

**Pacific Coast Pipelines
Fillmore, California
Region 9
CAD980636781**

Site Exposure Potential

Between 1920 and 1952, Pacific Coast Pipelines (PCPL) operated a petroleum refinery in Fillmore, California (Figure 1). Liquid and semi-solid refinery wastes were disposed of in unlined pits and sumps on-site. Wastes have been found in seven pits and are suspected in two additional areas. The largest of these pits, along the western boundary, contains 8,500 m³ of wastes. Since 1953, the PCPL site has been a crude oil pumping station. It is believed that the waste disposal areas have not been used since 1953 (Radian 1984).

The site is bordered on the west by the Pole Creek flood control channel, on the east and north by steep hills that are part of the Topatopa Mountains, and on the south by the Southern Pacific Railroad (Radian 1984). Pole Creek enters the Santa Clara River 1 km south of the site (USFWS 1981). Sespe Creek, 3 km west of the site, flows 3.5 km before joining the Santa Clara River, 4.5 km below the mouth of Pole Creek. The Santa Clara River enters the Pacific Ocean 45 km from the site. Groundwater flows generally to the southwest; depth to groundwater at the site is an estimated 26 meters (EPA 1987).

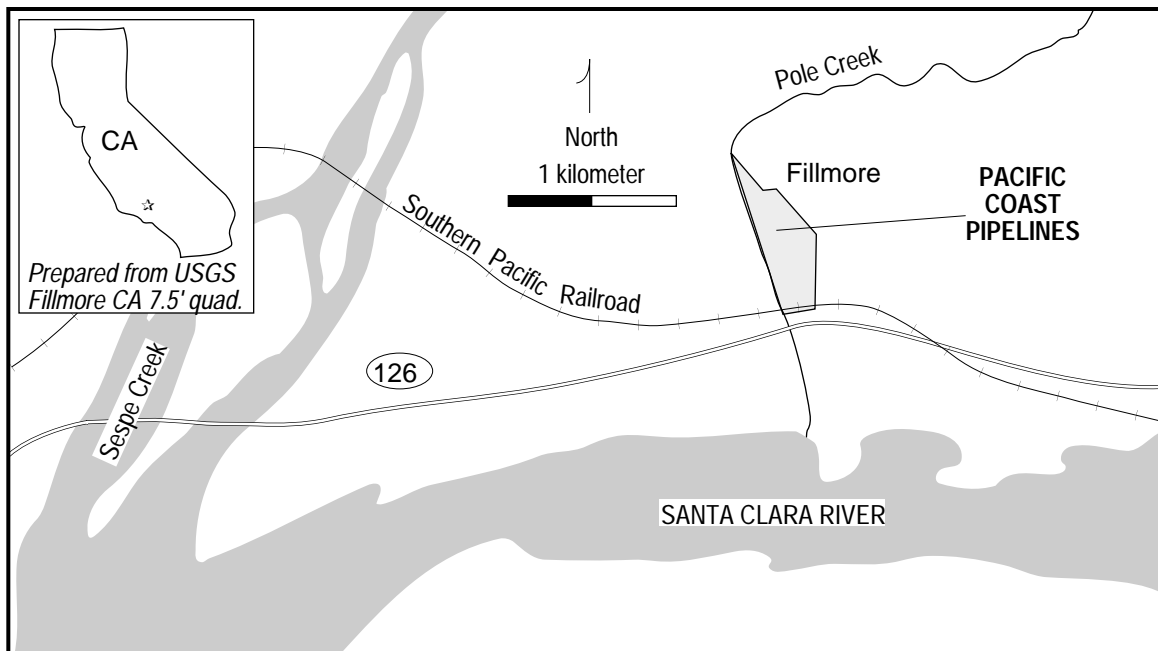


Figure 1. The Pacific Coast Pipelines site in Fillmore, California.

Possible contaminant migratory pathways to NOAA trust resources include surface runoff, flooding and subsequent erosion of materials from the waste pits, and groundwater flow to Pole Creek.

Site-Related Contamination

The contaminants of concern to NOAA are trace metals. High levels of several trace metals have been measured in waste collected from the on-site pit areas (Table 1) (Radian 1984).

The waste has been described as varying from generally soft, semi-fluid to hard soil/waste mixtures with a pH below 2.0. Analysis of the waste showed 82 to 93 percent VOCs and 7 to 18 percent ash. The high levels of trace metals were predominantly in the ash. Elevated concentrations of metals were measured in groundwater with the concentrations of cadmium, lead, and mercury exceeding the chronic AWQC for the protection of freshwater aquatic life (Radian 1984; EPA 1986). Low to moderate concentrations of VOCs were also found in groundwater.

Table 1. Maximum concentrations of selected contaminants at the Pacific Coast Pipelines site (Radian 1984); AWQC for the protection of freshwater aquatic life (EPA 1986); waste concentrations in mg/kg and water concentrations in µg/l.

Contaminant	On-Site Waste	Groundwater	AWQC	
			Acute	Chronic
ORGANIC COMPOUNDS				
<u>Volatile</u>				
benzene	N/A	798	5,300*	N/D
INORGANIC SUBSTANCES				
<u>Trace Metals</u>				
arsenic	666	5	360	190
cadmium	10	5	3.9†	1.1†
chromium	371	<1	16	11
copper	504	N/A	18†	12†
lead	44,800	45	82†	3.2†
mercury	0.2	3.1	2.4	0.012
nickel	5,556	N/A	1400†	160†
zinc	520	N/A	120†	110†
N/D: Criteria not determined; N/A: Not available; * LOEL				
† Hardness-dependent (based on 100 mg/l CaCO ₃)				

NOAA Trust Habitats and Species in Site Vicinity

The habitat of concern to NOAA is the Santa Clara River, which flows through a wash-like floodplain and has a maximum width of 1 km near the site. The water flow is regulated by dams above the site and varies considerably over the seasons. A diversion dam 25 km below the site is passable during high flow, but restricts the access of anadromous fish species to the upper Santa Clara River watershed during the dry summer months. The Santa Clara River is used as a migratory route by adult steelhead trout and as nursery area and migratory route for the outmigrating juveniles. The size of the run is unknown (Harper 1988).

Pole Creek, which flows adjacent to the site and into the Santa Clara River, is a small, intermittent creek and is not believed to harbor species of concern to NOAA (Sasaki 1989).

Although Sespe Creek is not physically connected to Pole Creek, it is of concern because it is one of the most valuable steelhead trout streams in southern California and originates downstream of the mouth of Pole Creek in the direction of the contaminant pathway. There is a 67-km stretch of stream within Sespe Creek that has suitable spawning habitats for steelhead trout. Adult steelhead migrate up the watershed to spawn during the winter months. The juveniles stay in the watershed for at least a year before they migrate to the Pacific Ocean.

Response Category: Federal Enforcement Lead

Current Stage of Site Action: Removal of contaminated soil under State (Department of Health Services) Order completed. PRP is currently doing independent site characterization. RI/FS is planned for the future but scope will be limited because of extent of prior PRP-sponsored remedial work.

EPA Site Manager

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References

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EPA. 1987. Documentation Records for Hazard Ranking System. Washington, D.C.: U.S. Environmental Protection Agency.

Harper, B., fisheries biologist, U.S. Fish and Wildlife Service, Laguna Niguel, California, personal communication, December 6, 1988.

Radian Corporation. 1984. Environmental Evaluation, Final Report, Pacific Coast Pipelines Facility, Fillmore, California. February 1984. Fillmore, California: Pacific Coast Pipelines.

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