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# AIRPORT DISASTER CONTROL GUIDE

DEPARTMENT OF TRANSPORTATION  
FEDERAL AVIATION ADMINISTRATION

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**DEPARTMENT OF TRANSPORTATION  
FEDERAL AVIATION ADMINISTRATION**

**October 1967**

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It should be well coordinated with the plans of local government and adapted to the needs and resources of the airport.

## DIMENSIONS OF DISASTER

*Vulnerability varies.* No airport manager can predict what degree of destruction might hit his facility. Target areas would not be uniformly distributed, nor would there be universal destruction. Some areas would be unaffected. Others would be physically untouched but contaminated by fallout. Near targets there would be greater fallout concentration and fire damage. Still closer, blast damage would appear with worse conditions of fire and fallout. Finally, at the target, there would be virtually complete destruction.

The general location of airports away from cities and possible target centers and the varying nature of damage offer clues to the approaches management might take in survival planning.

*Fallout.* Damage estimates suggest that the most widespread danger would come from fallout. Radiation stems from the fallout particle. Where radiation is the prime threat, the most important survival measures are:

- a. Have a prepared fallout shelter.
- b. Be able to measure radiation intensity.

Postattack activities *cannot* take place until radiation fields have been measured and defined.

*Fire and blast.* In developing a survival plan, assess the risks as realistically as possible. Aside from detonation of a nuclear weapon in close proximity to the airport, substantial protection from blast and thermal effects is possible. The degree of damage will depend on the relative location of the blast to the airport and its structures. Normal fire prevention programs greatly lessen the fire hazard. Protection from blast must be balanced between costs and probabilities. In general, the closer you might be to the target, the more it would cost to provide blast protection. Every airport, regardless of location, should plan to achieve protection against the most likely hazard.

*Plan now.* It is clear that planned disaster control measures must be developed. Each airport, regardless of size, needs a procedure for action. The degree of planning will depend upon local capacity and local needs.

Basic elements for effective disaster control are:

warning systems,  
protective shelters,  
radiological knowledge, and  
recovery know-how.

### MEDIUM AND SMALL AIRPORTS

In many ways, national recovery will be dependent on the hundreds of medium and small airports—a group that offers the right combination for *quick* and flexible emergency air transportation.

This planning guide describes a complete disaster control organization and plan format. Smaller airports with limited staff and resources are not expected to comply with every suggestion.

We are certain, however, that the resourceful manager/operator will recognize basic survival responsibilities and apply these within the scope and need of his airport. With local interest and practical planning, a smaller airport could very well become the community center of survival.

### LARGE AIRPORTS

The existing organization and leadership required to operate these facilities under normal conditions will be the guiding force for an effective disaster control program.

### LIAISON

From the beginning, the disaster control officer should establish contact with local and State civil defense directors and military units to link the airport program with the efforts of these organizations.



## AIRCRAFT DISPERSAL

Each airline, flight operator, and aircraft owner, through organized aviation groups, State aeronautical commissions, and Federal agencies, is involved in aircraft dispersal plans. Although airport management is not primarily responsible for these activities, the effect of dispersal is a factor in disaster control planning.

Actual flight operations during a declared emergency will be controlled by the FAA in accordance with military requirements. Flight operations following an attack and during the recovery will be controlled similarly.

Airport managers and operators will be called upon to assist and administer certain support phases of aircraft dispersal. As a designated dispersal or "safe haven" airport, you would be concerned with aircraft parking, designating decontaminating wash racks, crew handling, supervision of fuel storage and conservation, and many other ground support activities.

These emergency functions would present a new, but not unfamiliar challenge to an airport organized for disaster control.

## TRAINING

The most urgent planning need will be to train personnel—to prepare them to be self-sufficient under emergency conditions. Draw on employees with special talents—add to their abilities through training. Establish training goals. Before your staff can be effective, they must know what is required of them—what causes the hazard—how to cope with it. Then keep them up to date through periodic practice.

Determine the type and level of training you need. This will include:

- The concept of organized survival.

- The nature of nuclear attack.

- Radiological protective measures.

- Recovery and decontamination procedures.

- Other basic safety and survival skills—firefighting, first aid, shelter management, emergency communications.

Through your liaison with other groups, determine how and where this training is available. Some states have special training centers. The FAA, through its regional and district offices, will help coordinate training requirements and courses.

Outline a practical training schedule based on your resources.

