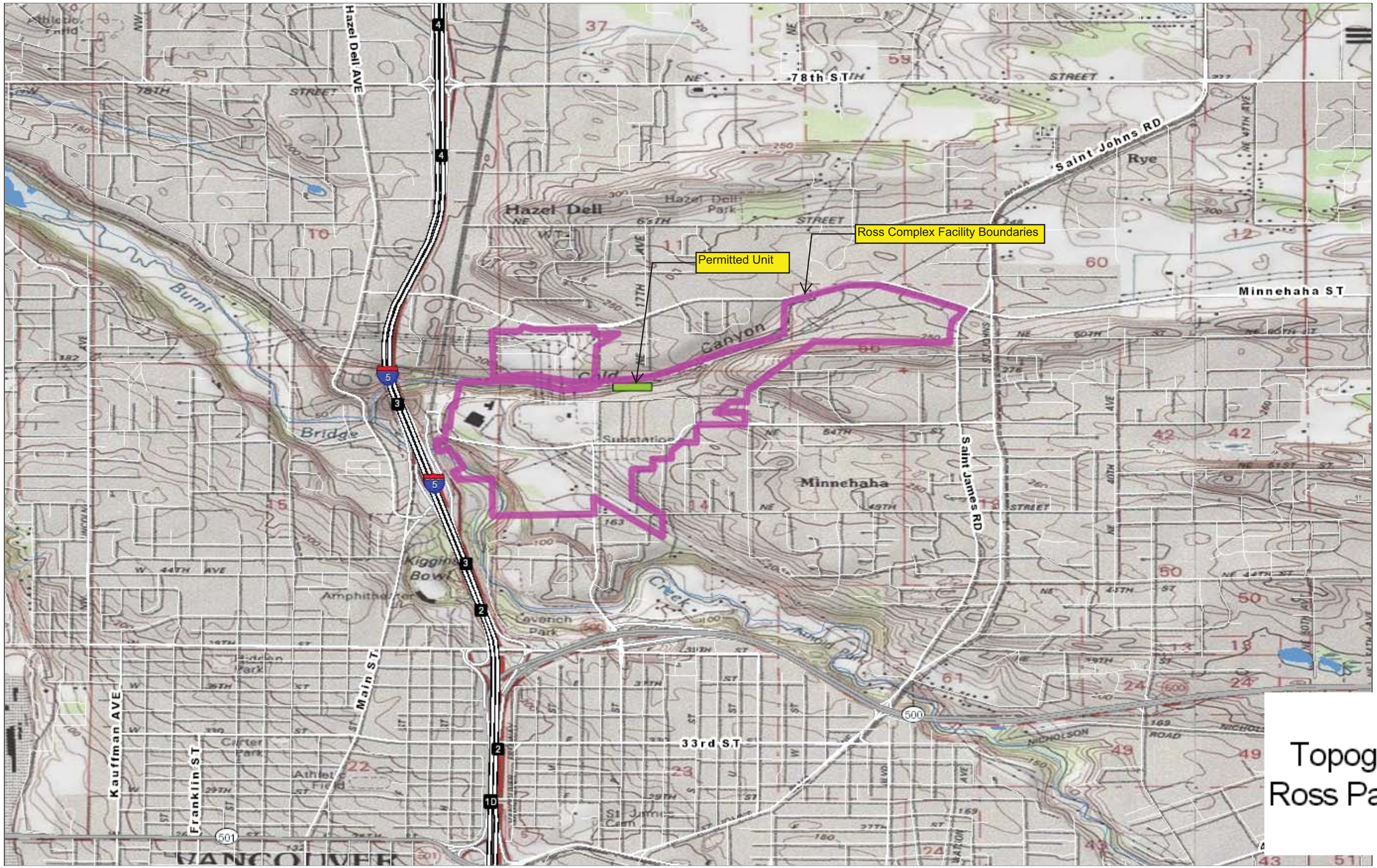
Drawn BE BOSCO
Envsp SG HUGILL
Chkd
Appr
Date Updated 07-18-2024

UNITED STATES DEPARTMENT OF ENERGY
BONNEVILLE POWER ADMINISTRATION
HEADQUARTERS, PORTLAND, OREGON

FIGURE B-2
HAZARDOUS MATERIALS BUILDING
FLOOR PLAN AND PERMITTED AREAS
ROSS PART B PERMIT RENEWAL

SERIAL	SOURCE	SIZE	SHEET	REVISION
PART B	KEP	B	1 OF 1	Ø

Ross Complex Topographic Map



0.7 0 0.33 0.7 Miles

1: 21,186

Map Created By: Bonneville Power Map Created Date: 5/25/2010 8:59 AM

Official Use Only

This product was made for informational and display purposes only and was created with best available data at time of production. It does not represent any legal information or boundaries. BPA GIS Database, 2009.

THIS MAP IS NOT TO BE USED FOR NAVIGATION

Legend

- Exit Numbers
- Interstate
- US Highway
- State Highway
- Major Roads
- Local Street
- Ramps
- Other Roads
- Forest Service Road (24k)
- Rivers and Streams (50k)
- Lakes and Water Bodies (50
- Pacific Ocean (500k)
- NGS USA Topographic Map

Figure B-3
Topographic Map
Ross Part B Permit Renewal

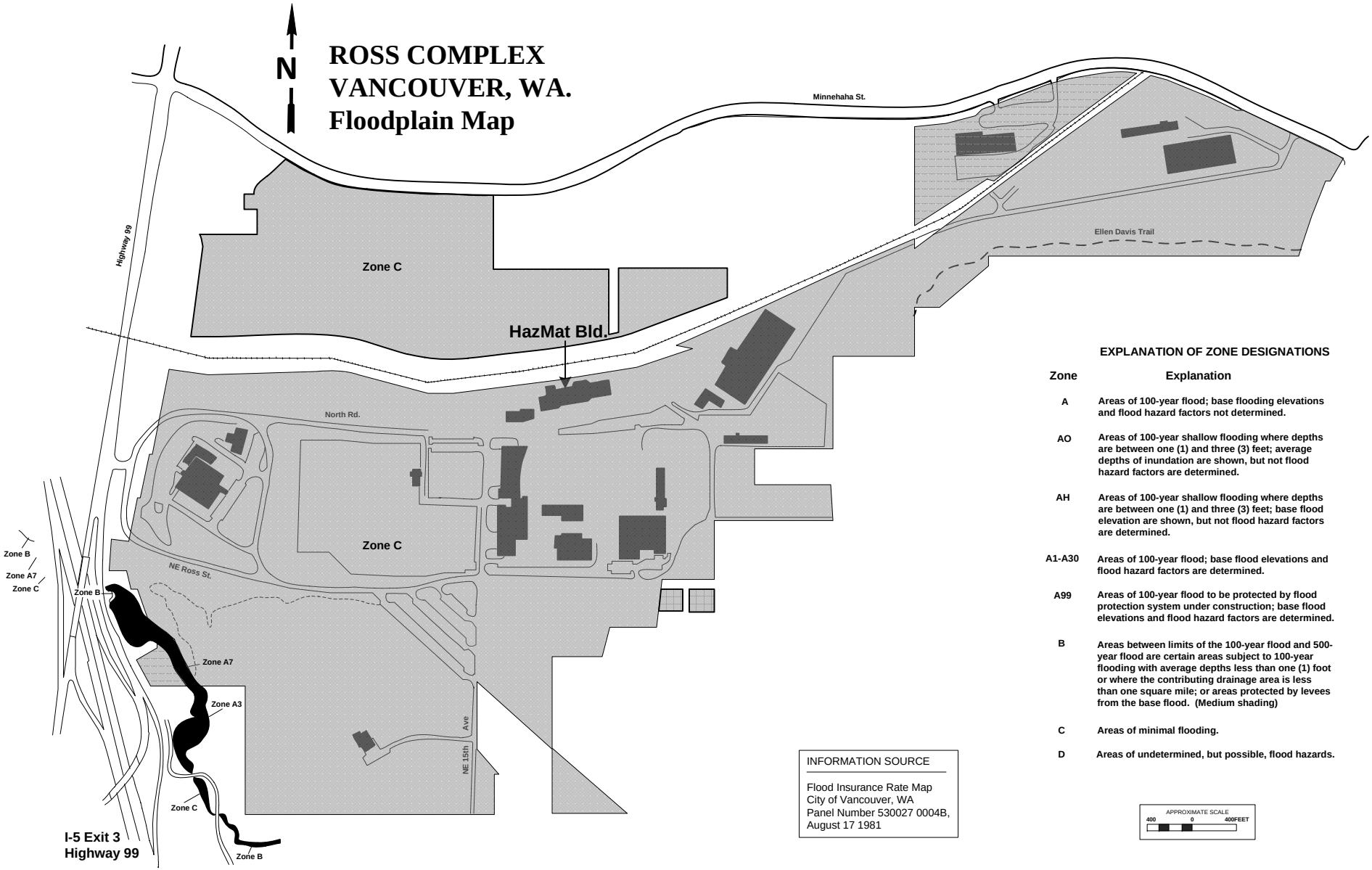


Figure B-4
Floodplain Map
Ross Part B Permit Renewal

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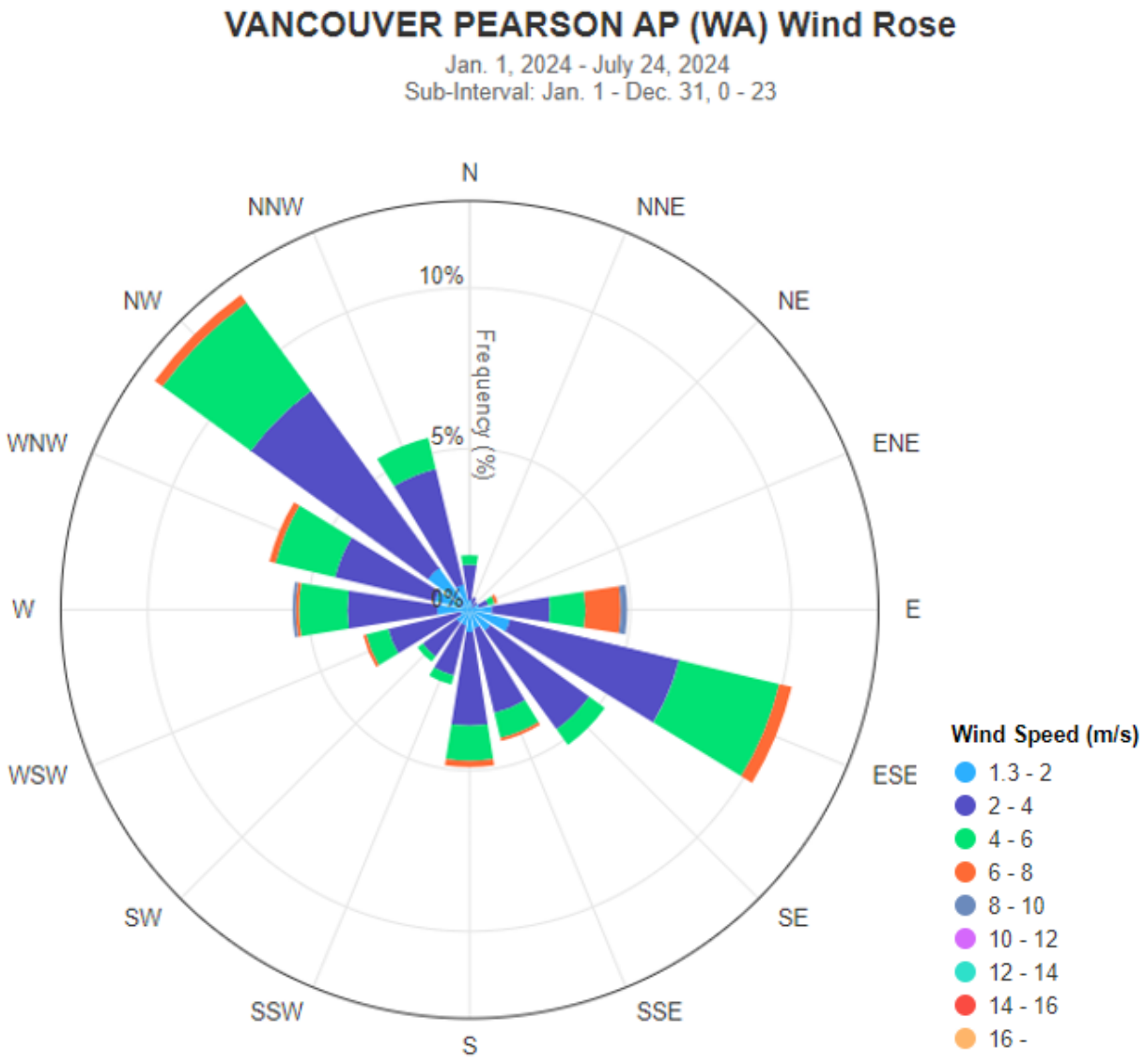


FIGURE B-5

Five-Year Windrose

Pearson Airport, Vancouver WA

BPA Ross Part B Permit Renewal

2024 MRCC (Purdue U)

Attachments – Section B

Attachment B-1

Correspondence with Washington Department of Ecology

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
PO Box 47600 • Olympia, WA 98504-7600 • 360-407-6000
TTY 711 or 800-833-6388 (For the Speech or Hearing Impaired)

March 26, 2007

Ken Morgan
Ken Morgan Consulting
509 South Liberty Street
Port Angeles, WA 98362

Dear Mr. Morgan:

Thank you for the inquiry regarding the option of treating mineral oil containing 2-49 ppm of PCB's rather than burning mineral oil containing low levels of PCBs for energy recovery. Your inquiry stated that under the current TSCA regulations, liquids containing PCBs at a concentration of 2 ppm or greater must have the PCB's destroyed. The TSCA regulations do not allow the reuse or recycling of PCB's. There are currently only two known technologies that can destroy PCBs; high temperature incineration and chemical detoxification (de-chlorination). With high temperature incineration, the PCBs are heated to a high enough temperature to insure that the biphenyl molecule is destroyed and the chlorine gas is removed from the exhaust by wet scrubbers. In chemical detoxification, metallic sodium is used to break the chlorine bond to the biphenyl molecule and water reacts with the free chlorine atoms to form hydrochloric acid and the biphenyl molecules to form aromatic hydrocarbons. The sodium then neutralizes the hydrochloric acid.

