

**American Crossarm and Conduit Company
Chehalis, Washington
Region 10
WAD057311094**

Site Exposure Potential

From the 1930s to 1983, the American Crossarm and Conduit Company (ACC) operated a wood-preserving facility on a 6.5-hectare parcel in a commercial/residential section of Chehalis, Washington (Figure 1) (EPA undated). The facility consisted of a wood treatment facility, sawmill, kilns, a wastewater impoundment area, and a landfill. From 1950 to 1983, the company pressure-treated utility pole crossarms and conduits using pentachlorophenol (PCP) or creosote as the preserving agent (Howard Edde Inc. and Landau Assoc. Inc. 1986). While some process chemicals were recycled, wastewater and surface water runoff were discharged to the unlined surface impoundment and ditch under a Washington State Department of Ecology permit. The landfill received construction debris, soils, and miscellaneous waste, possibly contaminated with PCP, from the facility (WDOE 1985).

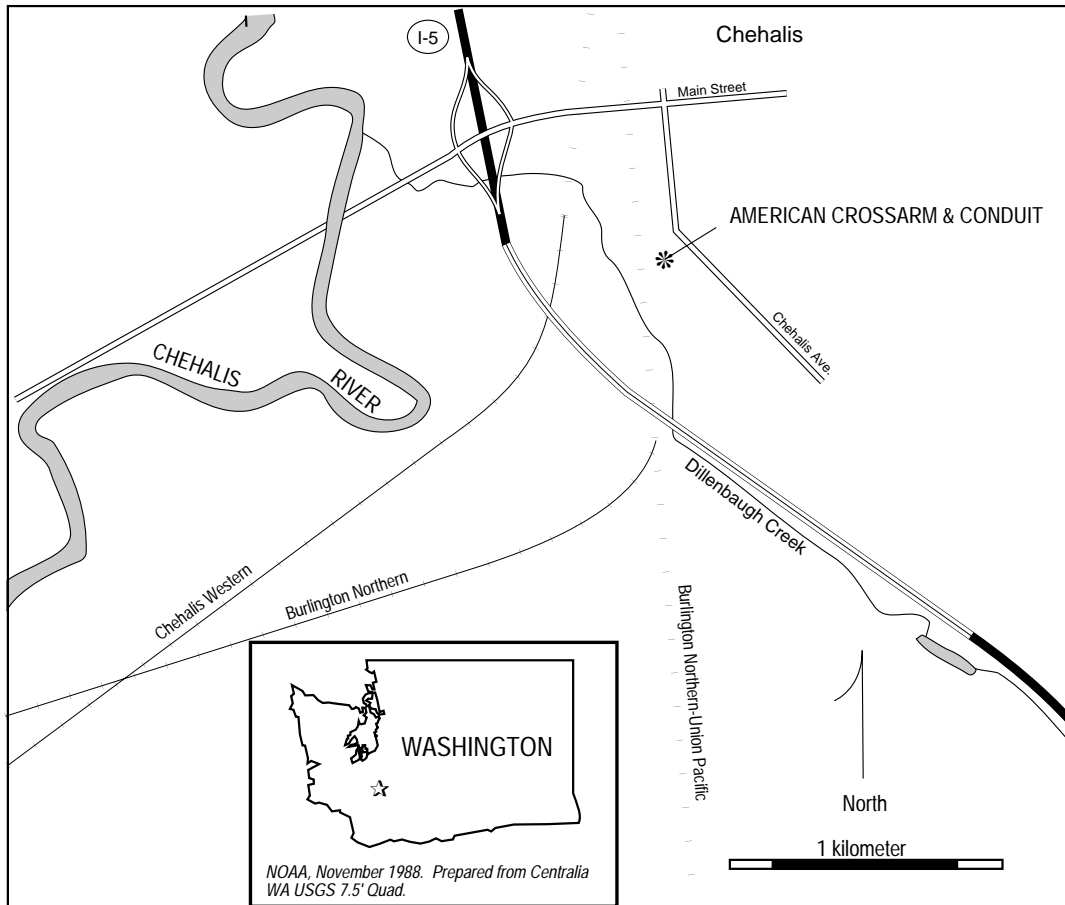


Figure 1. American Crossarm & Conduit site in Chehalis, Washington.

After production ended in 1983, the surface impoundment was regraded and the soil compacted to form a relatively flat topography (Howard Edde Inc. and Landau 1986). On November 25, 1986, the Chehalis River flooded, releasing approximately 37,850 liters of PCP-treated diesel oil from underground tanks and open sumps at the site. Dillenbaugh

Creek, the Chehalis River, and part of the town of Chehalis were contaminated. All wastes from the winter 1986-87 emergency cleanup of this spill were stored at the ACC site, and are now being incinerated on-site.

