

demie interest only and serve little purpose in the promotion or control of health. The hygienist should develop control methods for all exposures and have them sufficiently crystallized to present to the plant management. Any unusual hazards found during the plant survey should be pointed out to and discussed with the physician or nurse, in order that by co-operation and knowledge of the complete picture both the industrial hygienist and the plant medical department may be aided in their work. The medical director is health officer for the plant, and, as such, it is important that he have knowledge of all information developed as a result of the survey.

At the end of the survey, if not before, the plant manager or personnel director, the production superintendent, the safety engineer, and the maintenance engineer should be acquainted with all significant findings along with recommendations or suggestions for control. Objections may be raised, some of which can be overcome, whereas others may prove that alternates to some of the original proposals are more practical. It is obviously desirable that any major control program be explained and "sold" by the industrial hygienist to the man who pays for it, the man who supervises its installation, and the man responsible for unimpeded production; otherwise, misunderstandings and objections are almost certain to arise.

The alternative to "selling" the control program is the use of force. Unfortunately the use of force has been overworked and may have been a retarding influence in the promotion of industrial health. The words of a very famous American can well be applied here: "Speak softly and carry a big stick." There are, of course, instances where dangerous conditions exist and where the plant operators neglect or refuse to put through a satisfactory control program unless forced to do so, but these exceptions to the rule should not set the general pattern of relationship. The condition is certainly not improved if some untrained or uninformed representative of an official agency finds an unimportant exposure or potential exposure and, without proper evaluation of conditions, forthwith demands the installation of expensive and unnecessary control equipment. Too often, unnecessarily, his trip may have been followed up by a written order somewhat as follows: "Pursuant to an inspection of your premises you are hereby officially notified to provide exhaust ventilation that will be effective. . . . You are allowed 30 days in which to comply with this order." The informed plant manager who also has at his disposal qualified industrial hygiene service to evaluate properly his exposures and control needs is likely to avail himself of this assistance in order to point out any errors made in control recommendations; and future demands from the offending unit may be immediately met with strong opposition without proper consideration of their soundness. This practice of unnecessary force has not been confined to any group but has been found occasionally in all industrial hygiene groups, federal and state, departments of health and labor, government and insurance, military and civilian. The future course should be more toward the educational "selling" of sound control measures and curtailing the use of unnecessary force to get compliance with recommendations. Obviously, unsound recommendations

should not be presented; and requests for control should be limited to those conditions investigated and weighed by competent, responsible investigators. The "big stick" will prove more effective if reserved for the class of management that fails to understand the necessity for and value of the control of harmful materials.

### 3. Records and Reports

There should, of course, always be a written confirmation report of the survey complete with findings and recommendations. This report may vary from a brief unbound typewritten one to a pretentious and voluminous manuscript, in an attractive and expensive binding, depending upon the nature of the relations between the surveyor and the surveyed and whether "dressing" is necessary, as well as upon the artistic temperament and literary ability of the surveyor. It is more likely to be read when brief, but should always be sufficiently detailed to establish the necessity for the recommendations presented along with it. Notes should have been made in a field notebook as a permanent record from which to develop the report; the practice of jotting down random bits of information on pieces of scratch paper that may be lost cannot be too strongly condemned. Details not recorded on the spot are often forgotten; and reports written from memory, though they may be sufficiently accurate in certain instances for control purposes, are almost certainly inadequate for legal record. Unless the original notes made on the job at the time of the survey can be produced, any record of atmospheric conditions in a plant offered as evidence in a court may be open to question.

It is important that the report of a survey reach the plant management while the situation is fresh in mind, never later than 30 days after the survey and preferably within two weeks. The value of the report is enhanced if it is delivered in person by the surveyor, or this result may be achieved by a personal call as soon as the management has read the report, in time to explain or support any findings or recommendations that may be questioned. Even though a recommendation was agreed upon at the time of the survey, if it arrives at an inopportune time, or tardily enough to have been forgotten or even for interest to have waned, management may assume an antagonistic attitude necessitating another personal contact. Reports or copies of reports should never be presented to others than plant management without the knowledge and permission of the management.

To have to depend upon presenting by mail only the recommendations developed from a survey, and omitting all information pointing to the necessity for each recommendation, is to work under a handicap that will materially lower the percentage of recommendations receiving compliance. To have the recommendations delivered in person, or followed up, by someone who is able neither to discuss them intelligently nor to defend them is worse than having no personal contact. Likewise, the more time that elapses between survey and report—beyond that necessary for preparation of the report—the lower will be the percentage of recommendations complied with.