Start informing all employees and call on them to support this program by team participation, by knowing signals and shelter locations, and by having a family plan.

Much could be said about the environment imposed by large-scale nuclear attack. This guide gives a brief review of fundamental facts and offers a base for the detailed planning that lies ahead.

Effective plan development should focus on these three parts:

- Inventory of airport facilities
- Emergency planning elements.
- Emergency operations.

Because of the importance of airports to the national defense and survival, it is essential that airport management continue to function. If, for any reason, the regular airport manager is unable to continue to function, there should be others who can take over his responsibilities.

The order of precedence for such a take-over should be established by appropriate authority and published as part of the plan in the form of an "Operational Line of Succession." Similar lines of succession should be established for each major task group to insure that none is left without a leader.

At smaller airports, where fewer people knowledgeable in airport management may be available, consideration should be given to enlisting the services of successful businessmen in the community who will agree to serve until recovery is effected and someone experienced in airport operations can be appointed to the post.

## EQUIPMENT

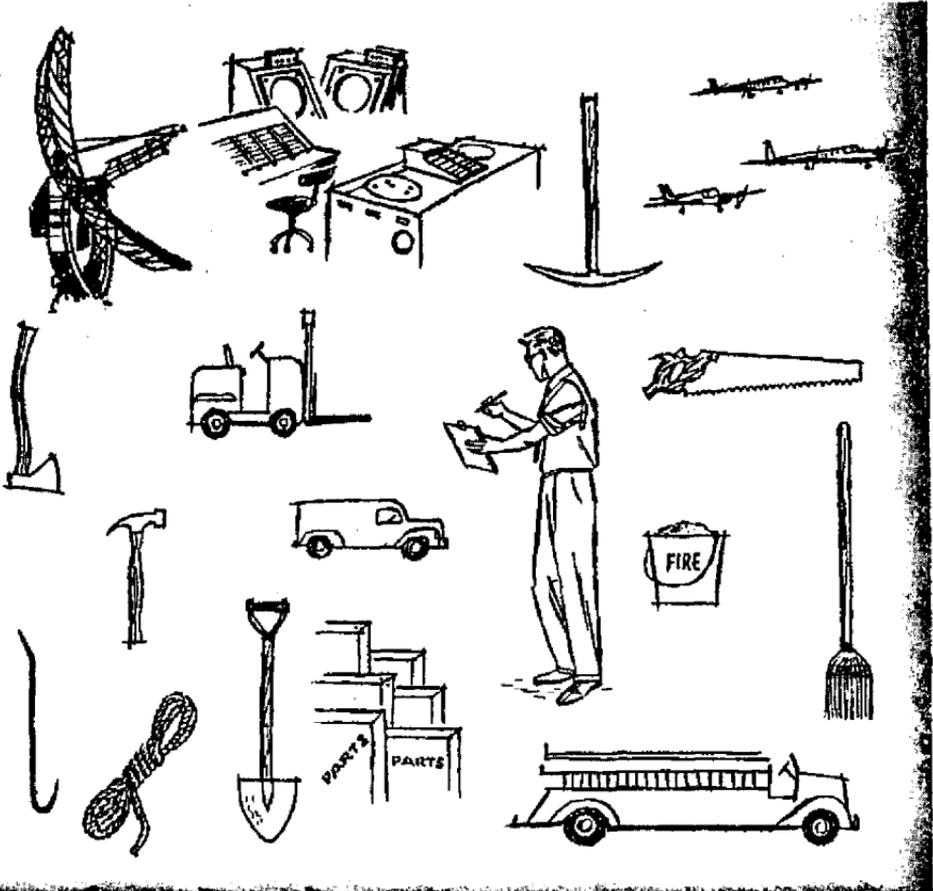
Trucks (all categories).  
Snow removal equipment.  
Sweepers.  
Aircraft wash racks.  
Engine test facilities.  
Emergency vehicles.

## PERSONNEL

Airport staff, number of people and responsibilities.  
Tenants, number of people and responsibilities.  
Government personnel.  
Military units.  
Transient (peak hour data).

## OPERATIONS

Number, type, and ownership of based aircraft.  
Volume of flying activities.





partment of Defense, Office of Civil Defense Staff College at Battle Creek, Michigan, for training in the problems he may face.

