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DEFENSE GUIDES FOR COMMERCIAL FOOD FACILITIES

Prepared by Food and Materials Requirements Division Commodity Stabilization Sorvice

UNITED STATES DEPARTMENT OF AGRICULTURE



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Preface

"Civil defense" and "defense mobilization" are in fact "selfpreservation". This is serious business. We cannot afford to pretend that the need is not there. We cannot afford not to do all that is reasonable and practical, both individually and collectively, to advance the security of America—and of our people.

This booklet has benefited by the review and suggestions of many industrial leaders—for whose help we are grateful. We commend it to your thought—and action.

EZRA TAFT BENSON Secretary of Agriculture.

Foreword

This bulletin, issued as a guidebook, discusses factors for reducing the vulnerability of food facilities to attack or other enemy action. It was developed in accordance with the responsibilities of the Secretary of Agriculture for providing "guidance and leadership in the development of plans and programs to insure continuity of operation of vital food facilities in event of attack", assigned by the Office of Defense Mobilization in Defense Mobilization Order I-9, on February 25, 1954.

While the factors contained in this guidebook have applicability to many industrial concerns, it was developed primarily for use in the field of food processing and wholesale distribution. As used here, the term "food" refers to all agricultural commodities or products capable of being consumed by humans or animals—including such commodities and products as fats and oils, naval stores, tobacco, wool, mohair, cotton, hemp and flax fiber, until, in the manufacturing process, they lose their identity as agricultural commodities.

An enemy nation attacking this country may be expected to use all modern weapons available to it. Management should, therefore, give consideration to the various types of attack which might occur and become prepared insofar as possible to: (1) lessen vulnerability to attack, and (2) commence production at the earliest moment following attack. Many of the suggestions outlined in this guidebook can be accomplished at little or no added costs and, if adopted, should prove very beneficial in the normal conduct of business.

Protection of the Nation's vital food facilities is a responsibility that must be shared by many. At the national level, the Federal Civil Defense Administration; the Food and Drug Administration of the Department of Health, Education, and Welfare; and other agencies are cooperating with the U. S. Department of Agriculture in planning to safeguard food supplies.

It is urged that the food industry, in implementing the guides set forth in this publication, cooperate to the utmost with local civil defense agencies, State and local labor offices, the Public Health Service, Red Cross, and other groups in a position to assist.

DEFENSE GUIDES FOR COMMERCIAL FOOD FACILITIES -

Continuity of Management and Production

CONTINUITY OF MANAGEMENT

Develop a Personnel Succession List and Prepare Standby Delegations of Authority

Loss of the services of executive and administrative personnel as the result of nuclear attack and radio-active fallout would be a serious problem. Even in areas some distance from direct hits and where no loss of life or injury was sustained, the general disruption of community life following an attack might keep food plant personnel off the job.

Management can do much to avert this problem by developing a succession list and distributing it to key employees. Let the list show, in descending order, the executives and other employees who would assume at least temporary command of the firm and continue its operations for a period of time. Advise these employees of their delegated authorities and plan to advise all affected areas, following an attack, of the authority and responsibility of each person on the succession list.

Education and Training

In the case of multiple plant companies, consider rotation of key personnel between plants so as to familiarize them with overall company operations. Selection and Equipping of Alternate Headquarters

Give serious consideration to selecting and equipping a secondary or alternate headquarters for the continued operation of plant facilities. In selecting alternate headquarters, make sure that the alternate site does not lie within a designated potential target area. (Information on designated potential target areas can be obtained from local civil defense offices.)

Develop Personnel Registration and Notification Plan

A personnel registration and notification plan, based on the use of cards, is a practicable means of locating employees after an attack. The plan would work as follows: The cards, which fold to wallet size, are filled out and carried by each employee. After an attack, the cards are mailed to a designated address. The cards are assembled by management and instructions for reporting to duty given to employees.

