Recent Research Projects:

- Conducting laboratory studies to discover the fundamental factors that influence the effectiveness of household vacuum cleaners in removing toxic lead dust from floors. Studies indicate that low-cost vacuum cleaners may be as effective as high-priced industrial vacuums.
- Providing quality control (QC) for the contract lab that performs workplace analyses for CalOSHA. QC checks revealed inaccurate analyses for toxic metals by the contract lab, which had resulted in incorrect assessments of worker exposures.
- Investigating and applying new techniques to sample and analyze for airborne toxic materials form incinerators. Standard techniques underestimate the amounts of certain toxic material released from incinerators.
- Developing advanced laboratory methods to identify the sources of unusual toxic materials in ambient air. One such method was to determine the source of widespread air pollution causing health concerns in a north coast community--a nearby wood products plant that was releasing chemically coated wood fibers.
- Devising new automated analytical methods to accurately determine the level of traffic related air emissions near roadways to assess the accuracy of current population exposure models. Inexpensive passive monitors capable of collecting many pollutant gases, allow measurements at a large number of sampling locations
- Refining automated scanning electron microscope methods to characterize the size and chemical composition of air borne particles collected by a passive aerosol sampler. This technique will be applied to assess the current impact of any residual hazardous dust which continues to be re-suspended in the air around the World Trade Center site.