In the past, the de-chlorinated mineral oil was traditionally sold and burned in place of virgin oil. However, recently with the high cost of virgin mineral oil and current prices vary between $8 and $10 a gallon depending on volume, the de-chlorinated mineral oil is currently being used as an ingredient in the manufacture of commercial products, including but not limited to explosives and form oil. Recently, you have been requested by some members of the NWPPA's Environmental Task Force to determine how the chemical detoxification process being offered by a company out of the Midwest that can treat the volume of low level PCB mineral oil currently being generated in the northwest would be handled under the Washington State Department of Ecology Dangerous Waste Regulations (WAC Chapter 173-303).

Their proposal would include the consolidation of the low level PCB mineral oil currently being generated in the northwest in Portland, Oregon and then being shipped by rail to the Midwest for chemical detoxification. Once the low level PCB mineral oil is

received, it would be chemically detoxified as described above, and then allowed to sit for gravity separation of the less than 2 ppm PCB mineral oil from the brine water which contains any excess sodium and the salt formed from the hydrochloric acid reacting with the sodium upon separation, the brine water is tested to determine if it is a hazardous waste, and this testing has not yet designated the brine water as a hazardous waste, then the brine water is sent to Texas for deep well injection. The mineral oil is then tested to insure that it meets the product ingredient specification, which it always has, before being shipped to the manufacturer for inclusion in their products.

When the mineral oil has been tested and shown to contain less then 2 ppm of PCBs, the company performing the chemical detoxification would issue a certificate of destruction for the PCBs only since the mineral oil that now contains less than 2 ppm of PCBs is being used as an ingredient in either the manufacturing of explosive or form oil. The storage of the low level PCB mineral oil by the generator would continue to be in full compliance with 40 CFR 761 and WAC 173-303-515 and in Portland the storage of the oil would continue to be in full compliance with 40 CFR 761 and OAR 340-111 which is equivalent to WAC 173-303-515 and the destruction of the PCBs would be in full compliance with 40 CFR 761 Subpart D.

Your questions under this scenario were; would the used mineral oil containing between 2 and 49 ppm of PCBs produced by electric utilities in the State of Washington count toward their generator status and, would the used mineral oil containing less than 50 ppm of PCBs have to be manifested under this scenario?

In response to these questions: The used oil containing less than 50 ppm of PCBs is going to a facility that under the Washington State Dangerous Waste Regulations (WAC Chapter 173-303) would be considered a used oil processor which is not making a fuel but is chemically treating/processing the used oil to make a used oil derived product. If the facility has an EPA ID number as a used oil processor, then your Washington State clients would be sending their used oil to the facility under WAC Chapter 173-303-515 and the used oil would not count toward your client's generator status and the used oil would not have to be manifested.

Sincerely,

Thomas M. Cusack

Thomas M. Cusack
Hazardous Waste Specialist

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
PO Box 47600 • Olympia, WA 98504-7600 • 360-407-6000
711 for Washington Relay Service • Persons with a speech disability can call 877-833-6341

March 27, 2008

Ken Morgan
Ken Morgan Consulting
509 South Liberty Street
Port Angeles, WA 98362

RE: Waste subject to PCB listing

Dear Mr. Morgan:

This letter is in response to a recent meeting we had with members of the Northwest Power Association (NWP). During that meeting we discussed the management of PCB waste, wastes captured under the WPCB listing description[1] and when those wastes are captured. An issue the NWP would like Ecology to address is those wastes generated from routine maintenance of transformers versus the same waste generated from the discarding, rebuilding or salvaging of transformers. In general, Ecology agrees waste generated from the discarding, salvaging and rebuilding of transformers is WPCB listed waste while similar waste from the maintenance of the same transformer is not (with an exception of bushings).

The risk posed to human health and the environment by PCBs is not dependent on whether the waste is listed or not. The degree of risk depends on the concentration of the PCB, and how the PCB waste is managed.

Bushings: As stated by NWP, bushings are replaced during routine maintenance of transformers. However those bushing qualify as WPCB listed waste because they are to be disposed of or discarded. In addition, bushings are specifically pulled out and listed in the WPCB description. So whether they were generated during rebuilding or maintenance is not an issue.

WPCB wastes: According to the listing description for WPCB the following are listed wastes (as long as the PCB concentration is at or above 2.0 ppm):

[1] WAC 173-303-9904

1) Discarded transformers, capacitors and bushings[2].
2) Cooling and insulating fluids, cores and core papers generated from the salvaging, rebuilding or discarding of transformers, capacitors and bushings.

Additional WPCB waste: Under the mixture rule[3] listed WPCB waste mixed with solid wastes (for example: rags, personal protection gear, "soil", small parts, spills) becomes a larger volume of WPCB listed waste.
Also, in relation to the derived from rule[4] any waste generated from the treatment, recycling or disposal of a WPCB listed waste becomes WPCB waste (for example: rags, personal protection gear, "soil", small parts, spills). In either case the first requirement is for the waste to be listed WPCB waste.

Routine maintenance of transformers: According to NWP (and Ecology agrees with) routine maintenance includes the following activities and does not involve the removal of cores or core papers:

1) Bushing replacement
2) Gasket replacement
3) Fuse holder replacement
4) Electrical connection work
5) Replacing secondary connectors
6) Tap changes
7) Paint touch up
8) Temporarily removing the cooling and insulating fluids to conduct the above maintenance activities.

Ecology agrees that gaskets, fuse holders and other small parts, rags, soil, personal protection equipment. are not listed WPCB waste when generated from the maintenance activities listed above (the bushings are however listed WPCB wastes). The intent of routine maintenance is to keep the working transformers in service.

Rebuilding of transformers: Activities other then those identified as "maintenance activities" above would be considered rebuilding and include the removal of cores, core papers and cooling and insulating fluids.

Future outlook: Ecology has become concerned about persistent bioaccumulative toxins (PBTs) since the original rule that listed PCBs as a dangerous waste in 1982. There is an on-going effort funded by the Legislature for the State to develop chemical action plans to respond to the threat posed by PBTs. PCBs are considered a PBT.

---

[2] Except when drained of all free flowing liquids
[3] WAC 173-303-082(3)
[4] WAC 173-303-070(2)

As mentioned earlier to the NWP, the Hazardous Waste & Toxics Reduction Program will be consulting with the agency's PBT workgroup. The management of PCBs will likely be addressed in some fashion by Ecology in the near future. The members of the NWP should consider the risks and liabilities posed by continuing to landfill this waste in a solid waste landfill.

Other management options: With the above said, the NWP could look into the PCB exclusion[5] and the conditional exclusion for special wastes [6] within the Dangerous Waste Regulations as possible management options for listed WPCB wastes.

If you have any additional questions please contact me at (360) 407-6755.

Sincerely,

Thomas M Cusack

Thomas M. Cusack

cc: Ava Edmonson, SWRO
Kerry Graber, SWRO

[5] WAC 173-303-071(3)(k)
[6] WAC 173-303-073

Attachment B-2

EA/FONSI/Documents

DEPARTMENT OF ENERGY

Bonneville Power Administration

Ross Complex Hazardous and Toxic Materials Handling Facility Project
Vancouver, Washington
Finding of No Significant Impact

AGENCY: Bonneville Power Administration (BPA), Department of Energy (DOE)

ACTION: Finding of No Significant Impact for the Ross Hazardous and Toxic Materials Handling Facility, Vancouver, Washington

SUMMARY: BPA proposes to build a hazardous and toxic materials handling facility (1) to consolidate existing hazardous materials and hazardous and toxic waste handling activities and (2) to efficiently utilize existing support structures and manpower at its only permitted treatment, storage, and disposal facility: the Ross Complex in Vancouver, Washington. BPA has prepared an environmental assessment (EA), DOE/EA-0733, evaluating the environmental effects of the proposed project. Based on the analysis in the EA, DOE has determined that the proposed project is not a major Federal action significantly affecting the quality of the human environment within the meaning of the National Environmental Policy Act (NEPA) of 1969 (42 U.S.C. 4321 *et seq.*). Therefore, the preparation of an environmental impact statement (EIS) is not required and DOE is issuing this Finding of No Significant Impact (FONSI).

FOR FURTHER INFORMATION: For further information regarding the proposed project, contact: John Taves, Environmental Coordinator for the Office of Engineering, Bonneville Power Administration, P.O. Box 3621-EFBG, Portland, Oregon 97208, 503-230-4995.

For information on DOE NEPA procedures or the status of a NEPA review, contact: Carol M. Borgstrom, Director, Office of NEPA Oversight, EH-25, U.S. Department of Energy, 1000 Independence Avenue SW, Washington, DC 20585, 202-586-4600.

SUPPLEMENTARY INFORMATION: BPA proposes to build a hazardous and toxic materials handling facility at the Ross Complex in Vancouver, Washington. The Ross Complex is BPA's only treatment, storage and disposal facility permitted under the Resource Conservation and Recovery Act (RCRA). The purpose of the facility is to consolidate all hazardous and toxic materials and waste handling activities at a single, previously developed location on the Ross Complex and to efficiently utilize existing support structures and manpower. These wastes are to be consolidated prior to permanent disposal at a site approved by the Environmental Protection Agency (EPA). All activities that would occur under the proposal are currently on-going activities at the Ross Complex. The facility would be designed to meet current Federal and State regulatory requirements and will comply with applicable permit requirements.

As described in the EA, the preferred alternative and other alternatives as well as the No Action alternative were evaluated. There is no feasible alternative to the proposed project that meets BPA's need to dispose of hazardous and toxic wastes safely and efficiently.

The proposed facility will be built on a previously developed site within the boundaries of the complex, consistent with the municipal land use ordinance. There will be no impacts to wildlife, endangered or threatened species, cultural resources, or groundwater. Potential impacts to soils and surface

water caused by facility construction will be temporary, confined to the boundaries of the complex, and minimized by mitigative measures such as erosion and dust controls. As the facility will be designed to meet strict Federal and State regulations, risks to human health and the environment are minimal. In addition, BPA has developed facility plans (e.g., safety, spill response, fire, other emergency) that would further protect human health and safety. Efforts will be made to minimize both the short- and long-term noise and visual impacts of construction and operation of the facility. In addition, measures will be taken to maintain transportation safety in and around the facility.

PUBLIC AVAILABILITY: This FONSI will be distributed to persons and agencies known to be interested in or affected by the proposed action.

DETERMINATION: Based on the information in the EA, DOE determines that this proposed action is not a major Federal action significantly affecting the quality of the human environment within the meaning of NEPA. Therefore, an EIS will not be prepared and DOE is issuing this FONSI.

Issued in Washington, DC, on July 6, 1992.

for Paul L. Ziemer, Ph.D
Assistant Secretary
Environment, Safety and Health

Department of Energy
Bonneville Power Administration
P.O. Box 3621
Portland, Oregon 97208-3621
June 2, 1992

In reply refer to: EFBG

Dear Neighbor:

In the last few months, you have received information from Bonneville Power Administration (BPA) about our plans for the future of the Ross Complex in Vancouver, Washington. One of the items we have mentioned is a new handling facility for hazardous and toxic materials. This proposal was outlined in two factsheets circulated as part of the public review material on the Ross Complex Development Guide. This same information was presented at a January 29 public meeting on the Development Guide.

BPA has now developed a detailed proposal for the hazardous and toxic materials handling facility. This proposal would consolidate existing procedures in a state-of-the-art facility designed for environmental safety. It would fulfill all current state and Federal regulatory requirements.

An environmental assessment (EA) of the proposal is enclosed for your review. If you would like to comment on the EA or request additional information on the proposal, you may do so by letter or in person. Comments on the EA should be addressed to:

Jo Ann C. Scott
Public Involvement Manager
Bonneville Power Administration - ALP
P.O. Box 3621
Portland, OR 97208

Close of comments is June 24, 1992. All comments should be in the mail by that date.

We appreciate your interest in the proposal. Please do not hesitate to call me at (206) 690-2380, or Nancy Wittpenn at (503) 230-3297 with any questions.

Sincerely,

Dave Dunahay
Ross Complex Site Manager

Enclosure

Ross Hazardous and Toxic Materials Handling Facility

Environmental Assessment

DOE/EA-0733

Bonneville
POWER ADMINISTRATION

June 1992

Environmental Assessment

Ross Hazardous and Toxic Materials Handling Facility

Prepared for:

Facilities Planning Branch
Division of Facilities Engineering
Bonneville Power Administration
905 N.E. Eleventh Avenue
Portland, Oregon 97208

Prepared by:

URS Consultants, Inc.