The card should contain the employee's complete name, title, secondary skill, sex, date of birth and permanent disabilities. It should also contain space for reporting, after an attack, the employee's emergency address; whether or not he has sustained injury, whether or not he is able to work; how soon he can report, and his military or civil defense status. Any such plan should be coordinated and compatible with local civil defense planning for the area.

Recruitment of Production Workers

Develop in cooperation with the local office of the State employment service a plan for recruitment of new personnel to fill out the operating force. Good sources of manpower are employees from other company plants, former employees and retired workers.

Written Description of Company Activities, Processes, Etc.

The technical knowledge of top executives and technicians must be preserved to the maximum extent possible for use after an attack. Develop in writing and file at an alternate headquarters a complete description of all activities of the company. Include information on present organization, financial structure, legal history, product lines, sales records, production activities, physical facilities, types of equipment and sources, manpower, utilities and services, government relations, insurance policies, real estate holdings, stock holders lists, operating techniques (including secret processes), basic operating procedures, and similar information.

Duplication and Safe Storage of Vital Records

Develop an outline and use it to establish the real essentiality of all plant records, such as accounts receivable, accounts payable, inventory of products, and the like. Make arrangements to duplicate the records having the highest priority and store them in a place where they will be safe yet accessible for operating in an emergency.

Survey of Legal Instruments

It is difficult to estimate what the condition of the nation's financial structure would be following an attack. Management may be better prepared for a serious situation by having the firm's attorney review all legal documents—contracts, charters, by-laws, and contractual escape clauses to facilitate rapid resumption of operations following an attack.

FACILITIES PROTECTION

The damage resulting from nuclear attack could be severe. We must not add to the enemy's destructive power through the lack of planning to meet such a situation. A plan to provide maximum possible protection of facilities before, during, and after an attack would not only provide the best guarantee for continued operation of a facility after an attack but would also provide activity for personnel, thus reducing the probability of panic. The following guides may assist in such planning.

Emergency Shutdown

Develop emergency shutdown plans and use them in carrying out periodic drills. Special problems will be encountered by practically every type of plant. Control valves and public utility services coming into the plant should be given special attention. It would also be wise to develop plans for partial operation and start-up as well.

Fire Protection Including Equipment

Extensive fires following an attack could render the municipal fire organization incapable of covering all

affected areas. A well trained properly equipped fire fighting organization, large enough to provide services for the plant is a prime requisite. The regular plant fire department should form the nucleus of the organization. Fire assistance should be planned on a 24-hour basis. Give special attention to new fire fighting procedures and equipment as well as to the location of steam, water, and fuel lines, provide instruction in the use of gas masks and respiratory equipment, undertake regular drills and inspect fire fighting equipment frequently and thoroughly. Much information on fire protection may be obtained from the National Fire Prevention Association as well as the local civil defense organization.

Warning and Control System

Consideration should be given to need for a warning and control system when, because of distance or other reason, the plant cannot receive warning of coming attack via public system. Alarm systems of many types are available, ranging from purely local area systems to systems which tie in with the telephone company to carry warning by bell and light from local civil defense headquarters directly to a particular plant.

Communication System Within Plant and to Other Areas

Depending on the size of the plant and the need to be in communication on an intra-plant basis, management may wish to consider a communication system with selfprotective features. Radio, battery operated intercom, and the like, may be employed to augment or substitute for regular telephone communications. Communication with other plants or community facilities by means other than public telephone could be important under certain conditions and should be considered by management.

Water, Fuel, and Ventilation

Give advance consideration to secondary water and fuel supply. Survey the air conditioning and ventilation system to determine need for security supervision, adequate radiation filtering, quality-control measures, and such actions as may be necessary to provide ventilation through secondary means. Some standby equipment and facilities may be needed.

Power Equipment and Alternate Sources of Power

Emergency light and power may be needed before first aid, rescue, and firefighting service can be provided. Consider the need for standby power generating equipment. Also look into the possibility of alternate public power sources to operate at least portions of the plant. It is possible that, because of damage to power facilities in a distant location, the plant may be rendered inoperative.

