

**Intersil, Inc., and Siemens Components  
Cupertino, California  
Region 9  
CAD041472341**

**Site Exposure Potential**

For several years, Intersil, Inc., and Siemens Components have manufactured semiconductors on two adjacent properties on six hectares in Cupertino, California (Figure 1). Intersil has several underground tanks, including two 33,000-liter neutralization systems, one 2,000-liter waste solvent tank, two 2,000-liter concrete scrubber pit sumps, and an abandoned 12,000-liter neutralization system. Siemens pumped waste solvents to four separate underground storage tanks that have since been removed. In 1982, the California Regional Water Quality Control Board's (CRWQCB) tank leak detection program conducted soil and groundwater studies at the sites and found widespread organic chemical contamination in soil and groundwater (EPA 1987).

Calabazas Creek is 400 meters east of the site (Geomatrix 1987). The creek flows north 5 km to discharge into Guadalupe Slough, which empties into the southern part of San Francisco Bay, 9.5 km north of the site.

Surface runoff of contaminants to Calabazas Creek is minimal because all tanks and contamination are underground. There is groundwater 18 meters below the site. Overall flow is towards the east, with smaller components towards the north and south (Geomatrix 1987). Contaminants may migrate to Calabazas Creek via groundwater.

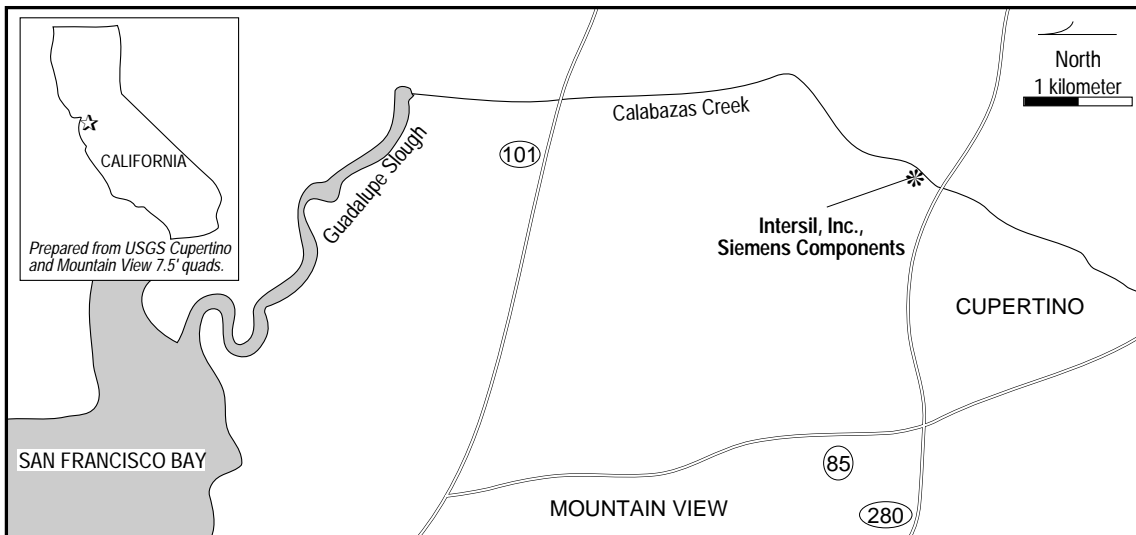


Figure 1. The Intersil, Inc., and Siemens Components site in Cupertino, California.

**Site-Related Contamination**

The contaminants of concern to NOAA are VOCs, which were detected in on-site groundwater. Concentrations of trichloroethylene exceeded LOEL (EPA 1986). Concentrations of VOCs in groundwater and soils were generally far higher on the Siemens property than on the Intersil property (Table 1). Contamination in the soil was found at depths of two to 14 meters on the Siemens site and at depths of between 5 and 30 meters

on the Intersil site. No analyses for trace metals have been conducted at the two sites. Contamination by VOCs has been found in groundwater collected from wells up to 1.6 km downgradient from the sites (Geomatrix 1987).

Table 1. Maximum concentration of selected contaminants at the Intersil/Siemens site (Geomatrix 1987); LOEL (EPA 1986); concentrations for soil in mg/kg and for water in µg/l.

Contaminant	Soil		Groundwater		Acute	LOEL Chronic
	Intersil	Siemens	Intersil	Siemens		
trichloroethylene	7	17	33,000	110,000	45,000	21,900
1,1,1-trichloroethane	0.05	11,000	610	27,000	N/D	N/D
1,1-dichloroethene	1.5	11,000	39	4,300	11,600	N/D
trichlorobenzene	ND	15,200	N/A	N/A	N/D	N/D
xylenes	1.8	14,000	4	ND	N/D	N/D
n-butyl-acetate	ND	21,000	N/A	N/A	N/D	N/D
N/A: Not available		ND: Not detected		N/D: Criteria not determined		

### NOAA Trust Habitats and Species in Site Vicinity

Calabazas Creek is a continuously flowing, low-gradient stream an average of nine meters wide and 0.3 to 1.5 meters deep. The lower 4 km of the creek has been channelized. The substrate in the lower stretch of the creek is muddy silt and in the upper reaches silty sand mixed with gravel. The water quality is fair, but there have been thermal problems that have caused algae blooms and degradation of the water quality. Calabazas Creek has been classified by the CRWQCB as a warm freshwater habitat, a cold freshwater habitat, and a wildlife habitat (Rugg 1988).

Guadalupe Slough is a major continuously flowing, low-gradient stream in the southern San Francisco Bay area. Width ranges from 30 meters at the mouth to three to five meters at the headwaters. Depth ranges from five meters at the mouth to 0.3 meters at the headwaters (Rugg 1988). The substrate in the lower portion of the slough consists of silty sand and gravel in the upper reaches. The water quality in Guadalupe Slough is fair.

Calabazas Creek supports a natural run of striped bass and a residual coho salmon run. Guadalupe Slough is used as a migratory corridor and nursery area by striped bass and coho salmon. The slough also supports a residual steelhead trout run (Rugg 1988).

**Response Category:** State Fund Lead

**Current Stage of Site Action:** RI/FS Workplan is currently in second draft (approval expected in April 1989); certain RI activities and interim actions are ongoing.

#### EPA Site Manager

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#### NOAA Coastal Resource Coordinator

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## References

EPA. 1986. Quality Criteria for Water. Washington, D.C.: Office of Water Regulations and Standards, Criteria and Standards Division. EPA 440/5-86-001.

EPA. 1987. National Priorities List, Superfund Hazardous Waste Site Listed under the CERCLA, Intersil, Inc./Siemens Components, Cupertino, California. San Francisco: U.S. Environmental Protection Agency, Region 9.

Geomatrix Consultants. 1987. Comments on the Siemens/Woodward-Clyde Consultants Report of 11, 13 and 20 March 1987. May 8, 1987. Cupertino, California: Intersil, Inc./Siemens Components.

Rugg, M., Water Quality Biologist, California Department of Fish and Game, Napa, California, personal communication, 1988.