June 1992

TABLE OF CONTENTS

Section		Page
ACRONYMS		iii
BACKGROUND		1
1.0 NEED FOR ACTION		4
2.0 ALTERNATIVES		7
2.1	NO ACTION	7
	2.1.1 CURRENT WASTE HANDLING PROCEDURES	8
2.2	DESCRIPTION OF PROPOSED ACTION	10
	2.2.1 FUNCTIONS AND PHYSICAL CHARACTERISTICS	10
	2.2.2 PROPOSED WASTE HANDLING	16
2.3	ALTERNATIVES ELIMINATED FROM CONSIDERATION	18
3.0 EXISTING CONDITIONS, ENVIRONMENTAL IMPACTS, AND MITIGATION		19
3.1	GEOLOGY AND SOILS	19
3.2	SURFACE WATER	20
3.3	GROUNDWATER	22
3.4	LAND USE	23
3.5	REGULATORY STATUS	24
3.6	HEALTH RISK/CONTAMINANT PATHWAYS	26
3.7	TRANSPORTATION	27
3.8	VISUAL IMPACTS	29
3.9	THREATENED AND ENDANGERED SPECIES	32
3.10	CULTURAL RESOURCES	33
3.11	NOISE	33
3.12	WILDLIFE	34
3.13	CONSTRUCTION IMPACTS	35
4.0 SUMMARY AND CONCLUSIONS		37
5.0 AGENCIES CONSULTED		42

FIGURES

Number		Page
1	Ross Complex and Vancouver Vicinity	2
2	Existing Flow Diagram for Used Equipment Rehabilitation and Disposal	8
3	Vicinity Map; BPA Ross Complex	9
4	Proposed Project Plan; BPA Ross Complex	11
5	Proposed Flow Diagram for Used Oil-Filled Equipment Rehabilitation and Disposal	17
6	Proposed Project Site; Looking Northwest from the North Access Road at the Existing PCB Storage Building	31
7	Proposed Project Site; Looking South from the End of N.E. 17th Avenue, across Cold Creek Canyon	31
8	Proposed Project Site; Looking West from N.E. 57th Street	32

TABLES

Number		Page
1	H&TMHF Environmental Assessment Design Table	15

ACRONYMS

ADT	average daily traffic
BPA	Bonneville Power Administration
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act of 1980
CFR	Code of Federal Regulations
cfs	cubic feet per second
DOE	United States Department of Energy
EA	Environmental Assessment
Ecology	Washington State Department of Ecology
EPA	United States Environmental Protection Agency
FEMA	Federal Emergency Management Agency
I-5	Interstate 5
LOS	Level of Service
ML	City of Vancouver light industrial zoning classification
NEPA	National Environmental Policy Act
OSHA	Occupational Safety and Health Act/Administration
PCB	Polychlorinated biphenyl
ppb	parts per billion
ppm	parts per million
RCRA	Resource Conservation and Recovery Act
SHPO	State Historic Preservation Officer/Office
SPCC	Spill Prevention, Control, and Countermeasure
SR	State Route
SWAPCA	Southwest Air Pollution Control Authority
TSCA	Toxic Substances Control Act
TSD	Treatment, Storage, and Disposal
U&D	Utilization and Disposal
US	United States
USFWS	United States Fish and Wildlife Service
USGS	United States Geologic Survey
vpd	vehicles per day
WAC	Washington Administrative Code

BACKGROUND

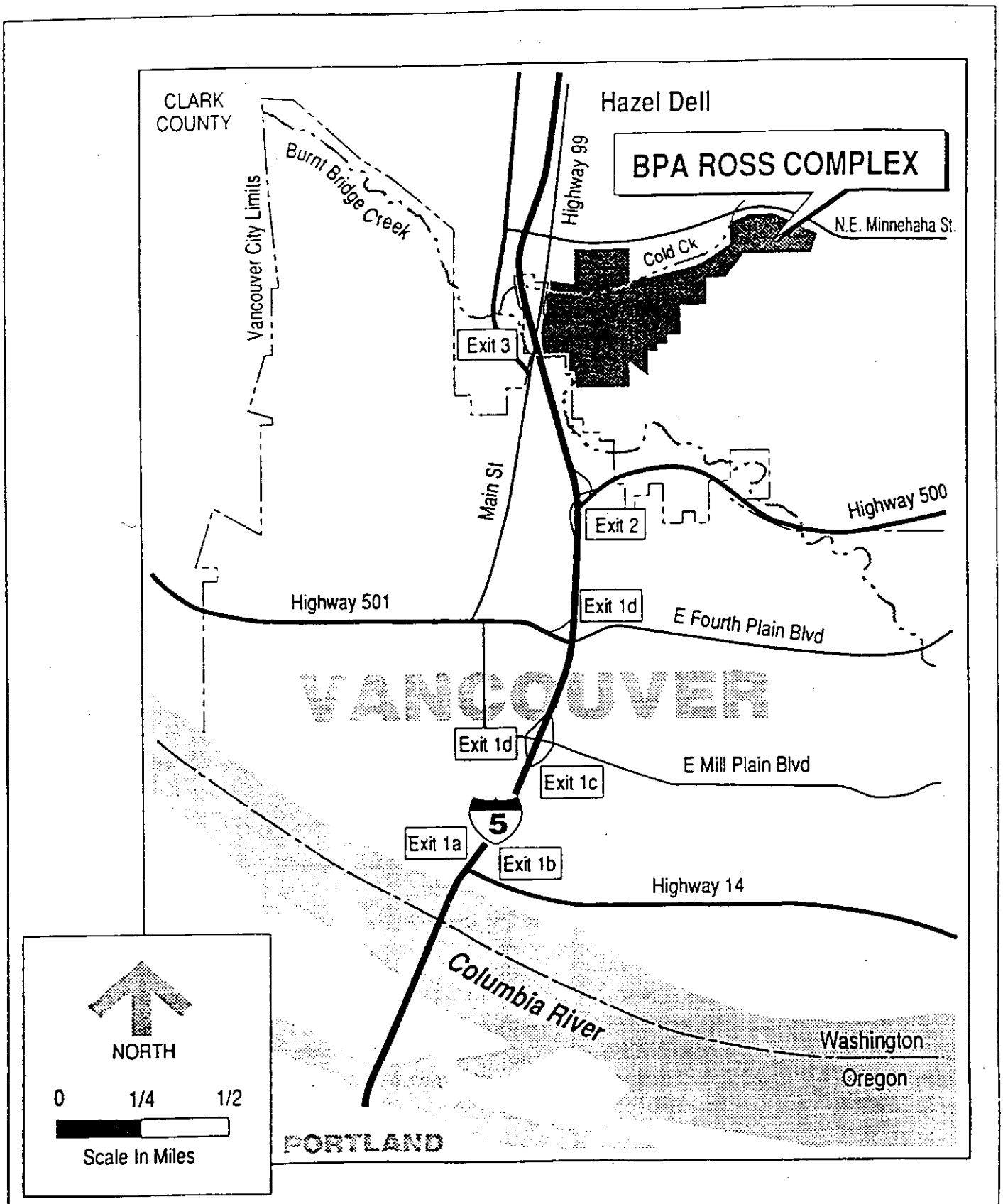
The Bonneville Power Administration (BPA) owns a 200-acre facility in Washington State known as the Ross Complex. It is located in the northern part of the city of Vancouver, east of Highway 99 and north of State Route (SR) 500 (Figure 1). Since its construction, the Complex has provided research and testing facilities, as well as maintenance, construction, materials and procurement operations, and waste handling for BPA. The Complex is an active facility that has been owned and operated by BPA since 1939.

Activities at the Ross Complex routinely involve handling toxic substances such as oil-filled electrical equipment containing polychlorinated biphenyls (PCBs), organic and inorganic compounds for preserving wood transmission poles, and paints, solvents, waste oils, and pesticides and herbicides. Hazardous waste management is a common activity on-site, and hazardous and toxic substances are often generated from these and off-site activities. The subject of this environmental assessment (EA) concerns the consolidation of hazardous and toxic substances handling at the Complex.

The existing hazardous materials handling practices primarily involve oil-filled equipment which is either in active service or is to be removed from service for disposal, much of which is contaminated with PCBs. The Ross Complex is BPA's only permitted Treatment, Storage, and Disposal (TSD) Facility and as a result serves as the central collection point for potentially hazardous waste and equipment generated at all BPA facilities. In addition, the Complex is the site for storage and processing of the majority of spare and replacement parts and equipment in the BPA region.

A major step toward improving the hazardous materials handling on-site is the proposed construction of a new hazardous waste and toxic substances handling facility (the proposal or facility). It would replace the existing PCB Storage Building, with a facility dedicated to draining and flushing of oil-filled equipment scheduled for disposal. It would also upgrade the facilities for storage of other hazardous wastes.

This environmental assessment has been developed to identify the potential environmental impacts of the construction and operation of the proposal. It has been prepared to meet the requirements of the National Environmental Policy Act (NEPA) to determine if the proposed action is likely to have a significant impact on the environment. In addition to the design elements included within the project, mitigation measures have been identified within various sections that are now incorporated within the project. This facility would be designed to improve the current waste handling practices and to assist BPA in meeting Federal and state regulations. A discussion of the need for the proposal is provided in Section 1.0 - Need for Action. Details on the proposed project are provided in Section 2.0 - Alternatives. Section 3.0 discusses the environmental impacts of the proposal; Section 4.0 provides a summary, and Section 5.0 lists agencies consulted.



URS CONSULTANTS

Figure 1
Ross Complex and Vancouver Vicinity

BPA Ross Complex

Terminology

The wastes and chemicals handled, stored, and disposed of at this facility are referred to as "materials" or "wastes" in this EA. These are lay terms that are understandable to the public and have little regulatory significance. This is done to simplify the language in the EA.

Various regulations ascribe specific meaning to words like "toxic substances," "hazardous waste," "hazardous materials," and others. The same container may have different classifications and handling requirements depending upon tests run on it, storage time, and whether it is to be kept, processed, or eliminated. To simplify the discussion, all hazardous or toxic compounds to be handled by the proposed facility that are not to be disposed of are referred to as "hazardous materials." All such items designated for disposal are referred to as "hazardous waste."

The purpose of the facility is to receive equipment and materials shipped to Ross, separate the hazardous materials from the non-hazardous materials, classify that which should be discarded as waste for disposal, and return reconditioned equipment to the field.

Mitigation

The environmental impact evaluation conducted for this Environmental Assessment evaluated the impacts of the proposal. In some cases, additional suggestions were made to mitigate potential impacts even if the impacts were minor. These suggestions have been adopted and are now part of the project. They are listed in each section under "Mitigation." Each of the mitigation steps listed will be implemented by BPA.

Relationship to Other Activities at the Ross Complex

Cleanup Activities Areas of the Ross Complex have been contaminated by past activities on the site. These areas are being cleaned up at the present time under requirements of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). The CERCLA cleanup activities are separate from, and independent of, the proposal. BPA has made a commitment to clean up any contaminated areas on-site and to work to prevent further environmental contamination. Part of that commitment involves improving the way that wastes are currently handled. This EA does not discuss any of the impacts or activities associated with the CERCLA cleanup process.

Ross Complex Development Guide When completed and adopted by BPA management, this guide will contain a strategy for future development of the Ross Complex. This EA does not address the activities associated with the Development Guide or assume that any of these activities will occur.

1.0 NEED FOR ACTION

BPA needs the proposal in order to consolidate existing hazardous waste and toxic substance handling activities, and to effectively utilize existing support structures and personnel at its only permitted treatment, storage, and disposal facility (the Ross Complex). This facility would be designed to enhance environmental safety and would fulfill all current Federal and state regulatory requirements.

The proposed facility would:

- Comply with existing Federal and state regulations.
- Provide a drain and flush facility for oil-filled electrical equipment including equipment containing PCB-contaminated oil.
- Provide an upgraded hazardous materials storage area.
- Improve the material handling process in the bushing farm, and oil and equipment loading areas.

There are a number of concerns that underscore the need for a new facility to handle wastes, some of which are summarized below. A map of the Ross Complex is included in Section 2.0. See Figure 3 for the location of buildings referred to in the following discussion.

- The existing hazardous waste storage capacity is insufficient.

  Washington State requires that a spacing of at least 30 inches be maintained between rows of waste stored in drums, to facilitate inspection. The size of existing buildings makes this recommendation difficult to meet. The proposed project would provide significant additional storage space and larger entrances for improved equipment handling.

- Design of the existing Hazardous Waste Storage Building is out of date.

  Federal regulations require that incompatible hazardous wastes be separated by dikes, berms, walls, or other devices. The existing building does not provide the four bays required by the regulation. The new facility would allow for separate storage of flammables, corrosives, and poisons and would provide additional area to adequately handle incoming waste.

- Outdoor storage of PCB-contaminated equipment is limited by time.

  Under Federal regulations, PCB waste cannot be stored outside for more than 30 days after the date it is removed from service for disposal. By this time the item must be drained or moved to indoor storage. Meeting the 30 day deadline has been difficult because the only facility capable of draining and flushing the equipment (the Untanking Tower) is only available on the weekends. During the work week, the Untanking Tower is used to drain and rehabilitate equipment that needs to be returned to service, therefore the draining of equipment slated for disposal has been relegated to the weekends. The new facility would provide for the draining and flushing of this equipment throughout the work week, thereby getting equipment drained faster and improving compliance with storage time limits.

- Storage of PCB-contaminated liquids at the Untanking Tower lacks secondary containment.

  PCB-contaminated oil resulting from the draining of equipment at the Untanking Tower is currently stored in tanks that do not have secondary containment as required by state and Federal regulations. (Secondary containment is a sealed collection system which would collect any spill.) The area does drain to oil water separators. The proposed facility would provide secondary containment within the building and in the areas set aside for the loading and unloading of trucks.

- The current materials handling practices are inefficient.

  At this time, the handling of hazardous waste and toxic substances, including oil-filled equipment is spread out over several areas across the Ross Complex. This requires increased man-power for proper management. Additional handling caused by these inefficiencies creates a greater risk for spillage.

In addition to satisfying BPA's needs, the construction of the proposal at the Complex would provide BPA with the following benefits:

- Reduced risk of environmental contamination by removing oil-filled electrical equipment from outdoor storage.

- Reduced risk of exposure to PCBs by creating enclosed drain and flush process for oil-filled electrical equipment.

- Reduced risk from exposure to hazardous waste on site by improving waste handling and storage.

- Consolidation of the waste handling process into a single area that meets current regulations.

- Increased waste storage and handling capability.
- Opportunity for streamlining of materials management.