Inventories of Merchantable Food Products and Raw Materials

Finished food is vital in wartime and major consideration should be given to protection of stocks. Under certain conditions certain foods are edible after an attack involving nuclear weapons. Also, some containers offer good protection from blast and fallout. However, measures to provide additional protection to finished stocks should be considered. Dispersed warehousing and adequate fire protection are important in the case of both finished stocks and raw materials. Where feasible, store in one place a complete complement of raw materials required to make an end product rather than storing raw materials on a segregated basis. Facilities for temporary protection from weather damage also may be desirable in event of damage to storage facilities.

Processing Equipment

Generally, the measures taken to protect the balance of plant facilities will provide the major portion of protection required for the processing equipment. However, give special attention to technical equipment and, where feasible, to the dispersal of such equipment upon relatively short notice.

PLANT DISPERSAL

With the nuclear age have come new responsibilities for industrial food plant management. Not only does management have to provide for the safety of his plant and his workers, but in making decisions regarding new construction for expansion of existing facilities or for new facilities, he should consider the location of such new construction in reference to target areas as defined by FCDA authorities. To locate a new facility or to expand significantly in such an area may place workers and their families in jeopardy.

In addition, further industrialization of a target area tends to make it more valuable to the enemy, further increasing its vulnerability.

The Office of Defense Mobilization on January 11, 1956,

issued Defense Mobilization Order I-19, containing the following policy statement:

"It is the policy of the United States to encourage and, when appropriate, to require that new facilities and major expansions of existing facilities important to national security be located, insofar as practicable, so as to reduce the risk of damage in the event of attack; and to encourage and, when appropriate, require the incorporation of protective constructive features in new and existing facilities to provide resistance to weapons effects suitable to the locations of said facilities."

The 84th Congress emphasized the importance of dispersal of industrial facilities in amending Section 2 of the Defense Production Act of 1950 by inserting at the end of the section the following paragraph which was approved by the President on June 29, 1956:

"In order to insure productive capacity in the event of such an attack on the United States, it is the policy of the Congress to encourage the geographical dispersal of the industrial facilities of the United States in the interest of the national defense, and to discourage the concentration of such productive facilities within limited geographical areas which are vulnerable to attack by an enemy of the United States. In the construction of any Governmentowned industrial facilities, in the rendition of any Government financial assistance for the construction, expansion, or improvement of any industrial facilities, and in the procurement of goods and services, under this or any other Act, each department and agency of the Executive Branch shall apply, under the coordination of the Office of Defense Mobilization, when practicable and consistent with existing law and the desirability for maintaining a sound economy, the principle of the geographical dispersal of such facilities in the interest of national defense. Nothing contained in this paragraph shall preclude the use of existing industrial facilities."

Dispersal to Safe Areas

Distance of a plant from the probable area of destruction is the controlling factor in reducing the risk of attack damage to the plant. The food plant manager representing an essential industry is urged to do everything possible to reduce the threat of attack damage to his plant, to his workers, and their families. If his plant is in a target area, he should consider carefully the idea of dispersal to a less vulnerable area. Dispersal may be relatively easy in some cases, since it is likely that some plants could operate in nontarget areas without greatly increasing costs. It should also be noted that dispersal is a form of insurance on which we hope never to collect, but which could mean the difference between survival and collapse of the enterprise if this country is ever attacked.

Protective Construction

Information is available from the Federal Civil Defense Administration and other agencies regarding protective construction. Therefore, where expansion of existing plants or construction of new facilities are contemplated, make use of available information on this subject and specifically give consideration to: ability of plant to survive blast and fire effects of atomic explosions; protection of occupants from blast, heat radiation and nuclear radiation; shelter areas, and the minimizing of hazards from bursting pipes, loose fixtures, flying glass, and the like.

BANKING SERVICES

In the event of heavy attack, normal bank services may become disrupted. Because of the possibility of a currency shortage, which could create a serious problem, appraise the company's cash position. Also, study the geographic concentration of banking services. It may be advantageous to maintain bank accounts and establish lines of credit at scattered locations.

