

Former Electronics Manufacturing Facility

City of Industry, California

Metals ● Petroleum ○ VOCs ●
Assessment/Compliance ● Investigation ○ Tank removal ● Remediation ○
System design/O&M ● Litigation support ● Oversight ○

Period 1994–present

Contaminants Chromium, copper, PCE, TCE, 1,1,1-TCA, 1, 1-DCA, 1,1-DCE, and 1,4-dioxane

Media Groundwater

Agency Los Angeles RWQCB

The 8.9-acre site formerly contained a facility that manufactured printed circuit boards for more than 30 years. The manufacturing process required the use of chlorinated solvents and other chemicals. In the mid-1980's, the EPA placed the San Gabriel Valley Basin, including the site, in its Superfund program because VOCs were found in several water supply wells. The RWQCB issued a Cleanup and Abatement Order. Numerous site studies followed which showed the presence of chlorinated hydrocarbons and metals in the soil and groundwater.

- Providing data evaluation, design, remedial systems installation, third-party review, and other services at the site since 1989 (Orion's principal engineer).
- Designed a groundwater extraction and treatment system that connected 10 existing onsite wells to air stripping, chromium treatment, and activated carbon systems, following an RWQCB-approved remedial action plan. Prepared bid documents, engineering drawings, and specifications. Helped the client select a contractor and provided management during the construction, installation, and start-up phases. Wrote a system O&M manual.
- Continuing to prepare annual status reports on soil and groundwater remediation. Providing data interpretation and document support for the semiannual groundwater monitoring reports.



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- Evaluated several innovative technologies using advanced oxidation for the treatment of groundwater impacted by 1,4-dioxane. Prepared a request for qualifications, solicited competitive proposals, evaluated capital and O&M costs, and recommended a system for client procurement. Installed an advanced oxidation system using ozone and hydrogen peroxide for over 99 percent removal of 1,4-dioxane. Currently monitoring and optimizing the ozone/peroxide system and managing client personnel for equipment O&M.
- Conducted inert dye tracer study to evaluate groundwater flow paths from onsite sources to offsite impacts.
- Evaluated innovative technologies for in situ treatment of VOCs to replace the existing groundwater treatment system.
- Conducted remedial investigation activities as part of regional Superfund program to delineate emerging compounds (1,4-dioxane, perchlorate, NDMA, and hexavalent chromium).
- Conducted source area investigation using cone penetrometer testing (CPT) for soil identification and vertical delineation of VOCs and 1,4-dioxane in groundwater.