3.2.1 CONTROL AT SOURCE

Control of pollution at source, in other words prevention, is the approach favoured by the legislation and by the industry. Specific technologies will be needed for each application, sometimes with quite sophisticated computerization and instrumentation.

These technologies will not only help solve the problems of earth, air and water pollution but will often save industry money because they encourage better utilization of resources and reduce treatment and disposal costs. The programs undertaken by companies such as 3M, Dow Chemical, Polaroid, Monsanto and Allied Signal are concrete examples of this trend. Thus 3M's «Pollution Prevention Pays» program and Dow Chemical's «Waste Reduction Always Pays» program have saved many hundreds of millions of dollars.

All these programs have involved a critical examination of processes, operating methods and raw materials by internal working groups supported where necessary by outside consultants, as well as a firm commitment by senior management.

3.2.2 NEW TECHNOLOGIES

New technologies to control organic and inorganic toxics and to recover, recycle and re-use "waste" materials in industrial wastewater represent an area of enormous opportunity in the coming years.

3.2.3 CHEMICALS

The industrial wastewater management market is highly fragmented and contains numerous suppliers offering a variety of technologies and services, specialized chemicals and ever more sophisticated equipment.

According to Kline and Co (Fairfield, NJ), the market in chemicals to treat industrial wastewater grew 10% in 1990, with sales reaching $465.0 million -- about 20% of the total market for water treatment chemicals.

The growing demand for specialized chemicals and automated systems to measure them are giving rise to a rapidly developing service industry.