The company's custodial procedures relating to accounts receivable and the storage of the company's marketable securities should be appraised for adequacy.

CONTINUATION AND RESUMPTION OF PRODUCTION

Establish a Damage Assessment System

Set up a system to assess and report on damage to the plant. A team trained in monitoring and evaluation work may be highly desirable. However, keep in mind the fact that the local civil defense organization has directive authority in this area and that the activity of a plant monitoring team must be coordinated with the local civil defense organization.

Develop Plans for Decontamination, Salvage and Repair Operations

Give consideration to establishing, training, and equipping a decontamination team. The training and activity of such a team should be closely coordinated with local civil defense organizations. Depending upon severity of attack and the requirement for particular food products, it may become necessary to operate on a reduced production basis.

Plants which have suffered some damage may resume at least partial production at an early date through proper salvage and repair operations. Therefore, organize and train a team for salvage and repair operations. In this connection, the use of regular engineering and maintenance personnel might be desirable. Management should consider coordinating salvage operations with other plants in the area on a mutual arrangement so as to avoid excessively high costs involved in the purchase of adequate equipment, and the delay which may be experienced in obtaining equipment on an individual company basis.

Pre-Attack Equipment Planning

Pre-attack equipment planning will facilitate an early resumption of production following an attack. Such planning should include, among other things, (a) identification of key items of equipment which require long manufacturing time; (b) advance procurement of such equipment; (c) alternate equipment or different methods of processing where items of equipment are difficult to replace; (d) safe storage of vital repair parts; (e) in the case of multi-plant concerns, advance arrangement for cannibalization of other plants; and (f) pooling of key equipment and repair parts through pre-attack arrangements.

Select Alternate Facilities and Plant Sites

Consider whether or not plants or office buildings would be rebuilt at existing sites should they be destroyed. Among the factors to study are these: (a) location of a suitable alternate site; (b) availability of suitable buildings or the need to construct new buildings; (c) the availability of critical materials; (d) availability of such services as communications, water and power; (e) availability of raw materials; and (f) location of markets.

Pre-Plan Production Transfers from Damaged to Nondamaged Plants

In the case of multi-plant operations, it may become feasible or necessary, depending upon the extremity of the situation, to make production transfers from damaged to non-damaged plants. Make preliminary arrangements prior to attack so as to minimize the loss of vital food production.

Establish Priority of Production

Survey production capabilities in order that an estimate may be made quickly of a plant's capability of producing certain vital food commodities. Also consider the capability of a facility to produce commodities not presently included in its production schedule.

Consider Reserve Stockpiles

Depending upon the particular food industry and the type of process, management may want to consider the establishment of reserve stockpiles of raw products. Any consideration of stockpiles should include storage at dispersed locations.

Warehousing, Storage and Inventory Arrangements

As in the case of reserve stockpiles, consider the dispersal of working inventories normally warehoused at the plant. If it is practicable, disperse inventories in such a manner as to be readily available in completely integrated lots. Establish a system of inventory control to provide easily ascertainable information on quantities and makeup of the inventory. Such information would be extremely helpful in making the inventory of a damaged plant available to other undamaged plants.

Transportation Arrangements

Study transportation and traffic activities of the company to facilitate making alternate transportation arrangements. Because transportation would be under strict control in the event of a national disaster, the results of any studies by management should be coordinated with studies being made by the Interstate Commerce Commission, the Federal Civil Defense Administration, and the Department of Commerce, as well as local government organizations.

Materials Sources

Make a review of established sources of essential supplies and requisites and study alternate sources. At the same time, consider the use of substitute materials. The results of such analyses should be made a part of the vital records of the plant.