2.0 ALTERNATIVES

2.1 NO ACTION

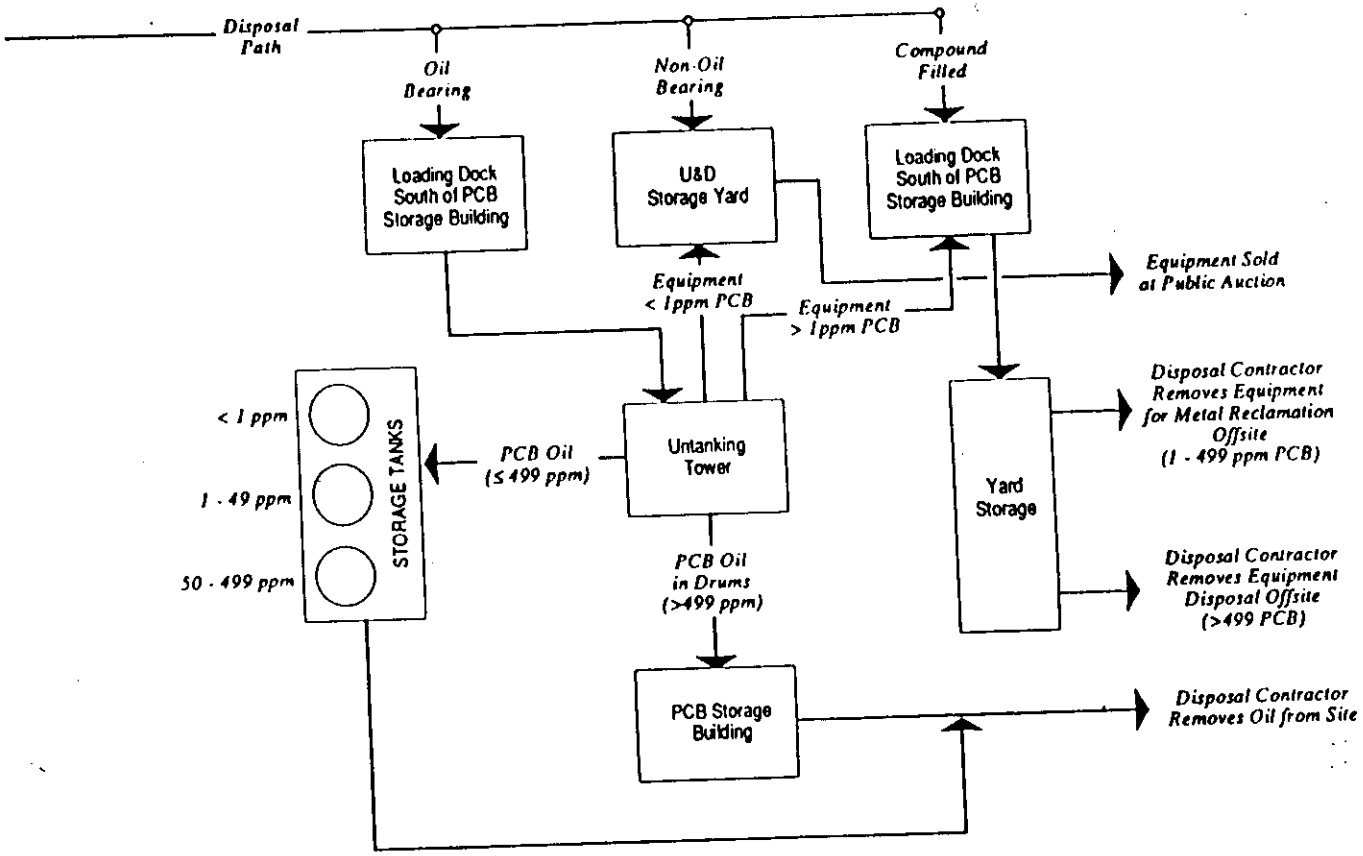
This alternative assumes that the proposed facility would not be built and waste handling would continue as it is. Materials and waste handling and storage activities would continue to use the existing facilities as described below and illustrated in Figure 2. The buildings referenced can be located on Figure 3 - Vicinity Map; BPA Ross Complex.

2.1.1 CURRENT WASTE HANDLING PROCEDURES

Used equipment arrives at the Ross Complex by truck and is delivered to the Utilization and Disposal (U&D) Building for receiving. At the U&D Building, oil-filled equipment is logged in and tested for the presence of PCBs. The item manager decides whether it should be disposed of or remain in-service. PCB concentration found during testing is a criterion for determining handling and disposal. If equipment remains in-service, it is repaired at the Untanking Tower during business hours. If the equipment is to be disposed of and contains oil, it is transferred to the PCB storage area until the oil can be drained in the Untanking Tower -- an activity currently restricted to the weekends.

The Toxic Substances Control Act (TSCA) requires that PCB-contaminated equipment be disposed of within 30 days of being officially removed from service. However, the restricted use of the Untanking Tower has made this goal difficult to meet.

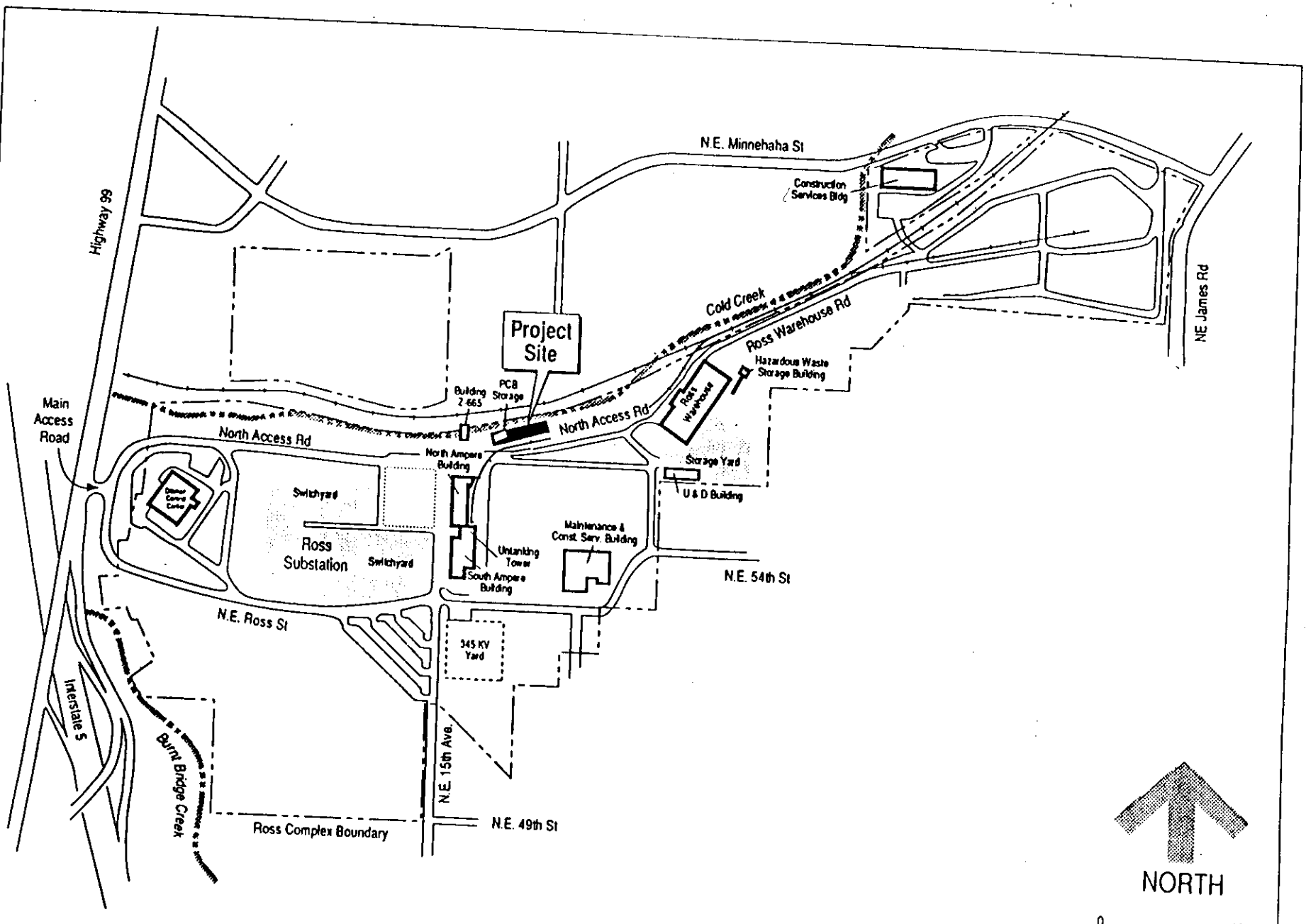
Hazardous wastes arrive at the Ross Complex by truck (already separated into required waste streams) and are delivered to the PCB Storage Building for receiving. The wastes are inventoried; manifests and other paperwork are checked; and the wastes are transferred to the Hazardous Waste Storage Building, where it is held until sufficient quantities are gathered for efficient disposal. The Hazardous Waste Storage Building is located across the Complex from the PCB Storage Building and behind the Ross Warehouse.



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Figure 2
Existing Flow Diagram for Used Equipment
Rehabilitation and Disposal

BPA Ross Complex



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Figure 3
Vicinity Map; BPA Ross Complex

BPA Ross Complex

2.2 DESCRIPTION OF PROPOSED ACTION

2.2.1 FUNCTIONS AND PHYSICAL CHARACTERISTICS

The property to be developed for the facility is an area adjacent to railroad right-of-way in the north central part of the Complex. It is designed to keep the railroad right-of-way free of permanent structures and use existing roads in the area.

The majority of the proposal would be committed to proper temporary storage of toxic substances and hazardous waste prior to permanent disposal. The disposal site would be selected based upon United States Department of Energy (DOE) off-site disposal policies which require that the site be United States Environmental Protection Agency (EPA) approved. No hazardous or toxic waste treatment would be performed. Only the drain and flush area would involve activities other than consolidation and storage.

A summary of the facility's functions and a brief description of the physical characteristics of each area is presented below. The proposed project plan is illustrated in Figure 4. This section is based largely on the Final Design Solution prepared by CH2M Hill under contract to BPA. The information presented in this section combines the most recent proposed site plan with details provided in the most recent proposed facility description.

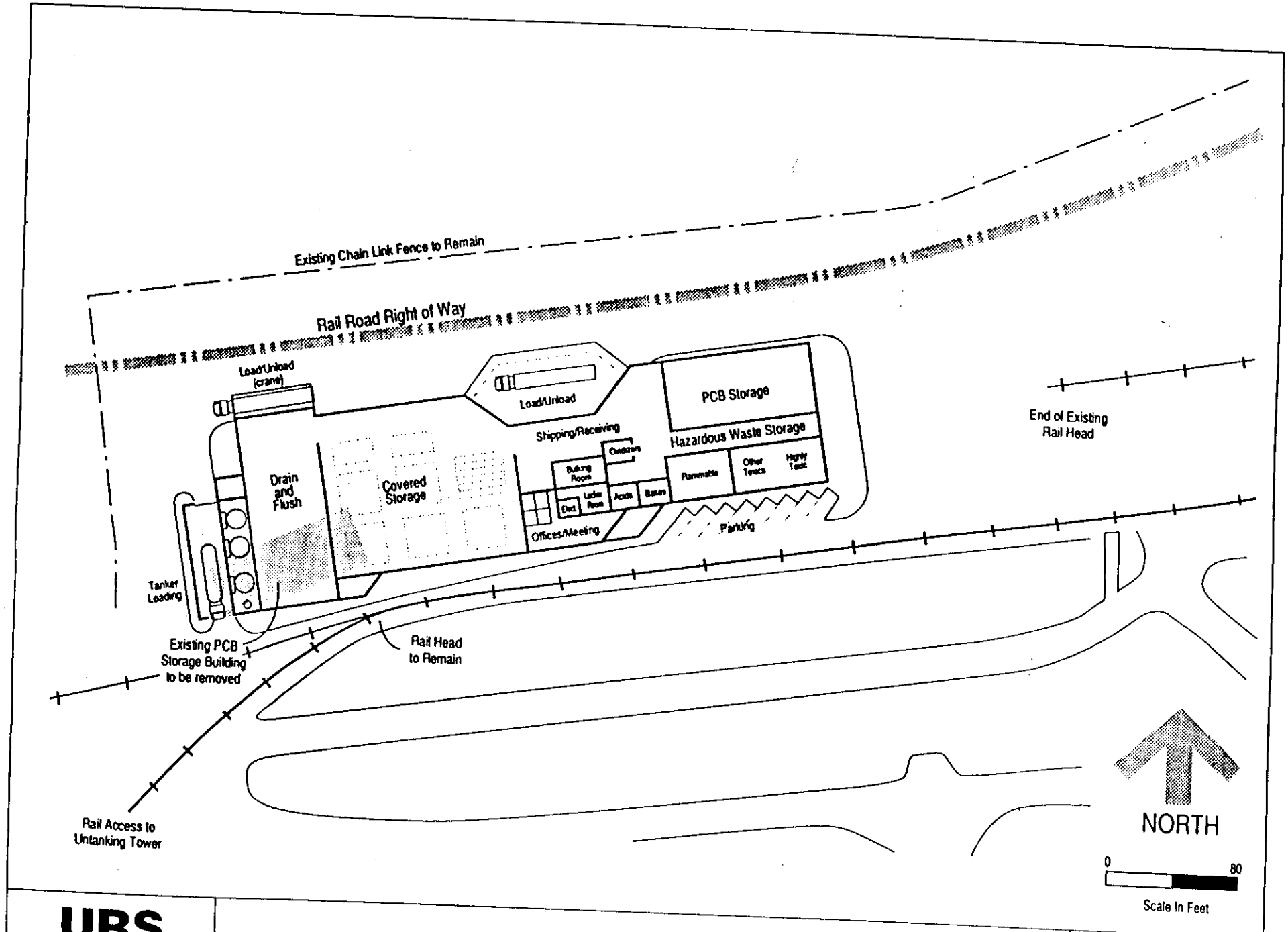
The proposal is designed to accomplish the following functions: hazardous waste storage, PCB storage, materials testing, hazardous waste and PCB bulking, equipment drain and flush, tanker truck loading and unloading, office and meeting support, and covered storage. It is proposed to be in one building.

A new untanking tower may be built approximately 60 feet east of the facility in the future. However, it is not being proposed at this time and is not part of this analysis.

Hazardous Waste Storage

This area would provide for the holding and bulking of hazardous waste under conditions that satisfy hazardous waste management regulations under the Resource Conservation and Recovery Act (RCRA). The area is designed to handle flammable waste, reactive waste, and acids and bases separately.

The hazardous waste storage area would occupy the southeast corner of the planned facility with direct access to the hazardous materials bulking room and the shipping and receiving area. Current plans specify that the floor would be constructed from concrete with a welded steel plate surface. Separate containment systems would be constructed for each of the waste types handled in the area. Containment storage volume required under RCRA would be equal to 25 percent of the average amount of fluid stored.



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Figure 4
Proposed Project Plan; BPA Ross Complex

BPA Ross Complex

PCB Storage

This area would accommodate the storage of drums containing PCB-contaminated oil and other PCB-contaminated materials prior to disposal off-site by licensed hazardous waste contractors. It would be located on the northeast corner of the planned facility with direct access to the shipping and receiving area.

The floor would be constructed with concrete secondary containment able to hold 25 percent of the total volume of the PCB-contaminated oil stored (40 CFR 761.65(b)(1)(ii)). It would be treated with a waterproof, oil resistant sealer. This area would be designed to meet TSCA requirements for PCB storage and handling (40 CFR 761.65).

Hazardous Waste and PCB Bulking

Two rooms would be set aside in the facility to allow for the separate bulking (consolidation of containers) of both hazardous waste and PCB-contaminated waste. These areas would be among the most secure at the site with personnel access restricted to those workers dressed in protective gear. These rooms are planned to adjoin the locker room in the central part of the facility. The hazardous materials bulking room would provide direct access to the hazardous waste storage area; while the PCB bulking room would connect directly to the shipping and receiving area.

Secondary containment would be provided for these areas and forklifts would be restricted. Welded steel checkered plate would be used for flooring to minimize damage from impacts and for ease of cleanup of any spills.

Equipment Drain and Flush

This area would provide for the draining and flushing of PCB-contaminated insulating oil from electrical equipment.

