Sola Optical USA, Inc.
Petaluma, California
Region 9
CAD981171523

Site Exposure Potential

Optical lenses have been manufactured since 1978 at the Sola Optical USA site in Petaluma, California (Figure 1). In 1985, contamination was detected in soils and groundwater near the 14-hectare site, and six on-site underground storage tanks were removed (EPA 1987).

Depth to groundwater at the site is 4.5 meters. Groundwater flow is believed to be to the southwest and west towards Adobe Creek and the Petaluma River (Levine-Fricke 1987). Adobe Creek lies 460 meters west of the site and flows into the Petaluma River, 1.6 km from the site. The Petaluma River empties into San Pablo Bay, 13 km from the confluence with Adobe Creek.

A contaminant migratory pathway to NOAA trust resources is via groundwater flow to Adobe Creek.

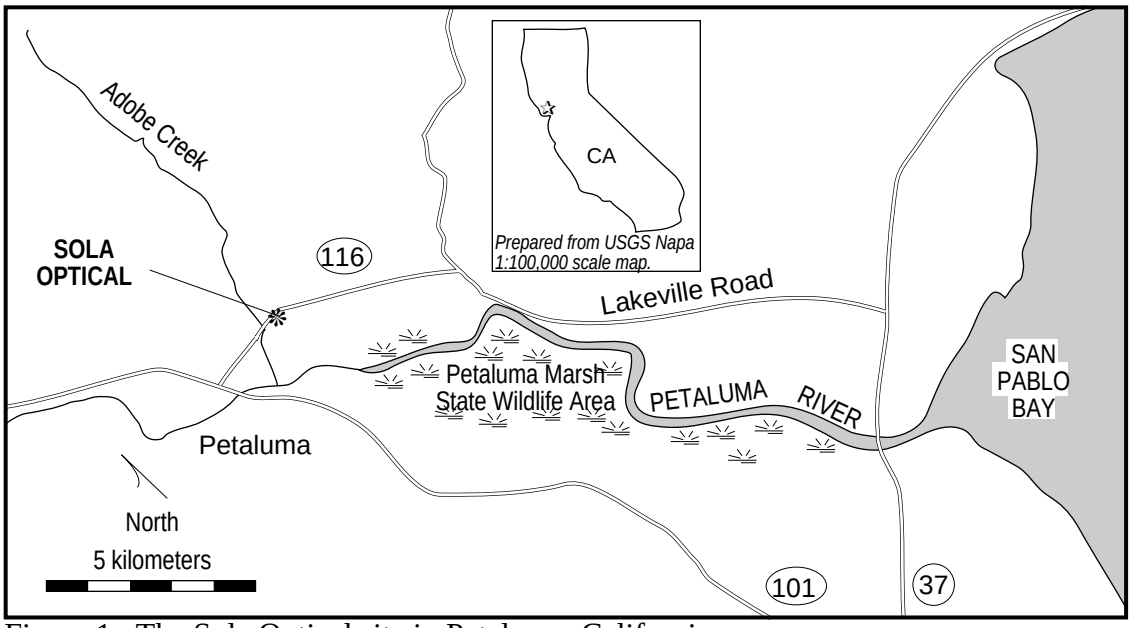

Figure 1. The Sola Optical site in Petaluma, California.

Site-Related Contamination

Soil borings near the underground storage tanks and groundwater sampling from on-site wells indicated that the soils and shallow subsurface water (less than 12 meters below the surface) were contaminated with VOCs, but levels were not reported. Contaminants were not detected in upgradient wells. Contaminants found in wells off-site and downgradient of the site included 1,1-dichloroethene (maximum of 3,300 μg/l); 1,1-dichloroethane (maximum of 680 μg/l); and trichloroethane (maximum of 1,700 μg/l). There is no reported evidence of surface water contamination at this site. No substances other than VOCs have been sampled for (EPA 1987).

NOAA Trust Habitats and Species in Site Vicinity

Adobe Creek is a continuously flowing, low-gradient tidal creek. There are no known resources of concern to NOAA in Adobe Creek (Enig 1989). However, a local high school has begun artificial propagation of steelhead along Adobe Creek, with assistance from the California Department of Fish and Game. This creek could become of interest to NOAA if the program is successful.

Habitats presently of concern to NOAA include the Petaluma River (Table 1). The Petaluma River is a low-salinity, tidal river near the site. The Petaluma Marsh State Wetland Area extends along the west bank of the Petaluma River from Adobe Creek to the river's entrance into San Pablo Bay (Enig 1989). Twenty mating pairs of steelhead trout use the Petaluma River headwaters for spawning. No other salmonids use the Petaluma River drainage basin for spawning; loss of spawning habitat and poor water quality limits salmonid production for this system (Rugg 1989).

Table 1. NOAA trust resource use of the Petaluma River and lower marshland estuary (USFWS 1981).

Species	Nursery Area	Spawning Area	Adult Area	Migration Corridor	Recreational Fishery	Commercial Fishery
INVERTEBRATES						
bay shrimp	X	X	X		X	X
Dungeness crab	X	X	X		X	
FISH						
chinook salmon			X	X	X	
coho salmon			X	X	X	
green sturgeon			X	X	X	
starry flounder	X		X		X	
steelhead	X	X	X	X		
striped bass	X		X		X	

Dungeness crab, starry flounder, striped bass, and bay shrimp use the lower Petaluma River estuary and associated wetlands for juvenile development. Extensive channels reach into the marshlands, providing access to the productive brackish waters. Adult chinook and coho salmon use the lower estuary as foraging grounds as they migrate to the Sacramento River. Green sturgeon, though not common, have been reported in the Petaluma River. Green sturgeon, like chinook and coho salmon, use the lower estuary for foraging. There is a bay shrimp fishery in northern San Pablo Bay near the Petaluma River estuary. Dungeness crab, starry flounder, striped bass, and sturgeon are harvested recreationally in the lower Petaluma River estuary (Rugg 1989).

Response Category: Federal Enforcement Lead

Current Stage of Site Action: RI/FS Workplan

EPA Site Manager

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NOAA Coastal Resource Coordinator

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References

EPA. 1987. Hazard Ranking System Package, Sola Optical USA, Inc., Petaluma, California. San Francisco: U.S. Environmental Protection Agency, Region 9.

Enig, J., fisheries biologist, California Department of Fish and Game, Napa, California, personal communication, January 17, 1989.

Levine-Fricke. 1989. Identification, Location, and Evaluation fo Public and Private Wells and Potential Deep Well Conduits near Sola Optical, Inc., Petaluma, California. Petaluma, California: Sola Optical USA, Inc.

Rugg, M., water quality biologist, California Department of Fish and Game, Napa, California, personal communication, January 19, 1989.

USFWS. 1981. Pacific coast ecological inventory: Santa Rosa, California. Washington, D.C.: U.S. Fish and Wildlife Service. Map scale 1:250,000. 38122-A1-E1-250.