# CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD

## SAN DIEGO REGION

CLEANUP AND ABATEMENT ORDER NO. R9-2002-201

## SCHUTTE & KOERTING INC. AND AMETEK INC.

790 GREENFIELD DRIVE, EL CAJON

SAN DIEGO COUNTY

The California Regional Water Quality Control Board, San Diego Region (hereinafter Regional Board) finds that:

1. Straza Corporation built and operated an aerospace and electronic manufacturing business at 790 Greenfield Drive in El Cajon, California (the Site) in the late 1940's. As part of the operation, it installed a sump to hold the discharge of wastewater containing metal cleaning solvents and chemical milling rinse water and stormwater from plant operations. Ametek, Inc. ("Ametek") purchased Straza in 1968 and continued to operate the sump until 1983. The sump was designed to receive up to 7,000 gallons per month of waste consisting of or containing metal cleaning solvents and chemical milling rinse water. Metal cleaning solvents used included 1,1,1-Trichloroethane (1,1,1-TCA), Tetrachloroethene (PCE), and Trichloroethylene (TCE). Waste discharged to the sump was deposited in the soil and discharged to ground water at concentrations in excess of water quality objectives.

2. The disposal sump was a circular tank, 18 feet in diameter and 12 feet deep, constructed of redwood planks situated on top of a concrete slab near the southeastern corner of the Site. Ametek removed the sump late in 1987 and excavated approximately 190 cubic yards of soil containing approximately 10,000 pounds of solvent waste from the area around the location of the sump.

3. Ketema Inc. ("Ketema") acquired the aerospace manufacturing business and the Site from Ametek in late 1988 and began site assessment and ground water investigation. Ketema installed 14 ground water monitoring wells that showed very high concentrations of chlorinated solvents in ground water beneath and immediately downgradient of the Site. Neither Ametek nor Ketema undertook any active cleanup or abatement at the Site other than the initial excavation.

4. In 1998, Ketema sold the Site and manufacturing operation to Senior Flexonics, Inc. and changed its name to Schutte & Koerting, Inc. ("S&K"). In order to facilitate this transaction, and secure a "Prospective Purchaser Agreement" releasing Senior from liability for cleanup and abatement involving the wastes discharged at the Site, Ketema and Ametek stipulated that they would remain responsible for any necessary investigation, cleanup and abatement.

5. Pollutant concentrations in ground water near the former sump were detected at levels exceeding 500,000 parts per billion (ppb) in 1988, and have since fallen, as of 2002, to approximately 35,000 ppb total volatile organic compounds (TOC). The plume of contaminated ground water with TCE concentrations greater than 1,000 ppb extends approximately 4,500 feet downgradient and northwest of the Site (within about 2 miles of the San Diego River) and is estimated to be approximately ¼ mile wide. Continued migration of ground water pollution has caused concentrations of chlorinated solvents in the ground water to exceed applicable water quality objectives.

6. The Site is located in the El Cajon Hydrologic Subarea (HSA). Ground water in the El Cajon HSA is designated as suitable for beneficial use as a source of municipal and domestic drinking water, among other beneficial uses, and is currently used as a source of agricultural water supply for one well supplying a golf driving range. The El Cajon HSA is located upgradient of, and is hydraulically connected to, the San Diego River HSA. The discharge of waste to the sump and subsequent migration have caused a condition of pollution in the El Cajon HSA and impacted its suitability for designated beneficial uses.

7. Beneath and downgradient of the Site, ground water in the El Cajon HSA exists in an aquifer system that is mostly unconfined with soil consisting primarily of silty sands and sandy silts overlying a gradational weathered contact with fractured crystalline rock. The relative depth to ground water varies between 6 feet below ground surface (bgs) (at the Site) and 18 feet bgs (approximately 5,000 feet downgradient of the Site).

8. The existing network of monitoring wells is not adequate to define the horizontal extent of the chlorinated solvent plume. There are not enough wells along the assumed plume perimeter to ensure migrating wastes are detected in the northeastern, southeastern, and upgradient direction from the Site. The northeastern edge of the estimated plume perimeter measures approximately 5,400 feet. Only one monitoring well (MW-21) currently exists along this estimated edge. There are no monitoring wells along the estimated southwesterly edge of the plume perimeter between MW-17 and MW-23. Full horizontal delineation of pollution conditions in ground water cannot be obtained without incorporating other existing wells in the vicinity and/or installing additional monitoring wells around the perimeter of the plume outside the area of contamination.

