place that affords sufficient food and shelter is immune to rat infestation. The office in which employees are permitted to eat their lunch is often rat infested, the scraps left in the waste baskets providing the rats with a good food source. All other organic wastes provide the rats with an additional good source of food.

D. KILLING RATS

Trapping by means of snap and cage traps is a method of killing rats that requires great skill and ingenuity, rats being rather wary mammals. Killing by use of rodenticides has advanced greatly in the past two decades. The most widely used and oldest poison is Red Squill, which has the advantage of having an emetic action that protects humans and all animals with the ability to vomit. Barium carbonate and phosphorus, utilized in the past, are not widely used now because of their unpredictable results. The newer rodenticides are Antu, a specific for Norway rats; sodium fluoroacetate (1080), an extremely powerful poison for all animals, which requires extreme caution in its use and which has therefore been prohibited in many localities because of human deaths; and Warfarin (a derivative of dicumarol), an anti-coagulant that causes internal hemorrhage in the rat, which, although affecting other animals, has a large factor of safety because of the low dosage (0.025 per cent) used in the baits.

In certain enclosed structures, primarily aboard ships, fumigants, such as hydrocyanic acid gas or carbon monoxide, are used for quick and nearly complete elimination of rats.

V. Provision of Adequate Sanitary Facilities and Other Personal Services

The personal hygiene practices of employees carry many health implications without reference to their employment. For instance, the disease-transmitting potential from failure to clean the hands after defecating, or the skin diseases resulting from poor body cleansing, may not be related to the person's job. There are, however, health problems relating to personal hygiene practices that occur in industry exclusively. Such problems are related to ingestion of chemical toxins or disease-producing organisms and to local skin, conjunctival, or mucous membrane inflammation due to sensitivity or direct irritative action of industrial chemicals.

Schwartz states that uncleanliness "is probably the most important predisposing cause of occupational dermatitis" (cf. page 447). Uncleanliness of the working environment exposes the worker to large doses of external irritants. Personal uncleanliness not only does the same, but also permits external irritants to remain in prolonged contact with the skin. Workers wearing or carrying to their homes their dirty work clothes may even cause dermatitis in other members of the family who come in contact with soiled clothes, or even among unsuspecting workers who clean them.

Where the employee is exposed to toxic materials, or if he is a food handler, the need for the optimum in clean, well-lighted, and well-ventilated washing and

locker facilities becomes imperative from the point of view of both protecting the health of the individual employee and minimizing the possibility of his transmitting infections to others. Unless the toilet and washroom facilities are easily cleanable, adequate in size and number, and accessible, the personal hygiene habits of employees in industry will suffer. The American Standard Minimum Requirements for Sanitation[6] considers that "ready accessibility" has not been provided when an employee has to travel more than one floor-to-floor flight of stairs to or from a toilet facility. It is understandable that some minimum standard on the basis of distance must be set. However, the advent of complex automatic and remote controls and their inclusion in plant design may bring about modification of some distance standards.

In industries where the work clothes of the employee are exposed to contamination with poisonous, infectious, or irritating materials, separate storage for street and work clothes should be provided. Cash[33] suggests the following arrangement for such a "change house":

> A good arrangement is a room or building divided into two sections—a street clothes section and a work clothes section, with bathing and toilet facilities between. The street clothes section has an outside entrance and lockers for street clothes, toilets and wash basins or wash fountains, and changing facilities for supervisors. The work clothes section has rooms for work clothes, toilets and wash basins or wash fountains, showers, and laundry. Three connections between the street clothes section and the work clothes section are (*1*) through the supervisors' change room, (*2*) through the main shower room, and (*3*) a hall with "one way traffic doors" from street to work clothes sections.

In the mineral, petroleum, and allied industries the change house may be located at the entrance gate or near the parking lot to make it readily accessible. It may be a separate building connected to the working area by a covered walkway and should be constructed of fireproof or fire-resistant materials, properly heated, lighted, and ventilated to meet the general requirements of Section 4 of the American Standard Minimum Requirements for Sanitation.[6] The interior arrangement of the equipment and facilities in change houses and in locker and toilet rooms is not standardized, but is a matter of proper design to meet the space cost, and other requirements of the individual plant.

The minimum facilities required for places of employment are set forth in the various state regulations of departments of labor and divisions of industrial hygiene. In addition, various industrial associations have established through industry-wide sanitation committees practice codes related to the particular industry. An example is the *Code of Recommended Practices for Industrial Housekeeping and Sanitation* of the American Foundrymen's Association.[34] The Association of Food Industry Sanitarians, in co-operation with the National

[33] E. Cash, Suggested standards for change houses. Presented at American Public Health Association Annual Meeting, October, 1951.

[34] *Code of Recommended Practices for Industrial Housekeeping and Sanitation*. American Foundrymen's Association, Chicago, 1944.