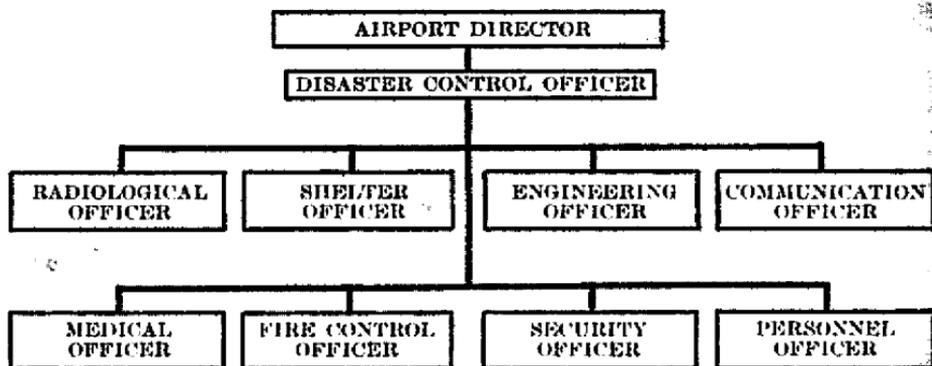
### THE DISASTER CONTROL ORGANIZATION

The disaster control staff is made up of persons already engaged in the normal functioning of the airport community. This group will be responsible for preattack planning and emergency procedure development. During a period of declared emergency, all airport survival activities will be under the direction of the Disaster Control Officer and his staff acting by authority of the Airport Director. Existing firefighting, security, and rescue units will perform necessary jobs in time of disaster. Other teams may be developed to meet specific situations. The disaster control organization does *NOT* replace the normal management authority of the airport, nor its regular police, fire, crash, or other protective organizations. It does supplement and expand these services to meet special needs.

The following staff organization is recommended for larger airports. Smaller airports will undoubtedly consolidate many of these functions. Sufficient team personnel should be organized and trained to fulfill your responsibilities.

*Succession of disaster control authority.* In the absence of the Airport Director and the Disaster Control Officer, the following staff officers will assume direction of the disaster control staff until higher authority is available:

1. Engineering Officer.
2. Shelter Officer.
3. Radiological Officer.
4. Communications Officer.



**DISASTER  
CONTROL  
OFFICER**

*Mission:*

Provide overall leadership and direction to the disaster control staff and, by authority of the Airport Manager, direct all survival activities at the airport during periods of declared emergency.

*Program Responsibilities:*

Develop procedures for all emergency actions.

Establish a disaster control center. Supervise the development and training of disaster control teams.

Coordinate all disaster control plans of airport tenant organizations with the airport plan.

Establish mutual aid agreements with tenant organizations.

Coordinate the airport disaster control plan with the community civil defense plan.

Keep an emergency operation plan in readiness at all times.

Maintain an up-to-date emergency call-up list.

Coordinate the establishment of a personnel payment system for emergency periods.



## RADIOLOGICAL OFFICER

### *Mission:*

Provide information on the radiological situation; technical advice on allowable radiation exposures and necessary procedures for decontamination; and the most effective course of action to minimize the effects of radiation on personnel and materials.

### *Program Responsibilities:*

Maintain a ready force of radiological monitoring teams well trained in all phases of radiation monitoring, contamination control, instrumentation, dosimetry, and decontamination.

Secure, maintain, and store radiological monitoring instruments, personnel dosimeters, and protective equipment.

Obtain data developed by U.S. Weather Bureau to plot predicated fallout patterns for the purpose of conducting monitoring operations.

(List local address and phone number)

Establish decontamination staging areas and procedures for equipment and personnel.



Establish radiological recording and reporting procedures.

Establish a plan for the timely distribution of personnel dosimeters.

Plan for the emergency transfer of radiological supplies to the shelters.

Maintain an up-to-date emergency call-up list.

## **SHELTER OFFICER**

### *Mission:*

Insure the availability of adequate shelter at all times and provide overall shelter management during periods of shelter occupancy.

### *Program Responsibilities:*

Organize and train shelter management teams for all areas designated as airport shelters.

(Exclusive of tenant-owned and -managed shelters.)

Establish requirements and plan for the procurement and storage of food, water, clothing, and other shelter supplies. Provide for the rotation or replacement of food and water to insure palatability.

Establish requirements and procedures for shelter communication, food preparing and dispensing, medical



facilities, sanitation, security, and decontamination. This work will be coordinated with other disaster control staff members.

Disseminate shelter location and assignment information.

Develop plans for the emergency transfer of shelter supplies to shelters.