9. The existing network of monitoring wells is not adequate to define the vertical extent of the chlorinated solvent plume. All of the existing monitoring wells are constructed with 20-foot well screens. Conventional sampling of 20-foot long well screens cannot provide discrete samples showing possible pollutant concentration variations with depth through the aquifer. Ground water sample data from short well screens at different depths or other discrete sampling techniques may provide better vertical definition of pollutant distribution within

the ground water. This information is necessary to identify the appropriate well screen locations in the aquifer for subsequent assessment and for better evaluating the feasibility of cleanup and abatement strategies.

10. The Regional Board has been the lead regulatory agency for investigation and remedial action for this discharge since 1996. The Regional Board has issued investigative orders pursuant to W.C. 13267 culminating in CAO 98-11, as amended by Addenda Nos. 1, 2, and 3 requiring delineation of the plume and a feasibility study for corrective action and remedial strategies.

11. S&K and Ametek submitted a Feasibility Study in 1998 for cleanup and abatement alternatives that recommends "monitored natural attenuation" instead of active cleanup or abatement. The Feasibility Study does not provide satisfactory documentation supporting the recommendation because it fails to present a clear analysis of reasons for eliminating various cleanup and abatement alternatives from consideration. S&K and Ametek failed to fully evaluate the feasibility of several developed treatment technologies proven to reduce toxicity, mobility, volume, and concentration of dissolved chlorinated solvent waste and did not clearly describe the performance of each technology. Thus, its finding of infeasibility for these technologies wasn't adequately supported and based on the 1998 Feasibility Study and subsequent technical submissions, the RWQCB was unable to conclude that "monitored natural attenuation" alone was the most appropriate remedial technology.

12. The Regional Board's determination that S&K and Ametek failed to provide satisfactory documentation for their conclusion that active cleanup and abatement would not significantly reduce the extent or duration of pollution and contamination led to prolonged disagreement about the need for additional investigation and cleanup and abatement, culminating in litigation. S&K and Ametek and the Regional Board have participated in mediation to address their respective concerns, and S& K and Ametek have agreed to complete the tasks outlined in this Order by the dates listed.

13. The California Business and Professions Code (Sections 6735, 6835, and 7835.1) requires that work plans and technical or implementation reports containing geologic or engineering evaluations or judgments be performed under the direction of an appropriately-registered or certified professional.

14. The issuance of this Order is an enforcement action taken by a regulatory agency and is exempt from certain provisions of the California Environmental Quality Act (CEQA) in accordance with section 15321, Chapter 3, Title 14 of the California Code of Regulations.

**IT IS HEREBY ORDERED pursuant to Sections 13267 and 13304 of the California Water Code, that S&K and Ametek Inc., hereinafter Dischargers, shall:**

1. **Complete delineation** of the extent of pollution and contamination caused by discharges of chlorinated solvents and other wastes from the Site and submit a complete Delineation Report **by April 30, 2003.** In order to accomplish this task, Dischargers shall:

   a. Examine and interpret available data for existing wells within 250 feet of the currently projected boundary of the plume to identify which of the existing wells may provide the most relevant information for the continued delineation effort **by December 2, 2002.**

   b. Analyze samples from the wells identified from the efforts of Directive 1.a. using USEPA Method 8260B (to include analysis for 1,4 dioxane) **by December 2, 2002.**

   c. Conduct depth-discrete ground water sampling of existing MW-20 and MW-22 using USEPA Methods 8260B (to include analysis for 1,4 dioxane) **by November 1, 2002.**

   d. Submit a **Well Installation Work Plan** based on the information collected from Directives 1.a, 1.b, and 1.c that describes the proposed well locations, well installation dates and sampling plan for 2 to 6 additional monitoring wells **by January 20, 2003.**

   e. Install and collect ground water samples from any additional wells installed pursuant to Directive No. 1.d of this Order **by March 17, 2003.** The additional wells shall be situated at appropriate locations along the estimated plume perimeter and beyond the current estimated plume terminus to identify with greater certainly the extent of ground water pollution.

2. Develop and submit an updated **Ground Water Management Plan** to the Regional Board **by April 30, 2003**. The Ground Water Management Plan must describe the sampling frequency and analysis plan for the entire monitoring well network (including both existing and recently installed wells).

3. Prepare a comprehensive and objective **Feasibility Study** of cleanup and abatement strategies for chlorinated solvents in ground water and for residual waste in soil at the Site **by October 8, 2003.** The Feasibility Study shall be based on the soil and ground water data currently available and an updated ground water model addressing pollutant transport through the aquifer. A **Ground Water Model Work Plan** shall be submitted **by June 2, 2003.** The work plan shall describe input parameters and model sensitivities appropriate for the Site.

4. This Order supercedes Cleanup and Abatement Order No. 98-11, issued on February 9, 1998 as amended.

**JOHN H. ROBERTUS**
**Executive Officer**

**Date Issued: September 19, 2002**