The ACC site is on the northwest side of an alluvial valley formed by the confluence of the Chehalis and the Newaukum rivers (Howard Edde Inc. and Landau Assoc. Inc. 1986). The site is adjacent to a 22-hectare wetland that extends east to Dillenbaugh Creek. Part of the site's surface runoff flows west via a storm drain to an off-site lagoon. The lagoon discharges into Dillenbaugh Creek, 215 meters west of the site. The remaining surface runoff flows south via drainage ditches and discharges into the creek. Dillenbaugh Creek joins the Chehalis River 1 km west of the site. The Chehalis River enters Grays Harbor on the Pacific Coast 95 km downstream from the ACC site. The site is 53 to 55 meters above mean sea level; most of the ground surface is within the 100-year floodplain.

Possible contaminant migration pathways include surface water runoff via the storm drain and drainage ditch and sediment/soil transport during flooding to Dillenbaugh Creek and the Chehalis River.

Site-Related Contamination

The contaminants of concern to NOAA are PCP, dioxins, and furans. High levels of PCP were found in soils from the production area (Table 1) (Howard Edde Inc. and Landau Assoc. 1986). PCP was measured in on-site groundwater and off-site surface water at concentrations exceeding AWQC for the protection of freshwater aquatic life (20 µg/l

Table 1. Maximum concentrations of selected contaminants at the ACC site (Howard Edde Inc. and Landau Assoc. 1986; Yake 1987); water concentrations in µg/l, for oil and soil in mg/kg, and for sediment in µg/kg.

Media	PCP	Naphthalene	PAHs	Chlor. Dioxins	Chlor. Furans
<u>Surface water</u>					
standing water on-site	43,000	N/A	N/A	N/A	N/A
upstream of site on Dillenbaugh Creek	ND	N/A	N/A	N/A	N/A
storm drain lagoon off-site	590	N/A	N/A	N/A	N/A
Dillenbaugh Creek downstream of lagoon	3.6	N/A	N/A	N/A	N/A
confluence with Chehalis River	9.3	N/A	N/A	N/A	N/A
<u>Groundwater</u>	5120	3,300	N/A	N/A	N/A
<u>Oil</u>					
flood dispersed	38,000	N/A	N/A	229.5	N/A
<u>Soil</u>					
facility area	5,000	47	1,600	2.88	N/A
landfill	5,775	N/A	N/A	4.15	N/A
retort sump	31,000	240	N/A	N/A	N/A
sludge, main sump	1,600	N/A	N/A	N/A	N/A
off-site downgradient	770	N/A	N/A	1.29	N/A
off-site upgradient	7.7†	N/A	N/A	N/A	N/A
<u>Sediment</u>					
storm drain lagoon	8.2	N/A	N/A	1530	373.1
Dillenbaugh Creek downstream of lagoon	N/A	N/A	N/A	103	13.3

† estimated value; N/A: Not available; ND: Not detected

and 13 µg/l, respectively). Dioxins, impurities in PCP, were found in moderate to high concentrations in on-site soils and flood-dispersed oil. High concentrations of dioxins were measured in sediment from the storm drain at the discharge point to Dillenbaugh Creek (Yake 1987). Another group of impurities in PCP, furans, were also found in sediment at the discharge point in moderate to high concentrations.

NOAA Trust Habitats and Species in Site Vicinity

Dillenbaugh Creek, a continuously flowing, low-gradient stream, flows along the western border of the site. The creek is less than one meter wide and has a substrate of sand and silt with some gravel and cobble, and provides suitable spawning and nursery habitat for coho salmon (Table 2) (Brix 1988). Adult coho spawn 7 to 12 km upstream of the site during November and December. Juvenile coho probably use the nursery areas in Dillenbaugh Creek throughout the winter, spring, and fall months.

The Chehalis River near the site provides nursery habitat and a migratory corridor for fall and spring chinook, coho, and chum salmon, and steelhead trout. A small number of fall chinook salmon may also spawn in this stretch, but are more likely to spawn up- and downstream of the site area (WDF 1975; Brix 1988). Steelhead trout, and chinook and coho salmon use the Chehalis River near the site over the entire year, while chum salmon use the river from mid-October to mid-June. All four anadromous species are commercially and recreationally fished on the Chehalis River.

Table 2. NOAA trust resource use of Dillenbaugh Creek and the Chehalis River in the vicinity of the site (WDW undated; WDF 1975; Ward 1988).

Species	Migration Route	Spawning Ground	Nursery Area	Commercial Fishery	Recreational Fishery
<u>Dillenbaugh Creek</u>					
coho salmon	X	X	X		
<u>Chehalis River</u>					
chinook salmon	X	X	X	X	X
coho salmon	X		X	X	X
chum salmon	X		X	X	X
steelhead trout	X		X	X	X

Response Category: Federal Enforcement Lead

Current Stage of Site Action: RI/FS Workplan

EPA Site Manager

Lee Marshall	206-442-2723
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NOAA Coastal Resource Coordinator

Lew Consiglieri	206-442-2101
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References

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