MEASURES AGAINST ESPIONAGE AND SABOTAGE

Although counter action against espionage and sabotage is primarily the responsibility of the Government, industry can do much to reduce or eliminate the dangers from espionage and sabotage. In a report to the Food and Drug Administration by the Civil Defense Foods Advisory Committee of the National Academy of Sciences, National Research Council, it was stated that:

"The food processing, transportation, and warehousing industries are aware of the possibility of overt attack and the results of Radiological Warfare (RW) because of Civil Defense activity and general publicity. These industries, however, are generally unaware of the serious possibilities or results of covert attack involving the use of Biological or Chemical Warfare." (BW & CW)

"Although considerable information is available concerning overt attack involving RW, these industries in general have neither availed themselves of this information nor studied the problem. Information on the overt use of BW and CW, on the other hand, has not been available."

"Certain segments of the food industry are extremely vulnerable to covert activity with BW or CW agents or both and possibly to RW because of the characteristics of manufacturing processes, the nature of certain foods and their ingredients, and the general unawareness of management, technical staff, and labor concerning the potential problem"."

"The fact that the food industries are unaware of the hazard of covert use of chemical, biological and/or radiological warfare and that the Federal Civil Defense Administration and other agencies are unfamiliar with the complexities of food processing, makes the problem of the covert use of CBR warfare agents acute and serious."

"Under present conditions of food manufacture, packing, and distribution, it would be possible to contaminate sufficient food with biological or chemical agents or possible radiological warfare agents to impair the health or endanger the lives of large numbers of people scattered over wide areas in the USA."

The scope and character of the steps taken by management should be no more extensive and no more limited than is warranted by an assessment of the relative criticality and the vulnerability of the particular plant concerned. Some of the measures which can be taken are outlined as follows:

Restricting Access and Areas

If necessary, control access to an egress from plant and specific areas of the plant. Such restriction can be accomplished by a check in and check out system utilizing identification badges and guards at strategic locations.

Personnel Screening

Establish effective procedures for screening personnel. Security screening may be made a part of the normal plant personnel program.

Security Training

Experience in World War II and the Korean War show that effective employee cooperation in a security program cannot be expected or secured unless employees become fully aware of security problems. Management must take steps to make employees "security conscious." Emphasis should be placed on obtaining the employee's personal interest and the exercise of his responsibility not only to the food plant as a vital defense weapon but also for the protection of himself, his family and the continuance of his livelihood. Some of the more important points to be emphasized are: (1) acceptance of the fact that all employees must be inconvenienced by rules and regulations designed to trap or thwart spies or saboteurs; (2) the danger of talking "business" away from the job; (3) the danger of hysteria and disaffection which may be inspired by subversive organizations; (4) the danger of spreading rumors; (5) the detection and reporting of trespassers on plant premises; (6) the avoidance of unwarranted approaches by strangers anywhere; (7) the avoidance of promotional offers involving extremely attractive business or financial opportunities; (8) noting and reporting unusual equipment failures and accidents and, (9) a general familiarity with the tactics of spies and saboteurs. Indoctrination as set forth above cannot be effective if done on a one-time basis. It must be a continuing program.

Safeguarding Security Information

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Much information, which under ordinary circumstances, may not bear a security classification will, under wartime conditions, be classified in accordance with existing law. Management should constantly appraise the employees under its jurisdiction of their responsibility for such security information and the possible effect the divulgence of such information might have on the defense of this country.

Information classified as security information by law and coming into the possession of the management of a particular industrial plant will be accompanied by the rules and regulations which have been established for the protection of such information. These rules will include the limitation on distribution of vital documents. Management should generally exercise the same precautions in the distribution of documents vital to the operations of its plant even when not classified by law. A good rule to follow in such case is one generally practiced by persons in sensitive positions in government, i. e., distribution to properly cleared persons on a "need-to-know" basis.

Fences, Walls, and Other Barriers

Survey fences, walls, and similar barriers to trespassers to make sure that they are adequate for the purpose intended.

Protective Lighting

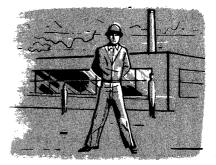
One of the best deterrents to espionage and petty thievery is proper lighting of plant areas. Proper lighting makes it possible for a small number of patrol guards to exercise a high degree of security over a particular area.

