established activities of the sanitarian. There is need for new skills and competencies to cope with coming problems. The stature of sanitarians will be increased if these can be supplied from his category.

In closing, I would like to emphasize the significance of change and the pace of change on the future course of environmental health. Our old ally Time is diminishing by geometric proportions. It is no longer possible to probe and explore every facet of a problem or to proceed through sequential steps of research, development of control procedures, and ultimately implementation of a program. Rather, these steps must be merged into a coordinated, concurrent activity with initial control measures based on the best judgment of a trained profession. In this setting, research becomes even more important and must be an integral part of programs of control.

Anticipation and mobility will be key words in dealing with our future problems. Anticipation in the sense of sifting new developments for hazards, and building in health protection where it is needed. Mobility in the sense of being able to progress with the times, in order that our programs may be in keeping with the current situation.

Your Association, with its fine record of constructive action will, I am sure, continue to make significant contributions to the solution of our new problems.

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**THE INTEGRATION OF INDUSTRIAL SANITATION**

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Industrial sanitation, in its broad concept, means the physical maintenance of the work place, not just in manufacturing plants, but in every place outside the home where people are assembled in numbers for a multitude of purposes—business, travel, education, worship, national defense, entertainment, health, even detention. It is, therefore, a factor as big as industry and business and all our sociological activities. It accommodates a high percentage of the 65,000,000 persons employed in this country, and many millions more who receive the services of the employed.

The Institute of Sanitation Management is proud of its unique position and its opportunities in undertaking to represent this function, this service, and the people engaged in it. Yet admittedly, the function—industrial sanitation—is just beginning to be recognized for what it is—a vital element in the producing of goods and the providing of services, economically significant, bearing on human health and well-being, and engaging the thought and energy of millions of persons in this country.

**ISM REPRESENTS SOMETHING NEW**

Few of us here have been long engaged in this work; it is just emerging as a recognized management job and it is regrettable fact that the top industrial executives and the management experts who have thought with any real perception about industrial sanitation are distinctly in the minority. Is it any wonder, then, that industrial sanitation appears, in some instances, to be an unstable function? To be more explicit, why in some industrial corporations and in some manufacturing plants is there too frequent turnover of supervision and a tentative, rather ill-defined approach to industrial sanitation? The answer probably lies in three circumstances: (a) the company management doesn't clearly comprehend the meaning and place of industrial sanitation in the plant organization and operation; (b) the management personnel assigned to the function do not fully understand the job nor have adequate supervisory and technical backgrounds for its handling; and (c) a combination of the above factors, leading to a failure to separate the function and then to make it an integral part of the plant operation.

When we look at the roster of members and their affiliations represented in the Institute of Sanitation Management, we see an imposing array of well-known corporate names. Obviously, the function of industrial sanitation has had some degree of recognition and acceptance in each of these operations, but in how many corporation and major manufacturing plants is it established as distinct, and recognized as indispensible? I would like to explore with you some of the reasons for this situation and some of the ways by which industrial sanitation can become properly integrated.

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2 President, The Institute of Sanitation Management.
Separation Before Integration

Integration is a word currently stirring some strong reactions in our society, but here we use it in its simplest connotation—fitting one part into other parts to make a smoothly operating whole. However, a condition necessarily preceding integration, or coincident with it, is separation. Integration of the amorphous or the ill-defined is pretty difficult. If we are to integrate industrial sanitation in the plant operation, it must be recognized, at least in its basic purpose and outline, by those responsible for plant administration.

There is no problem in seeing production for what it is whether in a factory making automobiles or pretzels, or on a railroad selling transportation; there is also no difficulty in perceiving mechanical maintenance of machines and of power, fuel, light and heat in the work place as a basic function. But what of the work place itself? Is it a part of production, or of machine maintenance to keep a plant clean, in order, and safe? Or is it a third, parallel function—industrial sanitation—which should relieve production and mechanical maintenance of a distinctly different set of tasks and deal with them as its prime function, with consistency and efficiency.

Some degree of maintenance of the work environment is essential to avoid fouling the work place beyond use. Unenlightened top management may hang a part of this maintenance on production, some of it on mechanical maintenance, and leave a part floating, but this may not involve any particular decisions or planning but more likely an unthinking following of past patterns. Management may be jolted out of such folly by one or a combination of adverse consequences such as product quality damaged by plant soil, or a bad safety or industrial hygiene situation, or low employee morale or union protests caused by low grade working conditions and personnel facilities, or by pressures of official agencies, or in some cases by inside or outside efficiency surveys to discover what's wrong and wasteful in plant operation.

