BPA Alcoa Substation

SHARP Report — Part 1 of 2

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• SHARP first SHARP	v2024.04.29	Ecology Info	
• SHARP rating	Low	ERTS	none
• SHARP date	08/14/2025	CSID	2970
• EJFlagged?	✔ – No Override	FSID	1057
• LD confidence level	low	VCP	none
• Cleanup milestone	site hazard assessment	UST ID	none
• SHARPster	John Kirkpatrick	LUST ID	none

This section is blank if this is the first SHARP

SHARP Media	Scores	Confidence	Additional Factors	
Indoor air	D4	medium	multiple chemical types	⊘
Groundwater	C4	low	risk to off-site people	⊘
Surface water	D4	medium	climate change impacts	✔
Sediment	D4	medium	plant/animal tissue data	⊘
Soil	B3	low		

Location and land use info

5500 Old Lower River Rd, Vancouver, Clark County, 98660

Primary parcel	152902000
Land use	industrial
Responsible unit	SWRO

Sources reviewed

1992, Report on Alcoa Substation Cap Group #4, Bonneville Power Administration (BPA)

1992, Mail correspondance from BPA to Region 10, Environmental Protection Agency (EPA)

1991, Site Management Information System Input Sheet, Department of Ecology

Primary census tract	Associated census tracts
53011041005	

Local demographics comments

A zero was applied to all EJscreen parameters because the EJscreen website was not available at the time of rating.

Source/source area description

The site has been the location of an electrical substation for decades, including serving the former Alcoa Aluminum plant. Electrical equipment at the site used to use polychlorinated biphenyls (PCBs). Soil at the site came to be contaminated with PCBs, and cleanup efforts occurred in the early 1990s. However, some contaminated soil was left in place.

The site is located a half mile north of the Columbia River, and about 3 miles from downtown Vancouver. GPS coordinates are 45.65203, -122.72768.

Soil comments

PCBs were confirmed in site soils at concentrations up to 6 ppm in 1992. Depending on the specific formulation, they may be partially degraded or still present in similar concentrations today. The soils appear to be partially capped by gravel but also surrounded by security fencing, which should limit human exposure to contaminated soils.

Groundwater comments

Area groundwater is highly likely to be shallow, and some of the nearby fields classify as freshwater emergent wetland. PCBs tend to be immobile but testing may be needed to confirm the lack of impacts to area groundwater.

Surface water comments

The nearest wetlands are about 600' away, and the Columbia River is a half mile to the south.

Sediment comments

n/a

Indoor air comments

PCBs are not typically associated with vapor intrusion risk.

Additional factors comments

The area is sucseptible to flooding, with a 1% annual chance flood hazard according to FEMA (flood zone AE).

Site history

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The site hosts an electrical substation. It is unclear based on the reviewed records when the station was built, but PCBs were in widespread use at facilities like these until manufacturing in the US was banned in 1979. In April 1990, Riedel Environmental Services conducted a site investigation at the facility and found that soils were contaminated with PCBs. By August 1990, a Cleanup Action Plan had been put together, and a copy was sent to the EPA.

In October 1990, hazmat crews removed 125 tons of contaminated soils. Soil samples taken afterward showed that PCB concentrations had been reduced to levels below 5 mg / kg, but were still above MTCA cleanup levels of 1 mg / kg.

A second site investigation was conducted by Riedel Environmental Services in early 1991, which reportedly identified 6 PCB hotspots. In July, Aptus Environmental Services performed another cleanup. Also in 1991, BPA rebuilt Capacitor Group #4 to utilize non-PCB capacitors. Presumably, this meant the previous capacitors had relied on PCBs. Ecology received information about contamination at the site and added the site to the Site Management Information System in November 1991.

Riedel Environmental Services conducted a third cleanup from March through May 1992. Contaminated soils were successfully removed except from underneath some of the facility's electrical equipment.

BPA's hazmat team attempted to address the residual contamination near and underneath the electrical equipment in July 1992. 125 more tons of soil were removed. However, cleanup goals of less than 1 mg / kg could not be achieved, and a new target of 10 mg / kg was adopted by BPA. Further cleanup apparently would have required digging underneath or removing concrete footings. BPA's subsequent report indicated that they planned no further action at the site.

No further remediation at the site has been document in Ecology files. Based on aerial and satellite photography, and compared to the 1992 reports, the facility layout has remained mostly unchanged.

Overflow - Site contamination and cleanup history

No overflow

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First SHARP
SHARP rating — Low

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Conceptual site model
08/14/2025

SHARP