Plant Civil Defense Organization

A number of industrial firms already have a civil defense organization to carry out the responsibilities which will be imposed upon individuals in the event of attack. Managers and others in authority must assume responsibility for an adequate civil defense organization within the company's plant or plants. Merely establishing an organization is not enough. Measures must be taken to keep the defense organization at top strength and in trained condition. A plant civil defense organization should include the following services:

WARDEN SERVICE

An official of the company should be designated to act as a chief warden or in like capacity having overall responsibility for all plant defense and personnel survival. All civil defense activity within the plant would come under his authority. All coordination with community services and local civil defense officials would be a part of his responsibility. Some properly designated organization, such as a Warden Service Organization, should be developed and adequately staffed and trained to provide



direction for the emergency services required. Some of the types of services which would be required in this organization are outlined below. In planning for operations in an emergency, it is emphasized that such planning be carefully coordinated with local civil defense and community officials.

FIRE SERVICE

The plant as well as the community would depend heavily upon the plant fire service organization when serious fires result from attack. Coordination of the activity of this group with community services is essential.

POLICE OR GUARD SERVICE

During attack conditions and under the direction of the warden service organization, the plant police or guard service would be responsible for maintaining order and discipline and the safeguarding of people and property in addition to the directing of traffic and the supporting of other protective services as required. A well trained police or guard service could prove invaluable to a plant which has suffered attack in preventing panic and providing for orderly protective measures. Because of the essentiality of these services they should be closely coordinated with local community police services.

FIRST AID AND CASUALTY SERVICE

In the event of an emergency involving attack, the scarcity of professional medical personnel would create a severe problem. The ability to render first aid in the shortest possible time may save many lives where death might otherwise result. In the event of a destructive attack on a plant, this problem will be magnified manifold. Individuals who have received a relatively few hours of first aid and casualty training under qualified instructors will very likely prove to be our first line of medical assistance to the civilian population. The area of first aid and casualty service is one which requires periodic refresher training. The local Red Cross or civil defense agency can assist with organization, guidance and training.

ENGINEERING SERVICE

To the plant's engineers, because of their intimate knowledge of the facility, will fall the task of demolition of unsafe structures, removal of debris, decontamination, and emergency repair of utilities, buildings, and equipment. In all probability, many plants do not have fully staffed engineering or maintenance departments. Other plant personnel who possess some qualifications for this type of work, therefore, should be further trained to carry on the engineering services required in the event of attack.

WELFARE AND PERSONAL CREDIT SERVICE

Immediately after an attack many employees and their families will need welfare assistance. Some will need food and financial aid. Many will be temporarily homeless. Many will need counsel, advice and credit. Those separated from their families will need information and other assistance until the family is reunited. To meet such urgent human needs management may desire to organize a welfare service for the benefit of their personnel. To meet the needs of this service, personnel counselors, cafeteria workers, chauffeurs and truck drivers, interviewers, stenographers, clerks, typists, telephone operators, messengers and sources of credit may be needed. Any firm having a separate personnel department can draw people for their emergency welfare services largely from that source.

STIMULATE INTEREST OF EMPLOYEES IN PROTECTIVE MEASURES AT HOME

A plant must depend on people for production. The protection that an individual provides for himself and family, within his home and community will, to a great extent, better his chances for survival and continued usefulness to his plant. The employee can do many things at little or no expense to himself in preparing to protect himself and his family against the effects of an attack. Local civil defense organizations can furnish much information which the employee will find beneficial and should be looked to for instructions and guidance. Management should encourage such activity.



Coordinate Plant Defense Activities With Community Defense Efforts

Because of the heavy requirement likely to be placed upon community facilities in event of an attack management is strongly urged to support and participate in local civil defense activities. Such participation will not only increase the chances for survival of individuals and lessening damage to plants but will create within the community a spirit of cooperation which will be essential in carrying out an effective overall civil defense program throughout the community.

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