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Cooper Drum Company

South Gate, California

CERCLIS #CAD055753370

Site Exposure Potential

The 1.5-hectare Cooper Drum Company site is in an urban section of South Gate, California. The site is about 650 m west of the Los Angeles River and 20 km upstream of San Pedro Bay, which is contiguous with the Pacific Ocean (Figure 1). The site is surrounded by industrial property to the north and east, residential and commercial areas to the west, and an old school to the south.

There have been drum recycling operations at the Cooper site since 1941. Drums previously used for storing petrochemical products and other hazardous substances are delivered to the site and subsequently reshaped, flushed with acids and caustics, and painted. Since 1971, under the ownership of the Cooper Drum Company, approximately 36,000 l of liquid hazardous wastes have been generated each month at the site. Waste materials resulting from the recycling activities include hydrochloric acid, sodium hydroxide, and paint wastes. All liquid wastes are currently recirculated through a hardpipe system to steel-lined tanks (CA DHS 1992).

Direct discharges, groundwater, and surface water runoff are the potential pathways of contaminant transport from the site to NOAA resources and associated habitats. Since 1984, at least three

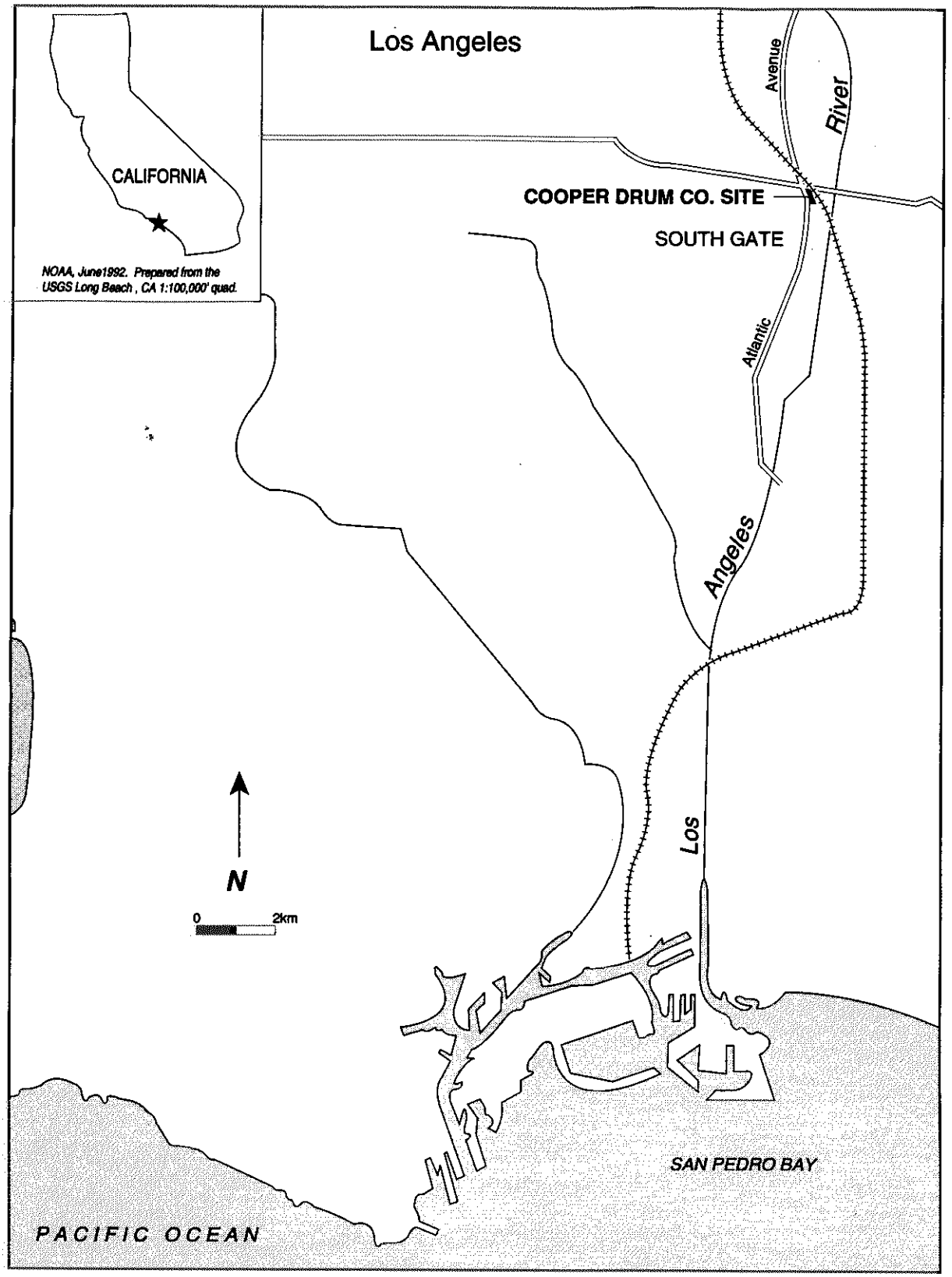

Figure 1. The Cooper Drum Co. site in South Gate, California.