Whatever the cause or condition, a major improvement is available to any corporate or plant management that will first recognize and separate what is industrial sanitation from the other plant functions, and then integrate it into plant operation under competent supervision. But I venture to say that there are a good many plant managements which have caught a glimpse of this procedure, have tried to isolate this maintenance function and give it separate management—and have apparently failed to get results, whereupon they have relapsed back into the old slipshod ways.

This audience is actually but a small fraction of those who have been called upon by plant executives in recent years to assume some responsibility for industrial sanitation—and who have been unable to deliver. The fact that we are here is an indication that, in some measure, we have risen to the challenge of this job—and that we have justified some decisions of management both in the matter of organization and in the selection of personnel.

Management Needs Guidance

These management decisions grow out of the sheer logic or the desperateness of the situation, or they are motivated by outside pressures (such as that of the Food & Drug Administration in the food, beverage and pharmaceutical industries), or one executive learns from another that there are many diverse plant tasks that can be grouped and supervised in a single operating unit so as to raise the efficiency of the whole operation.

I regret to say that the executive will not get much guidance in this particular problem from the big management associations. These in spite of their elaborate seminars and training courses have until now failed to grasp the meaning of industrial sanitation or to realize that it requires separation, analysis and managed integration to secure its real potential of efficient service. This myopia among management experts stems largely from their experience in the large industrial operations where the products are machines, or tools, or mechanical parts, or chemical products. Here the production supervision is essentially engineering; the distinctions between engineer-supervised production and engineer-supervised mechanical maintenance may be clear, but the actual differentiation of the work environment maintenance may be so far down the line that it is below the point of effective coordination. If it is below the point of coordination, it is too low for the needed quality of supervision, or for representation at the proper level of plant management. Industrial sanitation is too vital and too far-reaching in its over-all effects upon production and on plant labor for its parts to be dispersed and subordinated to other functions.

In many of our large heavy industry operations, industrial engineers and efficiency experts are at work analyzing not only production practices and production machinery maintenance, but also the tasks that make up the maintenance of the work environment. Too often, they study the parts and perhaps make some improvements, but without ever putting all these parts into context as industrial sanitation so as to realize the fundamental advantage of unified supervision.

It has not been so easy for the food industry to
ignore the logical approach to industrial sanitation. Food quality is dependent in varying degrees on plant sanitation. Official agencies maintain surveillance and occasionally resort to prosecutions to force an interest in sanitary processing and protection of foods. Yet, it is a sad fact that there are thousands of food manufacturing plants and food sales companies in this country in which the word "sanitation" is not to be found in a supervisory job title or applied to a plant function. We have just witnessed the disappearance of a firm from the dried fruit industry which was once its largest single unit; the management that presided over its decline and fall gave as little attention to sanitation as possible, in spite of official prosecutions. The major food processing company or the supplier of major ingredients of food processing which has no visible indication of the sanitation function in its management personnel and organization chart is at least suspect of either ignorance or irresponsibility.

Quality Control Not Industrial Sanitation

Let me say at this point that the quality control function to be found in many companies and perhaps manifested in elaborate laboratory and research facilities and quite competent personnel is no equivalent or substitute for the sanitation function. Any company executive who thinks so has never examined the problem. In fact, one of the most serious and often made mistakes in trying to set up a sanitation function is to place its supervisory personnel under a laboratory director and make it subordinate to the quality control function. Such an arrangement is guaranteed to prevent the effective development of a sanitation program and to block its integration into plant operation. In such a situation, the laboratory director cannot help but insulate the sanitation personnel from effective contact with company executives and departments, and restrict the sanitation activity to only a small part of its potential. That is not to say, of course, that there is not a large area of collaboration and mutual aid as between properly organized laboratory and sanitation functions.

Another fairly sure way of handicapping industrial sanitation and limiting its usefulness is to place its management in a position subordinate to either production or mechanical maintenance management. This automatically restricts it to a much narrower range of work, and prevents the exercise of its police or inspection function which is so important in securing plant-wide order, safety, and quality of products. A subordinate cannot police his superior; but industrial sanitation organized on a level with the other plant functions, and directly representing the plant manager, can far better influence the operations of parallel departments since it can rely to some extent on the manager's support when issues of sanitation have to be resolved.

The inspections by outside agencies, such as health, food quality, labor, safety, fire, building, etc., are never adequate in an industrial plant to achieve their proper objectives unless their interests are represented inside the plant by organized industrial sanitation. Such agencies are all concerned with phases of the work environment; they should devote a part of their official energies to the promotion of that form of organization within the plant which will serve the public interest, not just by sporadic observance of regulations under pressure, but consistently and at a level above the official minimum.