The area is designed to allow the separate handling of equipment containing four levels of PCB-contaminated oil — less than 1 part per million (ppm), 1 to 49 ppm, 50 to 499 ppm, and 500 ppm and greater. Three separate drain and storage tanks would be used to hold oil until picked up for disposal. Oil 500 ppm and greater would be drained directly into 55-gallon drums prior to disposal off-site. A central feature of this area would be the 10-ton bridge crane with two hoists to handle large equipment.

Located on the west side of the planned facility, the drain and flush area would be the tallest part of the structure. In order to accommodate the size of the equipment to be carried by the bridge crane, the area would be 50 feet high. It would be divided into four functional areas: bulk storage for holding and bulking of contaminated oil; staging area for the setup of

equipment prior to draining; drain and flush area to allow the draining of equipment of each of three concentrations of PCB-contaminated oil; and an area for processing equipment after draining.

The bulk storage area would be located on the western side of the facility. It would be a covered area where oil storage tanks are kept. Three 10,000 gallon tanks would handle oil that contains less than 500 ppm of PCBs from the drain and flush process. An additional 500 gallon tank would be included for the handling of spent solvent. These tanks would be connected to the drain and flush area by pipes. The tanks would be constructed within a single secondary containment area capable of holding 10,000 gallons.

The drain and flush area would have underslab waterproofing, concrete secondary containment with welded stainless steel checkered plate surfacing sufficient to contain 25 percent of the average amount of oil being processed; equipment to speed draining; and an exhaust system to minimize fumes. The exhaust system would have the ability to be connected to an air treatment system if it is later found to be necessary.

Truck Loading/Unloading

The Proposed Project Plan shown in Figure 4 shows that there are three different truck loading and unloading areas planned for the proposal. One of them is designated for the loading of tanker trucks. The others are intended to facilitate the arrival of equipment and the removal of material from the facility.

The central shipping and receiving area would be located on the north side of the facility. It would be a covered truck loading dock that would allow at-grade access by forklift. This area would serve as the central receiving area for the facility.

Secondary containment would be provided for up to 700 gallons of waste. Some rainwater can be expected to blow in from the north and west, and the system would be equipped to discharge non-contaminated water to a nearby oil-water separator.

A second truck loading dock would be included in the drain and flush area on the northwest corner of the facility. This would provide direct access to the drain and flush area for large electrical equipment. The loading/unloading area would be inside the building and under the bridge crane.

The air handling in this area would be designed to provide adequate discharge of truck exhaust. Secondary containment would be provided in this area for up to 700 gallons of waste and twenty minutes of fire protection water (the total amount is subject to design).

The third truck loading area would be the bulk storage area for the drain and flush area on the west side of the facility. In this semi-enclosed area tanker trucks can be loaded for the off-site disposal of PCB-contaminated oil.

Secondary containment for this loading dock would be the same system that would serve the bulk storage area. Trenches would direct waste to the system, which would be designed to hold 20,000 gallons of waste plus 20 minutes of fire protection water.

Office and Meeting Support

This area would provide administrative and employee support for activities within the facility. It would include office space, restrooms, lockers, storage for office equipment and supplies, conference space, a small space for materials testing, and a lobby to accommodate tour groups.

Covered Storage

This area has been included to meet the TSCA requirement that PCB-contaminated oil or PCB-laden equipment that has been permanently removed from service for more than 30 days be stored in a covered area with secondary containment. This area would be located in the central part of the facility, between the shipping and receiving area and the drain and flush area. It would be totally enclosed and have sufficient concrete secondary containment to hold 25 percent of the total volume of the PCB-contaminated oil stored (40 CFR 761.65(b)(1)(ii)). The floor would be sealed with waterproof, oil resistant sealer. There would be direct access to the drain and flush area to facilitate equipment staging and removal. This area would also be accessed by the central shipping and receiving area.

Staffing Levels and Operating Hours

Two employees, for drain and flush only, are expected to work at the new facility full-time. Operating hours for the facility are assumed to be regular business hours. This would change the current operations plan which has spent equipment being drained only on the weekends.

Other Features

The exterior construction of the facility would be mainly smooth, flat laminated aluminum panels with the PCB and hazardous waste storage areas constructed of concrete masonry units. The interior surfaces would be painted and only the employee support areas would have interior design features beyond basic functionality.

Several design criteria have been included in the design procedures to protect public health and the environment from the release of materials during operation of the facility. Some of these are described above. These criteria, and any regulations that they satisfy are summarized in Table 1.

Table 1
Hazardous and Toxic Materials Handling Facility Environmental Assessment Design Table

Regulation/Criteria	Regulation Citation	Requirements
Waste Separation	Washington Administrative Code (WAC) 630(90)	All incompatible materials will be separated by a dike, berm, or wall. Groups may include acids, bases, flammables, toxics, reactives, oxidizers.
Separation and Containment	WAC 630(9)(c)	Containment systems for incompatible wastes will be separate.
Security	WAC 310(2)	Signage, gates and various security measures will be installed to protect workers and exclude unauthorized entry.
Preparedness and Prevention	WAC 340(1)(2) and WAC 340(4)	An emergency communication and alarm system will be installed consistent with the Spill Prevention Control and Countermeasure (SPCC) plan for the Ross Complex that would include the proposed facility. The alarm system would provide notification of security violations, fire and spills. Arrangements will be made with local authorities for emergency response procedures. All regulated units (all hazardous waste impoundments) will be identified.
Secondary Containment	WAC 395(4), WAC 640(4)(e)(i)(A), WAC 630(7)(a)(iii), 40 Code of Federal Regulations (CFR) 761.65 (TSCA) and Universal Fire Code Section 80	Secondary containment will be included to capture and contain any and all spills. Secondary containment for tank systems must be sized to contain 25% of the volume of the largest tank within the boundary. Containers must have containment capacity equal to the largest container or 10% of the volume of all containers. All floors must be free of cracks and sealed with impervious material. NOTE: Universal Fire Code requires 10% volume and 20 minutes of fire protection water be contained - so WAC 630 and 640 will be exceeded for this project.
Tank Storage Systems	WAC 303-640	Tanks must meet special design and foundation requirements and meet special testing requirements.
Drum Storage and Inspection	WAC 630(2) and WAC 630(5)	Drums must meet strict condition and storage requirements, in addition to the containment requirements noted above. Storage requirements must meet visual inspection criteria for spacing and stacking.
Closed Draining Process	40 CFR 761 (TSCA)	Draining system for electrical equipment must be consistent with requirements that specify that toxic materials handling be a closed system to minimize opportunity for exposure and spillage.
Heating, Ventilation and Air Conditioning System	29 CFR 1910.120(b)(6) (OSHA)	Engineering controls will be incorporated into the design of a facility to ensure that worker exposure to hazardous materials is below regulated levels.

2.2.2 PROPOSED WASTE HANDLING

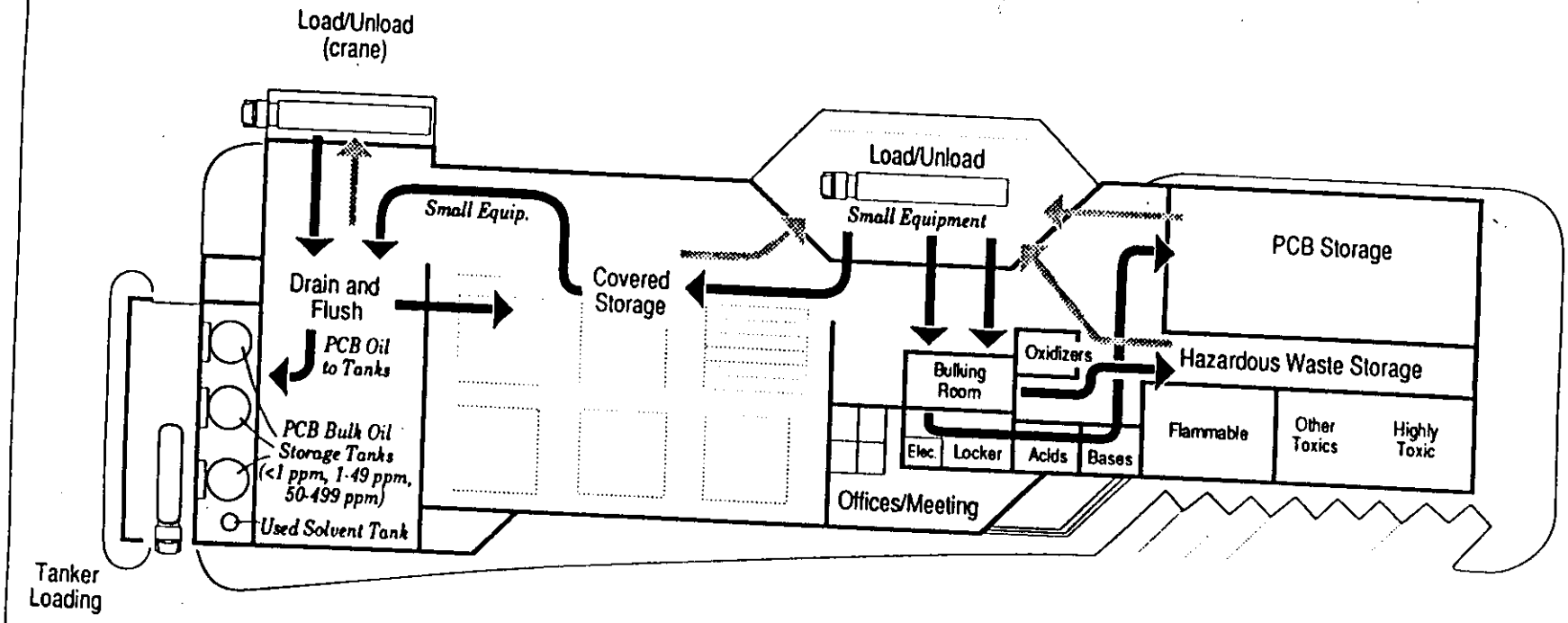
PCB Waste Handling

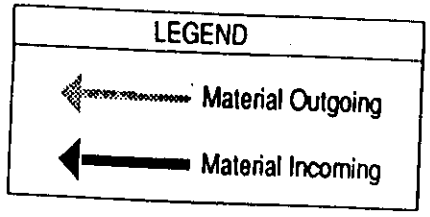
Materials would be processed by a manager at the U&D unit. Oil-filled electrical equipment to be rehabilitated and returned to service would be processed at the Untanking Tower, as is the current practice. Items slated for disposal would be transferred to the facility and follow the process discussed below and shown in Figure 5.

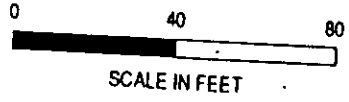
- Oil-filled electrical equipment is received at the loading dock on the north side of the facility and is sent to covered storage.
- It is inventoried and stored until it can go to the drain and flush staging area.
- Equipment is drained (and flushed, if necessary) in the drain and flush area.
- Oil is separated by concentration of PCB contamination for appropriate disposal.
    - Oil less than 500 ppm is drained into an enclosed system that stores that oil by concentration in three separate tanks in the bulk storage area.
    - Oil with 500 ppm and greater is drained directly into barrels and stored in the PCB storage area.
- Emptied equipment carcasses are returned to covered storage.
- Drained equipment that is ready for final disposal is either removed from the Ross Complex by a licensed contractor, returned to U&D for auction, or sent to the Untanking Tower for rehabilitation and returned to service, as appropriate.

The overall effect of operation of the proposed facility would be to speed up the disposal of oil-filled equipment. The total volume of equipment drained may also increase in the future.

Solid wastes contaminated with PCBs would be placed in barrels and stored in the PCB storage area.







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Figure 5
Flow Diagram for Used, Oil Filled Equipment
Rehabilitation and Disposal

BPA Ross Complex

Hazardous Waste Handling

The hazardous waste storage area in the facility would be dedicated to waste containment and management. This area would be designed to hold sufficient backlog of bulked material awaiting disposal to allow for efficient disposal off-site.

Hazardous materials would be routed through the U&D unit and temporarily stored at the proposed hazardous waste storage area in the facility, separated by type. Examples of hazardous wastes routinely handled at the Ross Complex include:

- 1,1,1 trichlorethane-contaminated solids.
- Machine shop coolant from machines contaminated with halogenated hydrocarbons.
- Waste combustible liquid including kerosene, diesel, d-limonene and Chevron 325 and 350 from washing in-service electrical equipment.
- Lacquer thinner and paint pigment residue from paint shops.

Materials would be temporarily stored at the facility according to category; reactive, corrosive, acids or bases. As sufficient quantity of each type of waste is amassed, it would be removed within regulatory time frames by licensed contractors for permanent disposal. There is no treatment of hazardous waste proposed for the new facility, nor would any new wastes be generated as a result of its operation.

2.3 ALTERNATIVES ELIMINATED FROM CONSIDERATION

Off-site

Alternative sites for the proposal located off the Complex are not considered because the Ross Complex is the only BPA facility currently permitted to receive and handle such wastes. Significant permitting delays (approximately ten years) at other sites make them infeasible.

On-site

An alternative site for the proposal located on the Ross Complex was eliminated due to restrictions on land available for a facility of this size as well as a site that was located close to support structures and personnel.

5.0 AGENCIES CONSULTED

City of Vancouver Department of Community Preservation.

Clark County Drainage Engineering.

Southwest Air Pollution Control Authority.

United States Environmental Protection Agency.

United States Fish and Wildlife Service.

Washington State Department of Ecology.

Washington State Office of Archeology and Historic Preservation.

3.0 EXISTING CONDITIONS, ENVIRONMENTAL IMPACTS, AND MITIGATION

3.1 GEOLOGY AND SOILS

The Ross Complex is situated on a series of alluvial terraces between two small stream valleys. At the site of the proposed construction, the elevation ranges from 200 to 220 feet above sea level, with a slope of 3 to 8 percent toward the north.

The Ross Complex, including the proposed site for the facility, is located within unconsolidated pleistocene sedimentary deposits. Data from a test well near the proposed site, installed during site investigation activities conducted in 1987, indicate that unconsolidated sediments and fill underlie the site to a depth of at least 80 feet.

During the recent remedial investigation conducted as part of the CERCLA evaluation of the Complex, PCBs were identified in soils at a number of locations. However, due to the affinity that PCBs have for organic matter in soils, their detection has been restricted to several inches near the surface. Chemical analyses of soils sampled at the site of the proposed facility found only minor contamination. Detailed information on these analyses is scheduled to be available to the public at the Vancouver Regional Library, pending draft report finalization. Prior to construction of the facility, any contaminated soil would undergo remediation, as required, under Washington State Department of Ecology regulations as promulgated in the Washington Administrative Code.