Develop a plan for the rapid conversion of dual-purpose shelter areas to single-purpose shelter areas.

Maintain an up-to-date emergency call-up list.

## **ENGINEERING OFFICER**

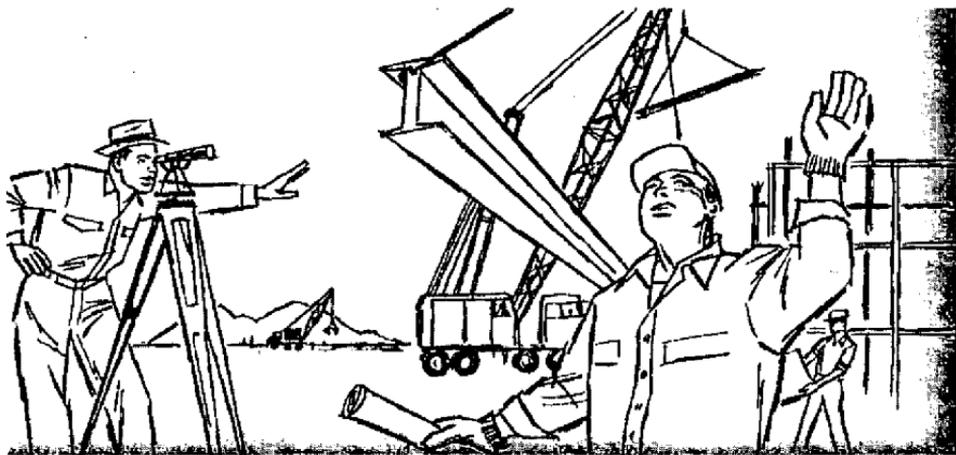
### *Mission:*

Construct, rehabilitate and repair facilities essential to disaster control operations; provide essential utilities and a safe water supply; open rights of way; conduct rescue operations, and assist other services during periods of declared emergency.

### *Program Responsibilities:*

Establish safe shutdown procedures for appropriate operating equipment and utilities.

Provide for emergency use of all stored water and well supplies.



Plan for the provision of power, sanitation, ventilation, and other essential shelter utilities.

Identify and schedule equipment and supplies for use during periods of declared emergency.

Establish procedures for damage assessment, repair, clearance, and recovery operations.

Establish and maintain reference plans and records to facilitate repair operations.

Maintain an up-to-date emergency call-up list.

### **COMMUNICATION OFFICER**

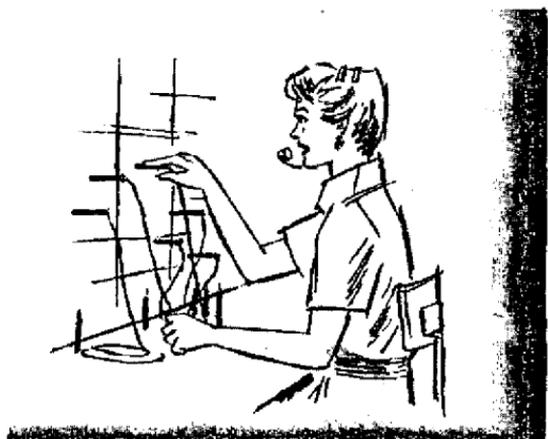
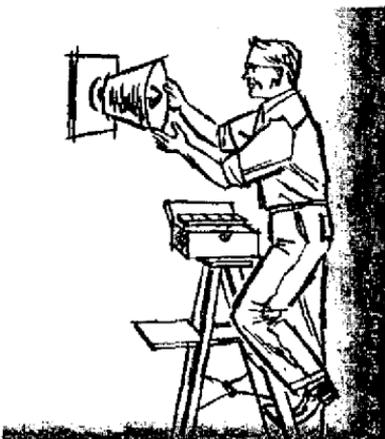
#### *Mission:*

Establish a comprehensive airport warning system; establish and operate an adequate system of communications to meet the requirements of the disaster control operation.

#### *Program Responsibilities:*

Establish channels for receiving warning information through local, county, or State civil defense offices. Establish a comprehensive airport warning system and develop procedures for its effective operation.

Establish emergency call-up procedures for disaster control organization



personnel and coordinate the call-up procedures of each disaster control staff member.

Establish a procedure for establishing an emergency communications link with the FAA Air Traffic Control Center.

Secure equipment and establish procedures for the operation of an emergency network of communications on the airport involving radio, telephone, telegraph, public address, and other systems vital to the needs of the disaster control organization.