The integration of industrial sanitation means, then, the establishment of the clearly differentiated and supervised function in a manner so solidly useful to plant operation that top management and production supervision cannot do without it. If industrial sanitation is integrated, it cannot be dispensed with or cut out without a process of disintegration which leads to confusion, waste, and loss. When you hear of a company dismissing a person from a supervisory job in industrial sanitation, it means either that he has not produced results because of his own inadequacies, or that his function has not been integrated. As we have said before, failure to develop an integrated sanitation function usually stems from top management mistakes. Such management must establish or evolve the organizational climate in which capable sanitation supervision can achieve its ends of integrated service.

Furthermore, when economic pressures for cutting expenses come on, as they do from time to time in every business, the unintegrated parts of plant maintenance are the first to suffer. The casual maintenance labor and duties may be lopped off without full recognition of the consequences, whereas, integrated industrial sanitation should be so firmly established and so stoutly defended as an essential that it will not have to bear more than its share of any over-all cuts.

The Nabisco Pattern

With your indulgence, and with only a minimum of modesty, I should like to make specific reference to what might be called the Nabisco pattern for industrial sanitation. It was just fourteen years ago that executives of the National Biscuit Company came to the conclusion that there was something fundamentally wrong with the handling of plant sanitation in which everybody in general and nobody in particular was responsible. A radical deci-
sion was reached that someone with some apparent qualifications in the field of environmental sanitation should be employed to develop a company-wide sanitation program and given a position and authority appropriate to this objective.

The essence of the Nabisco pattern for industrial sanitation as it has evolved through the years might be set forth as follows:

1. An administrator responsible directly to the president and executive vice-president and receiving genuine, wholehearted support therefrom.

2. A sanitation department in the general office on a level with other departments and in a position to deal with all company operating units, whether purchasing, production, or sales.

3. A sanitation department in each manufacturing unit on a level with other plant departments and with the sanitation supervision directly responsible to the plant manager.

4. A separation of the maintenance of the plant work environment from the production and mechanical maintenance functions and the integration of the diverse sanitation tasks into the other plant activities so as to give a balance of essential support and service.

5. An exercise of surveillance over company-wide operations and within each plant to maintain a reasonable conformance to a high but practical level of sanitation.

6. A participation in plant and machine design and in the selection of sanitation supplies and equipment.

7. A systematic recording of the use of sanitation labor on the basis of a standard pattern of tasks, and a comparative evaluation of sanitation performance and efficiencies in groups of like plants.

Such is the Nabisco pattern for industrial sanitation. It seems to be rational, logical, productive of the desired results, and it is not a side-line, dispensable activity but an integrated, essential part of the company in all its operations. However, this Nabisco pattern is still undergoing refinement and more complete application, and we can see no end to the problems of industrial sanitation or to the possibilities of better service and greater performance efficiencies.

Admittedly, a large, multiple-plant operation has many advantages in administering such an industrial sanitation program, especially in the employment of a person or group able to provide both staff and line services. The competition between plants and the contributions of supervision in the many plants to the solution of common and special problems all help in the development of the over-all program, aided by periodic conferences of sanitation supervision, and coordinated by the general office staff.

Sanitation Consultants Essential

In the smaller companies and in single plant operations, it may be highly desirable to obtain some of these benefits through the employment of sanitation consultants. Too often, the lone and inexperienced individual assigned the industrial sanitation responsibility in a plant is unsure of his ability and of his technical knowledge, and unable to defend his position against the pressures of other departments and the impatience of his superiors. The independent outside consultant can give guidance to company management in the general objectives of such an undertaking, and direct support to the plant sanitary in the details of his work. The consultant also has the major function of periodically inspecting and evaluating the status of plant sanitation. This service is usually necessary to sustain management's interest in its program until it is well established and to help the sanitary to move forward in handling his job. Consulting sanitarians are now functioning principally in the food field but their numbers should grow and their fields broaden as industrial managements discover their need for such service. The Institute of Sanitation Management has a great stake in the work to be done by sanitation consultants since those of competence and high ethics will contribute greatly to the growth of industrial sanitation where it is most needed.

On the Management Team

In summation, the foregoing discussion has largely dealt with sanitation maintenance in industrial plants, but it is no less pertinent to those places where services are rendered, such as in hospitals, school systems, hotels, commercial and business establishments, and transportation systems. The need for sanitation is universal and, in many instances, acute. Where it is dispersed and unorganized, it requires management awareness of the need, separation and aggregation of all its parts under its own supervision, and then an integration into the whole operation. In so doing, it becomes recognized as indispensable and capable of increasing effectiveness and its practitioners achieve a rightfully important position on the management team.

The Institute of Sanitation Management is dedicated to these ends. In the nature of the need and the opportunity, you, its members and friends, cannot fail to give to the Institute your full support, and to benefit in turn from its promotion of the integration of industrial sanitation into the work and service environments of our great country.