Environmental Impacts

No Action

Without the construction of the proposed facility, waste handling would continue under current practices. At this time, a large amount of equipment containing PCB-contaminated oil is being stored on the proposed site. This equipment is not under cover and is subject to temperature fluctuations and exposed to the elements. If any equipment has an undetected leak, PCBs could be released to the soil. Given the delay in processing of this equipment, the risk of oil contaminating the topsoil would be greater with No Action than if the proposal was approved and implemented. Contaminants might eventually sink deep into the soil, where perched groundwater could be affected.

Proposal

An evaluation of soil characteristics within the entire Ross Complex which focused on the suitability of areas to support construction and roads, found the area of the proposed facility

to be too variable to rate due to the nature of the alluvial deposits and fill. Current usage, however, implies that the soils are sufficiently stable to support the facility as planned, and that no adverse impacts could be expected. Prior to construction appropriate geotechnical studies would be performed to decide what foundation design should be used.

One potential impact issue is that alluvial deposits forming the site are known to transport vibrations easily. Any new construction that would employ sensitive instruments needs special foundations to dampen vibrations. This does not impact the planned construction, but facilities using this type of equipment near the facility may need to be retrofitted, as the bridge crane may create new vibrational disturbances.

In addition, construction of the proposed facility would lead to a temporary disruption of the soils on the site. However, this is not expected to have any significant long-term impacts on the site's stability or soil quality.

No other activities are currently proposed that would affect soils, thus no cumulative impacts to soils are anticipated.

Mitigation

- Employ erosion control measures during construction, such as using hay bales and plastic barriers along the north side of the property, and covering soil stockpiling areas during construction when soils are exposed.

- Evaluate future construction in the vicinity of the proposed facility for sensitivity to vibration caused by the bridge crane operation.

3.2 SURFACE WATER

The proposed project is located near Cold Creek, which is a tributary of Burnt Bridge Creek (Figure 1). Cold Creek was relocated at the project site in the 1950s and presently flows through a 48-inch culvert which lies approximately 80 feet beneath the site. The creek is fed from numerous shallow groundwater springs and seeps which provide the creek with a low average base flow at the project site (0.2 to 1.6 cubic feet per second) throughout the year.

The total watershed area of Cold Creek is approximately 1600 to 1700 acres. Approximately 0.06 square miles (40 acres) of the watershed area is within the Ross Complex. The slope of the creek in the project vicinity is approximately three percent.

The Ross Complex and project site are not within the 100-year floodplain mapping area of Clark County as identified by the Federal Emergency Management Agency (FEMA) in 1982 and as identified within the floodplain mapping of the City of Vancouver.

Limited water quality information is available for Cold Creek. The creek has not been classified in the state program. BPA sampling of Cold Creek water and sediment indicated levels of PCB contamination slightly above detection limits. Other studies sampling Cold Creek water and sediment revealed trace amounts (less than 0.05 μg/L) of PCB in the water samples, and no detectable levels in the sediment sample.

Detectable levels of other contaminants (metals, organics) were found during sampling of storm runoff events but these values were similar to levels in creeks of comparable nature. Concentrations of ions and pH of the creek during low flows were within expected and acceptable values for comparable quality creek waters in the general area.

Environmental Impacts

No Action

If the proposed project is not constructed there would be no change expected to the discharge to Cold Creek, therefore expected impacts on water quantity would be minimal. However, since current handling practices would continue, there would be a greater risk to surface water quality without the proposal. Oil-bearing electrical equipment would continue to be stored on the site. This equipment is exposed to the elements and undetected leaks could result in surface water runoff contamination by PCBs, posing a threat to the quality of Cold Creek from the current drainage system.

Proposal

The contribution of the project to the total drainage of Cold Creek is 0.0006 percent. Surface runoff from the paved areas flows into existing oil-water separators before going into Cold Creek. These separators are located both upstream and downstream from the proposed project site.

The hydraulic capacity of the 48-inch underground culvert is approximately 250 cubic feet per second. This capacity is not known to be exceeded, even during severe storm events. Maximum storm discharges in Cold Creek are calculated to be 108, 144, 180, 198, and 228 cfs for the 5-, 10-, 25-, 50-, and 100-year events, respectively. Maximum storm discharges from the project area only would be 0.4, 0.5, 0.7, 0.8, and 0.9 cfs for the 5-, 10-, 25-, 50-, and 100-year events, respectively (assuming no detention of flow). The volume of potential runoff from the project is thus insignificant to the total flow in the creek. Therefore, no impacts to Cold Creek or the culverted portion of Cold Creek from drainage volume from the proposed project are expected. Due to the low contribution of inflow and the vertical distance from the streambed, no conflict with the 500-year floodplain is anticipated.

The proposed project is not expected to have any impact on the structural integrity of the Cold Creek culvert. Located approximately 80 feet below the proposed facility, it is isolated from disruption during construction or operations. A test of the structural integrity of the

culvert would be performed before the construction takes place.

No environmental impacts to surface water quantity or quality are anticipated from the proposed project due to the presence of oil-water separators on-site, and the various design criteria incorporated into the proposed project to protect the environment. However, facility construction can be expected to cause a temporary increase in sediment loading to run-off from the site.

At this time, no other activities are planned for the Ross Complex that might impact surface water, therefore, no cumulative impacts are expected.

Mitigation

- Provide regular maintenance of oil-water separators.
- Sample Cold Creek annually during storm events for contaminants.
- Employ erosion control measures during construction such as using hay bales and plastic barriers along the north side of the property, and covering soil stockpiling areas during construction when soils are exposed.

3.3 GROUNDWATER

A shallow, perched groundwater zone is present in the Cold Creek drainage area within the project site. This zone is at a depth of 80 to 90 feet and is believed to contribute to the base flow of Cold Creek.

The principal groundwater aquifer, the Troutdale Aquifer, is approximately 130 to 170 feet below the ground surface. Flow direction of this aquifer is from east-northeast to west-southwest.

Groundwater samples collected from two wells (MW3A and MW3BR) immediately south of the proposed project site boundary indicate the presence of 1,1,1-Trichloroethane (8 parts per billion [ppb] in well 3A and 1 ppb in well 3BR) and 1,1-Dichloroethene (0.7 ppb in well 3A). The source of the contamination is not presently known and is the subject of an ongoing remedial investigation under CERCLA.

Environmental Impacts

No Action

If the project is not implemented, no change in the groundwater flow regime would be expected. However, no changes in the current waste handling practices would be expected either, placing groundwater at a somewhat greater risk in the event of undetected leaks or spills from oil-filled electrical equipment currently stored on the proposed project site.

Proposal

No impacts to either the perched groundwater zone or the Troutdale Aquifer are expected from the proposed project. This is due to incorporation of secondary containment into the design as well as other features to prevent release of contaminants to the environment (Table 1). Overall risk of aquifer contamination from releases would be reduced. In addition, cumulative impacts would be minor, since none of the other activities at the Ross Complex are adversely impacting groundwater.

Mitigation

None suggested.

3.4 LAND USE

The Ross Complex lies within the northeast corner of the city limits of Vancouver, Washington. It extends into an unincorporated area of Clark County. Urban land uses surround the Complex on all sides.

Areas north and south of the Complex are predominately single family residences. The land adjoining the site for the proposed facility to the north is a Burlington Northern railroad track and right-of-way. The right-of-way is approximately 60 to 75 feet in width. The land north of the railroad right-of-way is zoned residential and is made up of single family homes on one-quarter acre lots. The Minnehaha Elementary School is approximately one-half mile east-southeast of the proposed facility. Land uses to the east and west of the complex are predominately commercial. The county's comprehensive plan designates a large area northeast of the Complex as a heavy industrial district.

The Ross Complex itself is shown as an Industrial Park on the city of Vancouver's comprehensive plan. The site is zoned as a Light Industrial District (ML), which is described as an area "intended for light clean industries, usually of a manufacturing or storage nature, with little outdoor storage .... This industrial district may be located adjacent to residential or commercial uses with appropriate buffering." Zoning standards for ML require that all processes and storage in an ML zone be entirely enclosed within a building.

Major utility facilities are permitted as a conditional use in the ML zone.

Environmental Impacts

No Action

There are no land use impacts expected under No Action except that the continuation of outdoor storage would be inconsistent with the ML zoning.

Proposal

The environmental impact of this project to land use would be favorable. Enclosing hazardous materials that are currently stored outside in a building would bring waste management practices more in line with the city zoning for the site. The proposed project would comply with ML zoning requirements since the covered storage area is to be enclosed.

Mitigation

None suggested.

3.5 REGULATORY STATUS

Resource Conservation and Recovery Act Compliance

A RCRA Part B permit application for the entire Ross facility was submitted to EPA on November 11, 1988. This permit application, now under the jurisdiction of the Washington State Department of Ecology (Ecology) is not expected to be processed and issued for at east two more years. (Ecology, BPA and EPA signed a Federal Facilities Agreement on May 1, 1990). The Ross Complex is currently operating under an interim status permit.

Discussions are underway between BPA and Ecology to determine whether the proposal can be built under the interim status permit. BPA's plans to consolidate and improve the facilities involved in this proposal will result in a total cost which is below fifty percent of the cost of improving the Ross Complex. In addition, discussion is underway to determine whether the proposed facility could be considered an expansion in waste handling capacity. Expansion in excess of 25 percent would require compliance with Washington State siting standards. Following state concurrences, this proposal would be accomplished under the existing interim status permit. Notwithstanding the permit decision, the facility will be designed and constructed in compliance with all applicable RCRA requirements for storage facilities for hazardous waste.

Toxic Substances Control Act Compliance

The facility will also meet all regulations pertaining to TSCA. This Act, passed in 1976, provides EPA with authority to manage any chemical substance that presents an unreasonable risk of injury to human health or to the environment, except for substances that are excluded from regulation, such as pesticides, nuclear material and some other substances. Section 6(e) of TSCA requires EPA to manage the disposal of PCBs. The principal function of the proposed TSCA facility is PCB handling and preparation for disposal. There is no state authorization provision under TSCA, although some states regulate PCBs as a hazardous waste.

The regulations include requirements for PCB storage and disposal, PCB handling procedures in the drain and flush area, and for the handling and use of transformers, capacitors, bushings, or other facilities contaminated with or using PCBs. Many specific design features have been included in the proposal to meet the intent of TSCA. Some of the major features are listed in Table 1.

Occupational Safety and Health Act Compliance

The Occupational Safety and Health Act (OSHA) is designed to ensure that workers are protected from hazardous substances and activities they might encounter on the job. Final facility design will comply with all applicable building codes and standards including the worker safety requirements as imposed by DOE regulations implementing OSHA requirements (DOE 5400).

Air Permit

The Ross Complex has an order of authorization to operate from the Southwest Air Pollution Control Authority (SWAPCA). This permit is for air emissions for welding, storage tanks and numerous other sources. Prior to construction of the facility, a permit modification request may need to be submitted to SWAPCA to amend the existing authorization for the Ross Complex. The SWAPCA does not feel, at this time, that a permit modification is likely. The facility does not need its own permit.

Shoreline Management Act

The Washington State Shoreline Management Act restricts activities within 200 feet of certain defined water bodies of the State. It is implemented through the County Shoreline Management Program. If any of the proposed facilities were proposed to be built within 200 feet of a defined shoreline, they would come under requirements of the Act. However, the minimum stream flow required for jurisdiction is 20 cubic feet per second (cfs). Cold Creek's annual average flow is less than 2 cfs, thus the Act does not apply.

3.6 HEALTH RISK/CONTAMINANT PATHWAYS

In accordance with Federal and state regulations, the proposed project would take into account existing plans to reduce health risk and contaminant pathways. This includes the consideration of the facility and how it would interact with the following plans and regulations designed to protect human health.

Spill Prevention Control and Countermeasure Plan

A system-wide Spill Prevention, Control, and Counterneasure (SPCC) plan for BPA is designed for use with site-specific SPCC plans. It addresses the general methods for containing oil spills on-site which have been adopted by BPA, allowing the site specific plans to provide details unique to each oil-handling operatior.

A facility-specific SPCC plan would be developed for the proposed facility within six months of beginning operations. The plan would outline procedures to minimize the risk of oil spills and appropriate actions to reduce the risk to the environment in the case of a spill. This specific SPCC plan would incorporate elements of the existing SPCC plan for BPA and would be integrated into a complex-wide SPCC now under development.

Hazard Communication Program

The purpose of this program is to protect worker health and safety by providing training, information, and measures to work safely with hazardous materials; to provide chemical and physical health and safety evaluations; and to ensure compliance with regulations governing the use of hazardous materials in the workplace. Workers involved with hazardous materials handling - such as PCB-contaminated oil - would need to participate in this program.

Contingency Plan for the Ross Complex

The Ross Contingency Plan is intended to minimize hazards to human health or the environment from fires, explosions, or any unplanned release of hazardous substances. This plan assigns responsibility for emergency action following an incident at the Ross Complex. It includes coordinating emergency response, proper clean-up after emergency action is complete, and reporting requirements. Any emergency actions occurring at the proposed facility would be subject to the procedures outlined in the Contingency Plan. The plan is currently being updated.

In addition, the project design incorporates the current Uniform Fire Code requirements which would assist in handling emergencies at the facility.

Waste Minimization Plan

Washington State requires all generators who treat, store, or dispose of hazardous waste to develop a site specific plan to reduce the volume and toxicity of hazardous waste to the extent economically practicable. A waste minimization plan exists for BPA as a whole. It sets goals for reducing hazardous materials use and hazardous waste generation at all BPA facilities. How the proposed facility would be impacted by the Waste Minimization Plan and whether a facility specific plan would be required has yet to be determined.

3.7 TRANSPORTATION

Existing Operations

Trucks hauling equipment containing hazardous wastes into the site, transport the equipment to the U&D Building or to the PCB Storage Building where it is logged in. The equipment is then transported through the various steps of processing as described in Section 2.0. The total truck volumes associated with the transportation of this equipment is low. In 1991 approximately 200 trucks hauled equipment into the Complex and 100 hauled equipment out. This yields an average volume of a little more than one truck per day (245 working days).

Although the associated truck volumes are low and the intersections within the site operate at a Level of Service[1] (LOS) A, there are other safety issues of concern. Sight distances, striping, signing, and turning radii are substandard at several locations.

