DOE/EA--0733

DE92 018403

Environmental Assessment

Ross Hazardous and Toxic Materials Handling Facility

Prepared for

**Facilities Planning Branch
Division of Facilities Engineering
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June 1992

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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

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Figure 1
Ross Complex and Vancouver Vicinity

BPA Ross Complex

environmental impacts of the proposal; Section 4.0 provides a summary, and Section 5.0 lists agencies consulted.

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.

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.

Figure 2
Existing Flow Diagram for Used Equipment
Rehabilitation and Disposal

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BPA Ross Complex

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.

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.

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Figure 4
Proposed Project Plan; BPA Ross Complex

BPA Ross Complex

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

A room would be set aside in the facility to allow for the bulking (consolidation of containers) of both hazardous waste and PCB-contaminated waste. This area would be among the most secure at the site with personnel access restricted to those workers dressed in protective gear. This room is planned to adjoin the locker room in the central part of the facility. The bulking room would provide direct access to the hazardous waste storage area and the shipping and receiving area.

Secondary containment would be provided for this area 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)(c)(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.

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

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.

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 $\mu\text{g/L}$) 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 least 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 Countermeasure (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 operation.

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 Service¹ (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.

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.

- 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.

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 continue 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. 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 resources.

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.

END

**DATE
FILMED**

9 / 24 / 92