

examples of specific accomplishments can be given here, but they will serve to illustrate the scope of the project.

Recovery of mill scale from flume water has always been a problem in the industry because the finer particles tend to escape capture. Investigation showed that poor recoveries were caused primarily by inadequate design of equipment. Research led to the development of more efficient settling basins. This improved design has been adopted by mill engineers.

Extremely low concentrations of organic compounds can cause flavors in drinking water. It is necessary to identify these substances so that proper steps can be taken to eliminate them. The minute amounts present require that they be concentrated 1,000-fold to obtain enough material for analysis. Highly sophisticated analytical methods are being used to characterize these compounds and to devise ways to overcome their effects.

Accidental spills and pipeline breaks are unpredictable causes of pollution. It is obviously essential that such occurrences be corrected promptly. An electronic monitor has been developed that will signal supervisory personnel whenever there is a marked change in composition so that corrective action can be taken at once.

The control of water pollution is generally a complex problem because of the variety of substances that can be present. One solution is to conduct analytical surveys to identify the sources of the effects in the receiving waters in order to develop appropriate treatment. This is usually a matter of some difficulty because of the large areas involved. Nevertheless, it has been found that highly useful information can be obtained by confining surveys to one limited area at a time and studying that area intensively.

Full and free exchange of technical data is an important feature of water pollution research. This can lead to unexpected bonuses. It has been the experience of the AISI project that results from its research have often become equally applicable to other industries. Cooperation, however, is the key to constructive and responsible research. This can be achieved through candid conferences and punctual publication of scientific findings.

In the early 1950's ORSANCO sponsored a project at the Kettering Laboratory in the Department of Preventive Medicine & Industrial Health, College of Medicine, University of Cincinnati, for the assembly and critical evaluation of information on the undesirable effects of chemical pollutants in water as they relate to man and domestic animals. To assist in the study, the American Iron & Steel Institute contributed to Kettering both money and an abstract service under the direction of Dr. Hoak at the Mellon Institute. The summary tabulations from the ORSANCO-Kettering project have been most helpful.

ADDITIONAL RESEARCH NEEDS

The following areas are those in which the steel industry visualizes the need for additional technological advances over those that hopefully will result from research already underway.

In air pollution abatement it is believed that the work to date on removal of sulfur dioxide from stack gas, though carried out in a competent manner, requires further escalation. In the same cate-