Traffic conflict situations of particular concern to the proposal include:

- Poor intersection sight distance at the north approach of the intersection of N.E. Ross Street and the road east of the Maintenance and Construction Services Building.
- Potential truck, auto and forklift traffic in the storage yard immediately west of the Ross Warehouse.
- Difficult turning movements at the top and bottom of the short connector road between the proposed site and the U&D Building.
- Inadequate signing and striping where the five road approaches intersect to the northeast of the North Ampere Building.

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[1] Level of Service is a method of quantifying the operation of a transportation facility. It is measured as a grade on a scale of LOS A (extremely favorable conditions) to LOS F (unacceptable delay, breakdown of facility). LOS D is generally the minimum acceptable design standard.

Proposed Operations

The volume of trucks hauling hazardous wastes to the proposed facility is expected to be unchanged in the near future, although the routing of equipment being processed at the facility would be less circuitous. The roadways that would be used to the new facility would also be unchanged. It is possible that truck traffic may increase in the future, as the volume of waste increases.

Environmental Impacts

No Action

Conditions under the No Action alternative would contnue as described above in "Existing Operations". The roadway system within the BPA Ross Complex is composed of a combination of private and public roads that are used by both Complex-related users and the general public. This combination of both public and Complex-related traffic, such as cars, trucks and forklifts, together with a poorly defined and delineated traffic system creates a potential for traffic conflicts and accidents. The possibility of increased truck traffic is the same under No Action as it is with the proposed project.

Proposal

Consolidating waste handling operations at the new facility should reduce the number of vehicle-miles traveled by vehicles hauling equipment slated for disposal by reducing the number of sites needed to process the equipment. A counter-clockwise traffic pattern is planned around the facility with trucks delivering equipment at the loading docks on the north and removing waste from all loading docks. For example, currently equipment must be hauled from the U&D storage yard to a storage yard south of the PCB Storage Building, to the Untanking Tower to be drained, and then back to the PCB Storage Building storage yard. Under the proposed alternative, equipment to be disposed of would not be taken to the Untanking Tower. All drainage and storage operations would be performed at the new facility. Equipment is currently drained at the Untanking Tower only on the weekends. The new facility would be in operation on weekdays.

In light of current conditions, cumulative impacts of the proposal would be beneficial promoting more efficient traffic control for the area around the proposed site. Although the proposal would have a positive impact on the traffic situation within the Ross Complex, existing conditions already create the potential for conflicts between motor vehicles, both Complex-related and public. These conditions, in combination with the fact that the site-related traffic involves the hauling of hazardous materials, support the need for improving the transportation facilities.

Mitigation

- Organize and delineate storage yards and grounds surrounding the proposed facility to provide distinct driveways and storage areas.

- Stripe the intersection of the five road approaches northeast of the Ampere Building in accordance with standards set forth in the Manual of Uniform Traffic Control Devices.

- Increase the turning radii and roadway widths on the connector road between the site and the U&D Building to facilitate truck turning movements.

3.8 VISUAL IMPACTS

The Ross Complex is a well developed, working industrial site. Landscaping has been added to soften lines and to screen views from nearby residences. When the Complex was first developed, the surrounding area was rural, requiring little in terms of aesthetic enrichment. However, the area has since become primarily residential and the Complex now has become visually incompatible.

The overall character of the Ross Complex varies. It includes natural wooded preserves, formal landscape plantings, industrial facilities, transmission towers, storage areas, and parking lots. The proposed site for the facility is located in one of the industrial use areas of the Complex.

The site of the proposed project includes the existing location of the older, metal-clad PCB Storage Building. There are also several outdoor storage areas for equipment and trucks in the area. There is very little vegetation on the site and no notable visual characteristics in need of preservation. The site has a low visual resource value. The current PCB Storage Building is not a dominant feature of the surrounding viewscape (Figure 6).

Environmental Impacts

No Action

The storage of equipment outside on the grounds of the Ross Complex creates an unpleasant view for neighboring residents. Residents confirmed their concerns and sensitivity to the visibility of activities at the Complex through comments made at a recent public meeting. Without a full-time drain and flush facility dedicated to oil-filled equipment slated for disposal, the amount of equipment stored at the Complex can be expected to increase, creating additional materials in industrial storage yards which are more visible to nearby residents.

Proposal

The location of the site within the Complex reduces the potential visual impacts of the proposal on the public. Existing plans for the site indicate that it would be similar to the current visual setting created by neighboring industrial buildings and storage areas.

Because the view is well screened by topography from the south, the major area of interest is the potential impact of the facility on the residences north of the site — directly across the Burlington Northern railroad track, railroad right-of-way, and Cold Creek canyon. The new drain and flush facility is expected to be 50 feet high. This is higher than most other buildings on the site and may allow the building to be seen above the vegetation that currently screens these homes (Figure 7).



Figure 6
Proposed Project Site;Looking Northwest from the North Access Road at the Existing PCB Storage Building (December 1991)



Figure 7
Proposed Project Site;Looking South from the End of N.E. 17th Avenue, across Cold Creek Canyon (January 1992)

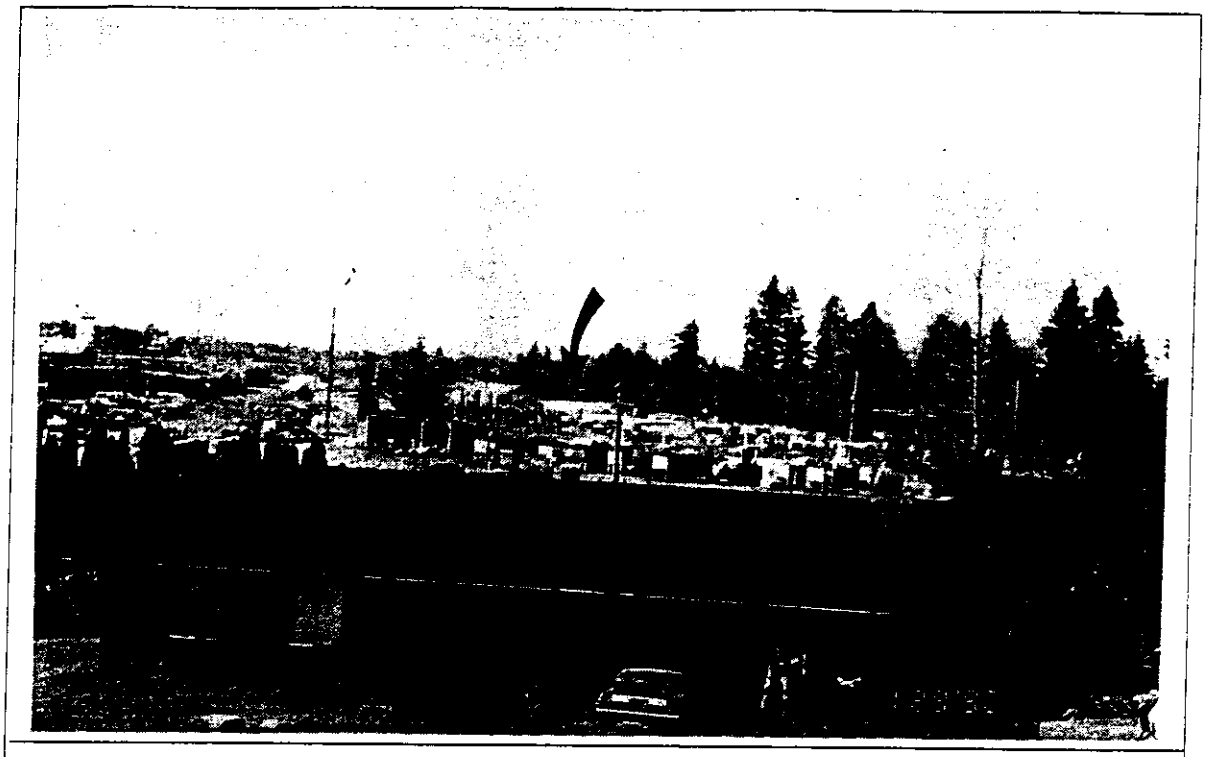


Figure 8
Proposed Project Site;Looking West from N.E. 57th Street
(Arrow indicates site)

Another area that may be impacted is the residential area on a hill east of the proposed site. Figure 8 illustrates the view from this area - N.E. 57th Street. However, the distance to the site would limit the visibility of the facility.

Overall, the anticipated visual impacts of construction of the facility are relatively minor when compared to the existing character of the Ross Complex. Cumulative impacts of the facility are minor due to the existing highly developed nature of the Ross Complex.

Mitigation

- Reduce contrast of the visible height of the facility by choosing appropriate colors and textures.

- Negotiate with property owners directly north of the Ross Complex in an effort to acquire nearby properties for a scenic buffer and/or to plant additional vegetation on these properties.

3.9 THREATENED AND ENDANGERED SPECIES

As part of the investigation of the potential impacts of the construction of the proposal, BPA conducted a biological assessment of the proposed project. The bald eagle was identified by the U.S. Fish and Wildlife Service (USFWS) as the only threatened or endangered species in

the area.

The biological assessment conducted by a BPA wildlife biologist under section 7(c) of the Amended Endangered Species Act concluded that "it is not likely to adversely affect the threatened bald eagle." BPA has received concurrence from the USFWS on the findings of the assessment.

3.10 CULTURAL RESOURCES

There are buildings on the Ross Complex that may be eligible for inclusion on the National Register of Historic Places. As of 1991, these buildings have not yet been nominated to the register, but BPA has the legal obligation to treat these properties as if they were listed. Before the impacts on cultural resources from the proposed project can be evaluated, a determination of significance must be obtained from the Washington State Historic Preservation Officer (SHPO). Preliminary findings from the SHPO suggested that the project would have no effect upon cultural resources. A cultural resource survey of the site was conducted on February 26, 1992. No historic resources were found.

3.11 NOISE

The changes expected in hazardous and toxic materials handling procedures expected from the construction of the proposal involve the consolidation of many activities within a single site at the Ross Complex. Noise impacts from this project are limited to the noise generated by the transport of equipment and materials to and from the facility, much of which already exists elsewhere at the Complex.

Environmental Impacts

The construction of the facility would involve the shifting of truck traffic from the Hazardous Waste Storage Building to the new facility. Trucks would be loaded and unloaded on the north side of the facility at two different loading docks. In addition, tanker trucks would be loaded at the western side of the facility, as well as at the Untanking Tower.

No Action

There would be no increase in noise expected from continuing current waste handling operations at the Complex.

Proposal

The noise created by the tanker trucks entering and leaving the loading areas may be noticed by residences north of the Complex. Approximately 100 trucks removed waste, including

both used equipment and contaminated oil, from the Ross Complex in 1991. In addition, 200 trucks delivered equipment to the Complex. Given the worst-case scenario, the maximum frequency of traffic from the facility would be a little more than one truck per day (245 working days), creating a low frequency of noise disturbance. The noise impacts from these activities are expected to be relatively minor. However, truck traffic may increase in the future and noise would be expected to increase as well.
Cumulative noise impacts as a result of one or more trucks entering the facility would not be significant as it is similar to the number that presently use the Ross Complex. Additional noise can be expected from facility construction activities but this would be temporary.

Mitigation

- A steel acoustical baffle will be placed in the truck loading area to absorb noise.
- Limit construction to daylight hours.
- Negotiate with property owners directly to the north of the proposed facility to acquire their properties and retain as a noise buffer.
- During facility operation, require truck engines be shut off promptly when vehicles are at rest.

3.12 WILDLIFE

Given the nature of development on the Ross Complex and the level of urbanization surrounding it, the amount of wildlife on the site is minor.

Local residents have mentioned that there is a small population of deer in the area. Small animals such as rabbits, rodents, raccoons, coyotes, and several birds of prey may be found in the undeveloped areas surrounding the Complex. The level of flow in Cold Creek is unable to support a sport fishery, so aquatic life is expected to be limited.

Environmental Impacts

No Action

The existing hazardous materials handling practices at the Ross Complex provide an increased risk of environmental contamination. As described above, oil-filled equipment awaiting disposal is currently being stored outdoors where exposure to the elements and temperature variations can affect the oil. This allows for a greater risk of undetected leaks with the potential for impacting soils, surface water or groundwater and thereby exposing wildlife.

Proposal

The design criteria outlined in Table 1 demonstrate the level of environmental protection built into the proposal. This, combined with the greater efficiency of oil-filled equipment processing and hazardous waste handling, would limit opportunities for environmental contamination, effectively eliminating the potential for adverse impacts to wildlife. The proposal would not displace any wildlife habitat. Cumulative impacts of the facility are minor due to the existing highly developed nature of the Ross Complex.

Mitigation

None suggested.

3.13 CONSTRUCTION IMPACTS

Construction impacts are discussed above in each section in the impact analysis. They are also discussed here as a summary of all construction impacts.

Environmental Impacts

No Action

None.

Proposal

Most impacts from the construction of the proposal would be temporary in nature. They would result from geotechnical investigation, excavation for the foundation, increased traffic and noise from machinery and construction workers, and noise from the construction itself.

The excavation for the foundation would disrupt the soil on the site. Stockpile areas would be created by the temporary storage of the soil removed from the foundation area. This loose soil would be subject to transport based on the weather. If construction takes place in the summer and dry conditions are present, then dust may be a problem. In the event of rain, erosion from the soil stockpiles and excavated area could contaminate runoff.

Construction activities would require the use of heavy machinery and a temporary concentration of workers in the area. This may restrict access to nearby storage areas. Roadways may be blocked temporarily during equipment operation. Overnight storage of equipment on-site may also crowd the area. Parking is limited in this part of the Ross Complex, which increases the likelihood that roadways would be used for construction crew parking, further crowding the area.

The construction of the facility would generate noise, because construction activities are dependent on the use of heavy equipment, such as cement mixers. Equipment and materials loading and unloading can also be expected to contribute to construction noise. Noise regulation exempts construction noise.

Another impact of facility construction would be the displacement of activities that currently occupy the site. This includes the existing PCB Storage Building, the outdoor storage of electrical equipment, and the storage of transportation vehicles.

The PCB Storage Building would be torn down to allow construction of the facility. Storage Building Z-665, located northwest of the site along the fence, would have secondary containment installed and would be the temporary location for the contents of the PCB Storage Building during construction. After demolition, the materials composing the PCB Storage Building would be tested for contamination. Any contaminated material would be disposed of off-site by licensed EPA-approved contractors. Non-contaminated concrete would be sold as aggregate, metal would be recycled, and the remainder disposed of at an approved landfill.