direct releases of hazardous wastes to on- and off-site soils have been documented. Approximately 180 tons of contaminated soils were removed from the site after the first documented release. Off-site contaminated soils were also reportedly removed following the two subsequent releases, but information on the quantity of soils excavated was not available. In addition, waste materials may have been discharged directly via unlined concrete sumps (Ecology and Environment 1988, 1989).

Perched groundwater is thought to occur 24 m below ground surface at the Cooper site. There are five deeper aquifers (the Exposition, Gage, Jefferson, Lynwood, and Silverado aquifers) beneath the site at depths ranging from 30 to 185 m below ground surface. There are hydraulic connections between the Exposition and Gage aquifers and the Lynwood and Silverado aquifers. Groundwater in the Silverado aquifer generally flows southwest from the site. Data on the direction of groundwater flow was not available for any of the other aquifers (Ecology and Environment 1988, 1989).

Industrial wastewaters from the site are discharged to a sewer system in accordance with Los Angeles County Sanitation Department regulations. Overland surface water runoff from the site is clarified on-site and discharged to a storm drain in accordance with Los Angeles Regional Water Quality Control Board permit regulations. However, the facility has been cited on several occasions for violating permit discharge limits for both wastewater and storm drain discharges. In addition, at least some component of surface water runoff discharges from the site to a nearby street (Ecology and Environment 1988, 1989).

NOAA Trust Habitats and Species

The primary habitats of NOAA concern in the vicinity of the Cooper Drum Site are surface water and associated bottom substrates of San Pedro Bay, and, to a lesser degree, the tidal water of the Los Angeles River. San Pedro Bay is considered important spawning, nursery, and adult habitat for trust resources (Johansen personal communication 1991). Pilings, oil platforms, kelp beds, breakwaters, and cobble/sand substrates provide diverse marine habitats for numerous demersal and pelagic fish and invertebrate species. Over 130 different fish and invertebrate species have been identified in San Pedro Bay; dominant species are presented in Table 1 (Allen 1976; Crooke personal communication 1991; Cross personal communication 1991; Hagner personal communication 1991; Helvey personal communication 1991).

The majority of surface water in the Los Angeles River is the result of secondary and tertiary effluent from the Los Angeles metropolitan area. It is considered unlikely that the Los Angeles River provides suitable habitat for any NOAA trust resources (Johnson personal communication 1991; Maxwell personal communication 1992). Tidal influence is limited to approximately 2 km

Table 1. Species, habitat use, and commercial and recreational fisheries in San Pedro Bay.

Species		Habitat			Fisheries	
Common Name	Scientific Name	Spawning Ground	Nursery Ground	Adult Forage	Comm. Fishery	Recr. Fishery
RESIDENT FISH						
Poacher	*Agonidae*			♦		
Silverside	*Atherinidae*	♦	♦	♦	♦	♦
Blenny	*Blennidae*	♦	♦	♦		
Left-eye flounder	*Bothidae*	♦	♦	♦		♦
Clinid	*Clinidae*	♦	♦	♦		
Sculpin	*Cottidae*	♦	♦	♦		♦
Surf perch	*Embiotocidae*	♦	♦	♦	♦	♦
Anchovy	*Engraulidae*	♦	♦	♦	♦	♦
Flying fish	*Exocoetidae*			♦		
Goby	*Gobiidae*	♦	♦	♦		
Striped mullet	*Mugil cephalus*		♦	♦		
Smoothhound	*Mustelus* spp.			♦		
Sea bass	*Paralabrax* spp.		♦	♦		♦
Right eye flounder	*Pleuronectidae*	♦	♦	♦		♦
Damselfish	*Pomacentridae*		♦	♦		
Midshipmen	*Porichthys* spp.	♦	♦	♦		
Skate	*Rajidae*		♦	♦		
Guitarfish	*Rhinobatidae*		♦	♦		
Drum	*Sciaenidae*	♦	♦	♦	♦	♦
Mackerel	*Scombridae*		♦	♦	♦	♦
Scorpionfish	*Scorpaenidae*	♦	♦	♦		♦
Rockfish	*Sebastes* spp.	♦	♦	♦		♦
California barracuda	*Sphyraena argentea*			♦		♦
Pipefish	*Syngnathidae*	♦	♦	♦		
INVERTEBRATE SPECIES						
Rock crab	*Cancer antemnarius*	♦	♦	♦	♦	♦
Abalone	*Haliotis* spp.	♦	♦	♦		
Bay mussel	*Mytilis edulis*	♦	♦	♦		
Spiny lobster	*Panulirus interruptus*	♦	♦	♦	♦	♦
Littleneck clam	*Protothaca staminea*	♦	♦	♦		
Kelp crab	*Pugettia producta*	♦	♦	♦		
Octopus	*Octopodidae*	♦	♦	♦		♦
Platform mussel	*Septifer bifurcatus*	♦	♦	♦		
Urchin	*Strongylocentrous* spp.	♦	♦	♦		
Tunicate	*Styela* spp.	♦	♦	♦		
Pismo clam	*Tivela stultorum*	♦	♦	♦		♦
Gaper clam	*Tresus nuttali*	♦	♦	♦		♦

upstream of the river's confluence with San Pedro Bay.

There is no commercial or recreational fishing in the Los Angeles River. There are commercial bait fisheries in San Pedro Bay for northern anchovy, topsmelt, mackerel, and queenfish, but mid-water and bottom trawlers are not allowed into the bay (Crooke personal communication 1991). Commercial and recreational harvesting of white croaker is banned in the area because of DDT and PCB contamination (Pollock personal communication 1991). A related advisory is in effect warning people to limit consumption of fish

taken from the Palos Verdes/San Pedro Bay area (Pollock personal communication 1991). Commercial and sport abalone fishing is closed from Vincente to Dana Point, California (Crooke personal communication 1991). A health advisory, probably based on fecal coliform counts, is in effect for eating shellfish from San Pedro Bay (Crooke personal communication 1991).

There is sport fishing in San Pedro Bay at numerous piers and other shoreline features, on party boats and fishing barges, and from private boats (Oliphant personal communication 1987). The majority of activity is focused away from Los Angeles Harbor and closer to the San Pedro Bay breakwater. Species regularly caught by anglers include kelp bass, sand bass, queenfish, rockfish, surfperch, California halibut, and diamond turbot. Spiny lobster and rock crab are caught regularly by sport fishermen near Los Angeles Harbor (Crooke personal communication 1991).

Site-Related Contamination

Data collected during preliminary site investigations indicate that on-site soil and off-site groundwater contain elevated concentrations of inorganic substances and organic compounds. Past wastewater discharges from the site also contained high concentrations of trace elements (Ecology and Environment 1988, 1989). Primary contaminants of concern to NOAA include trace elements, PCBs, and petroleum hydrocarbons. Secondary contaminants of concern include VOCs.

Lead (30 mg/kg) and zinc (2,500 mg/kg) were detected in on-site soil at concentrations exceeding average U.S. soil concentrations for these substances (10 and 50 mg/kg, respectively; Lindsay 1979). PCBs (31 mg/kg) and petroleum hydrocarbons (up to 90,000 mg/kg) were also measured in on-site soil. It was unclear whether these contaminated soils were removed from the site during the previous excavation activities. There is no information on whether off-site groundwater was analyzed for trace elements and PCBs. Lead concentrations up to 460,000 µg/l and zinc concentrations up to 79,000 µg/l measured in wastewater discharged from the site exceeded freshwater and marine acute AWQC (U.S. EPA 1986) by up to three orders of magnitude (Ecology and Environment 1988, 1989).

On-site soil contained VOCs (including perchloroethylene, trichloroethane, trichloroethylene, acetone, and methyl ethyl ketone) at a total concentration exceeding 1,700,000 µg/kg. There are no screening guidelines for VOCs in soils. In 1987, four municipal wells less than 500 m downgradient of the site were closed because groundwater samples from these wells contained perchloroethylene at concentrations up to 14 µg/l, exceeding the maximum concentration limit (5 µg/l) and local background concentrations (2 µg/l). These wells were screened in the Silverado aquifer; data on potential contaminants in the perched aquifer were not available (Ecology and Environment 1988, 1989).

Summary

San Pedro Bay is the habitat of concern to NOAA; the Los Angeles River is unlikely to provide suitable habitat for NOAA resources. Lead, zinc, PCBs, and petroleum hydrocarbons were measured in on-site soil above screening criteria. Lead and zinc were measured in wastewater discharges above their respective AWQC. Elevated levels of VOCs were measured in soil, and four municipal wells located downgradient of the site were closed due to the presence of perchlorethylene. It is not known to what degree contaminants from the site can potentially reach trust resources in San Pedro Bay.

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