The relocation of equipment currently stored on the proposed construction site would be necessary before construction can begin. Electrical equipment would be relocated to various other storage areas around the Complex. Miscellaneous special use trailers stored on the site would be relocated to another location on BPA property, enclosed within fences if necessary.

The cumulative impacts of the construction of the proposal on the environment at the Ross Complex would be minor. At this time, no other construction would be taking place while the facility is being built.

Mitigation

- Employ erosion control measures during construction, such as using hay bales and plastic barriers along the north side of the property, and covering soil stockpiling areas during construction when soils are exposed.
- Use water trucks to reduce the amount of dust from the site.
- Restrict construction to weekdays and business hours to reduce noise impacts on nearby residents.
- Provide parking for construction crews in less crowded areas of the Complex.

4.0 SUMMARY AND CONCLUSIONS

THE PROPOSAL

BPA is proposing to construct a facility at the Ross Complex in Vancouver, Washington to streamline hazardous materials handling activities and to speed the draining of oil-filled electrical equipment prior to disposal. The site for the proposed facility, referred to as the Hazardous and Toxic Materials Handling Facility (the proposal or facility) is currently developed and contains a storage building and a parking lot. The facility would provide four basic functions:

- Equipment drain and flush
- PCB storage
- Hazardous waste storage
- Covered storage

PCB-contaminated oil would be brought into the facility in bushings, transformers and other equipment and would be drained in the planned drain and flush area. The drain and flush area would be used in place of the existing Untanking Tower south of the proposed site. The oil would be segregated and stored according to PCB concentration. Oil with PCB concentrations less than 1 to 49 ppm and 50 to 499 ppm would be stored in tanks in the western tanker truck loading area. PCB-contaminated waste and oil with greater than 499 ppm PCB would be stored in a segregated area within the building. Another function within the building, segregated from others, is hazardous waste storage. Various wastes would be bulked and stored awaiting off-site disposal. Covered storage would be provided in a separate area to store equipment which contains or is contaminated with PCBs.

The construction of the proposal at the Complex would provide BPA with the following benefits:

- Reduced risk of environmental contamination by removing oil-filled electrical equipment from outdoor storage.
- Reduced risk of exposure to PCBs by creating enclosed drain and flush process for oil-filled electrical equipment.
- Reduced risk from exposure to hazardous waste on site by improving waste handling and storage.

- Consolidation of the waste handling process into a single area that meets current regulations.
- Increased waste storage and handling capability.
- Opportunity for streamlining of materials management.

ENVIRONMENTAL IMPACTS OF THE PROPOSAL

This environmental assessment reviewed the expected environmental impacts of construction and operation of the proposal. The project would be designed to meet Federal and state regulations regarding the handling and storage of hazardous and toxic materials. Measures to protect human health and the environment required by these regulations have been incorporated into the design of the facility. These are summarized in Table 1. Where possible environmental impacts were identified in this investigation. Mitigation measures were proposed to minimize their effect. The impacts and associated mitigation measures are summarized below.

Geology and Soils

Soils would be disturbed during construction causing some local erosion and runoff. Impacts at the very flat site would be minor. Operation of the facility may cause vibrations that could impact activities in nearby buildings.

Mitigation: Evaluate future construction in the vicinity of the facility for sensitivity to vibration caused by the bridge crane operation.

Surface Water

Runoff would go through oil-water separators which discharge into an existing storm drainage system into Cold Creek. The rate of runoff with the proposal would be similar to the existing condition. The facility is not within a 100-year floodplain. Construction would cause some soils disturbance leading to erosion and sedimentation.

Mitigation:

- Provide regular maintenance of oil-water separators.
- Sample Cold Creek annually during storm events for contaminants.
- Employ erosion control measures during construction, such as using hay bales and plastic barriers along the north side of the property, and covering soil stockpile areas to control erosion during construction when soils are exposed.

Groundwater

No impacts to groundwater are anticipated. Mitigation: None.

Land Use

The proposal is consistent with existing and adjacent land use and complies with all plans and policies. Mitigation: None.

Regulatory Status

The proposal is designed to improve regulatory compliance and would comply with the requirements of RCRA, TSCA, OSHA, the local Air Pollution Control Authority.

Health Risk/Contaminant Pathways

A quantitative health risk assessment was not needed for this project because it was proposed for environmental compliance, not as a remedial action. The consolidation and upgrading of facilities would reduce risks of exposure from handling and storage activities.

Transportation

Impacts are minor and largely beneficial. However, some transportation conditions at the Ross Complex could impact the facility in the future, especially as volumes of waste handled are expected to increase. Mitigation suggested for this area is preventative, aimed at reducing future impacts.

Mitigation:

- Organize and delineate storage yards and grounds surrounding the proposed facility to provide distinct driveways and storage areas.
- Stripe the intersection of the five road approaches northeast of the Ampere Building in accordance with standards set forth in the Manual of Uniform Traffic Control Devices.
- Increase turning radii and roadway widths on the connector road between the site and the U&D Building to facilitate truck turning movements.

Visual Impacts

The drain and flush area of the facility would be 50 feet tall and visible from the surrounding area. The viewshed of the two homes immediately north of the facility would be changed by the construction of the facility. The project would also be visible, in the distance, from

several housing developments that overlook the Ross Complex. When compared to the existing character of the Complex, impacts are concluded to be minor. However, the visual impacts of the new facility can be further reduced by adopting suggested mitigation.

Mitigation:

- Reduce contrast of the visible height of the facility by choosing appropriate colors and textures.
- Negotiate with property owners directly north of the Ross Complex in an effort to acquire their properties and retain as a scenic buffer and/or to plant additional vegetation on these properties.

Threatened and Endangered Species

There would be no impacts to Threatened and Endangered Species.

Cultural Resources

No impact is expected to historic or archaeological rescurces.

Noise

There would be temporary noise emissions from construction which are not expected to be major and which are exempt from regulations. Operational noise impacts would occur from truck loading and unloading, particularly at the north side of the building. Truck traffic is expected at a rate of a little more than one truck per day and the nearest residence is approximately 200 feet away. Noise impacts would be minor. However, noise at the facility could increase in the future, especially as volumes of waste handled are expected to increase. Mitigation suggested for this area is in part preventative, aimed at reducing future impacts.

Mitigation:

- Provide baffling for north loading and unloading areas.
- Limit construction hours to daylight hours.
- Negotiate with property owners directly north of the proposed facility to acquire their properties and retain as a noise buffer.
- During facility operation, require truck engines to be shut off promptly when vehicles are at rest.

Wildlife

There is no known wildlife on the site and no indication that project construction or operation would have a significant adverse impact on wildlife. Mitigation: None.

Construction

Impacts of the construction of the proposal would be temporary in nature. They include erosion and dust from disturbed soil, noise from heavy machinery operation, and restriction of access to the area by equipment blocking the roadways and parking for construction workers.

Mitigation:

- Integrate erosion control measures during construction, such as hay bales and plastic barriers along the north side of the property, and covering soil stockpiling areas when soils are exposed.
- Use water trucks to reduce the amount of dust from the site.
- Restrict construction to weekdays and business hours to reduce noise impacts on nearby residences.
- Provide parking for construction crews in less crowded areas of the Complex.

The project as proposed would have few environmental impacts. A review of potential cumulative impacts from the proposal shows that they would also be very minor. By including the mitigation measures outlined above, there would be no significant environmental impacts from construction and operation of the facility.

5.0 AGENCIES CONSULTED

City of Vancouver Department of Community Preservation.

Clark County Drainage Engineering.

Southwest Air Pollution Control Authority.

United States Environmental Protection Agency.

United States Fish and Wildlife Service.

Washington State Department of Ecology.

Washington State Office of Archeology and Historic Preservation.

Attachment B-3

CERCLA Delisting of Ross Complex

61 FR 49690

CERCLA Delisting Information Date: 27 January 1994

INTRODUCTION

Section 3004(u) of the Hazardous and Solid Waste Amendments of 1984 requires "corrective action for all releases of hazardous waste or constituents from any solid waste management unit at a treatment, storage or disposal facility seeking a permit... regardless of the time at which waste was placed in such unit."

The following is a description of corrective actions undertaken at the site under CERCLA.

Assessment of Waste Management Units

Following the inclusion of the Ross Complex on EPA's Superfund List (November 1989), BPA performed a full scale CERCLA Remedial Investigation/Feasibility Study (RI/F'S) on the site. The two-year RI field investigation began in the summer of 1991 and included the collection and chemical analysis of soil, surface water, sediment and ground water samples. A total of 21 individual areas of concern or "waste units" were identified for investigation based on historical chemical handling, storage and disposal practices, and the results of previous investigations. The waste units investigated are listed below and include the original PCB Storage Building.

1. Fog Chamber Dump Trench Areas 1 and 2
*2. Wood Pole Storage Area South
*3. DOB-1 Drain Line
4. DOB-2 Drain field
5. Top Coat Test Area
**6. Capacitor Testing Lab
7. Paint Storage Facility
*8. Plumbing Shop
*9. Sandblasting Area
10. Van's Way Oil Storage Area
**11. Wood Pole Storage Area East
**12. Ross Substation and Capacitor Yard
13. Utilization and Disposal Yard
*14. Hazardous Waste Building
15. Herbicide Storage Area
*16. Untanking Tower
*17. Laboratory Waste Storage Area
18. PCB Storage Area
19. Cold Creek Fill
20. Oil/Water Separators (8)
21. Temporary Paint Storage Area

The soil, surface water, sediments and ground water samples collected from each of the waste units were analyzed for volatile organics, base neutral acids, aromatic hydrocarbons (HPAHs), metals, polychlorinated biphenyls (PCBs), pesticides, and herbicides. Except for the Fog Chamber Dump, Trench Area 1, laboratory results revealed only limited surface soil contamination. No widespread contamination was found on site.

Out of the 21 waste areas identified, 17 required no remedial action under CERCLA; 7 waste units (*) contained spot contamination of concern under Washington State Model Toxics Control Act (MTCA); only 4 waste units (**) required remediation under CERCLA. The seven waste units (*) with MTCA exceedences were fully remediated in the summer of 1992. Remediation of three of the waste units (**) requiring action under CERCLA was completed in FY 1996.

Both active and inactive waste handling and storage units exist on the premises. There are no active units used for disposal of waste on the Complex. Two inactive areas, the Fog Chamber Dump Trench Areas 1 and 2, were previously used by BPA for disposal. These areas were addressed in the Comprehensive Environmental Response and Compensation and Liability Act (CERCLA) Remedial Investigation/Feasibility Study (RI/FS) performed under a Federal Facility Agreement with BPA, the State of Washington Department of Ecology (Ecology), and EPA Region 10.

In a Record of Decision (ROD) signed in September 1993, it was agreed that for Fog Chamber Dump Trench Area 1, the installation of an impervious cap and institutional controls were protective of human health and the environment. For Trench Area 2, the parties agreed that since only solid wastes, not process wastes, were involved, institutional controls alone would be protective.

Two other waste units that required remediation were the Wood Pole Storage Yard (enhanced bioremediation) and the Ross Substation and Capacitor Yard (excavation and offsite removal).

CERCLA Delisting Information Date: 27 January 1994

With the exception of ground water monitoring and limited surficial excavation and removal at a number of locations, none of the other waste units required further action.

With remediation complete and ground water monitoring results shown to be unremarkable, the Ross Complex was officially deleted from the CERCLA National Priority List (NPL) on September 23, 1996.

Referenced reports were provided to the U.S. Environmental Protection Agency (EPA) and the Washington State Department of Ecology (WDOE).

FEDERAL REGISTER

Vol. 61 No. 185 Monday, September 23, 1996 p 49690 (Rule)

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 300

[FRL5612-8]

National Oil and Hazardous Substances Contingency Plan; National Priorities List Update

AGENCY: Environmental Protection Agency.

ACTION: Notice of deletion of Bonneville Power Administration Ross Complex (USDOE) from the National Priorities List.

SUMMARY: The Environmental Protection Agency (EPA) announces the deletion of the United States Department of Energy (USDOE) Bonneville Power Administration Ross Complex, located in Clark County, Vancouver, Washington, from the National Priorities List (NPL). The NPL is Appendix B of 40 CFR part 300 which is the National Oil and Hazardous Substances Contingency Plan (NCP), which EPA promulgated pursuant to Section 105 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), as amended. EPA and the State of Washington's Department of Ecology have determined that the Site poses no significant threat to public health or the environment and therefore, no further remedial measures pursuant to CERCLA are appropriate.

EFFECTIVE DATE: September 23, 1996.

FOR FURTHER INFORMATION CONTACT: Nancy Harney, Site Manager, U.S. Environmental Protection Agency, Region 10, 1200 6th Avenue (ECL-111), Seattle, Washington 98101, (206)-553-6635.

SUPPLEMENTARY INFORMATION: The site to be deleted from the NPL is: Bonneville Power Administration Ross Complex (USDOE), Clark County, Vancouver, Washington.

A Notice of Intent to Delete for this site was published July 18, 1996 (FRL-5537-8). The closing date for comments on the Notice of Intent to Delete was August 19, 1996. EPA received no comments.

EPA identifies sites which appear to present a significant risk to public health, welfare, or the environment and it maintains the NPL as the list of those sites. Any site deleted from the NPL remains eligible for remedial actions in the unlikely event that conditions at the site warrant such action in the future. NCP Sec. 300.425(e)(3). Deletion of a site from the NPL does not affect responsible party liability or impede agency efforts to recover costs associated with response efforts.

List of Subjects in 40 CFR Part 300

Environmental protection, Air pollution control. Chemicals, Hazardous substances, Hazardous waste, Intergovernmental relations, Penalties, Reporting and recordkeeping requirements, Superfund, Water pollution control, Water supply.

Dated: September 10, 1996.

Chuck Clarke,
Regional Administrator, Region 10.

For the reasons set out in the preamble, 40 CFR part 300 is amended as follows:

PART 300 -- [AMENDED]

1. The authority citation for part 300 continues to read as follows:

Authority: 33 U.S.C. 1321(c)(2); 42 U.S.C. 9601-9657; E.O. 12777, 56 FR 54757, 3 CFR 1991 Comp., p. 351; E.O. 12580, 52 FR 2923, 3 CFR 1987 Comp., p. 193.

Appendix B--[Amended]

2. Table 2 of Appendix B to part 300 is amended by removing the site for Bonneville Power Administration Ross (USDOE), Vancouver, Washington.

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