Establish emergency intershelter communications and develop procedures for its use.

Organize and train various key personnel to be responsible for the operation of communications equipment.

Maintain an up-to-date call-up list for the communications team.

## **MEDICAL OFFICER**

### *Mission:*

Provide for emergency care and treatment for airport personnel; emergency health services to meet disaster conditions; and preventive and remedial measures to minimize the effects of biological and chemical warfare.



*Program Responsibilities:*

Develop procedures for establishing emergency treatment stations in the shelters.

Prepare shelter medical supply requirements.

Develop plans for the emergency transfer of medical supplies and equipment to shelters.

Conduct first-aid and self-aid training.

Establish in-shelter public health procedures.

Coordinate with local civil defense forces and military units to provide defense measures for biological and chemical warfare agents.

Develop a first-aid service.

Maintain an up-to-date emergency call-up list.

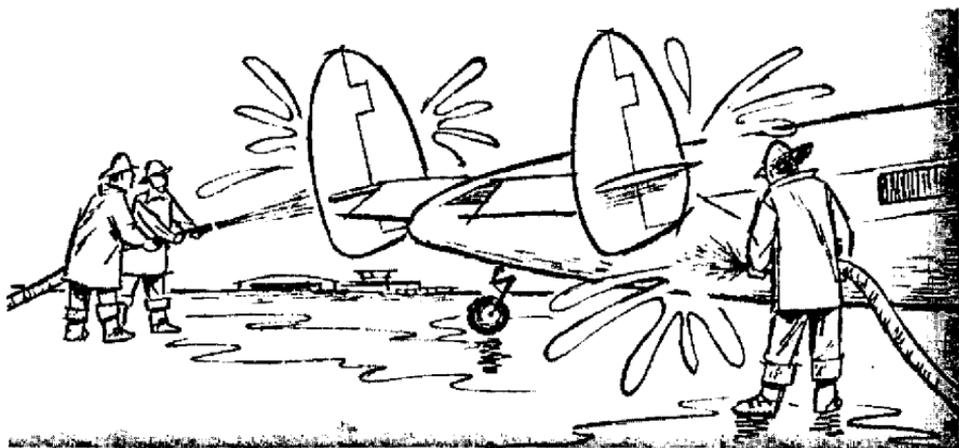
**FIRE  
CONTROL  
OFFICER**

*Mission:*

Provide for the protection of life and property from fire; and minimize fire damage caused by enemy attack.

*Program Responsibilities:*

Maintain a trained, ready fire brigade to supplement the established





airport fire and crash unit.

Prepare and disseminate first-aid fire-fighting and fire prevention instructions to all airport personnel.

Develop fire prevention instructions for safe shutdown of the airport.

Develop procedures for maximum emergency use of all stored water and well supplies at the airport.

Maintain an up-to-date map of the water supply distribution system showing all hydrants, sectional control valves, and automatic sprinkler and deluge system post indicator valves.

Plan for the emergency transfer of needed supplies and equipment to shelters.

Develop an in-shelter fire prevention program.

Develop decontamination procedures and techniques in cooperation with the Radiological Officer.

Maintain an up-to-date emergency call-up list.

## **SECURITY OFFICER**

### *Mission:*

Provide for the protection of life and property; enforce rules and regulations; regulate and control traffic; direct flow of personnel and control access to shelters; maintain law and order; prevent subversive activity; and conduct explosive ordinance reconnaissance.

### *Program Responsibilities:*

Maintain a trained, ready auxiliary security force to supplement the established airport police unit.

Develop and maintain emergency traffic flow maps and procedures.

Provide for the protection of vital records.

Establish procedures for protection against sabotage, looting, and subversive activities.

Establish procedures for protection against mob hysteria and panic.

Provide for the emergency establishment of a detention area.

Plan for the emergency transfer of needed supplies and equipment to shelters.

Maintain an up-to-date emergency call-up list.

## **PERSONNEL OFFICER**

### *Mission:*

Provide for meeting disaster control organization manpower needs; recruit and assign personnel; develop and maintain occupational inventories of workers; maintain records of personnel assigned to the disaster control organizations; maintain training records of disaster control organization personnel.

### *Program Responsibilities:*

Secure personnel for all elements of the disaster control unit.

Maintain essential personnel records of disaster control unit members.

Inventory and systematically categorize skills of other airport employees.

Maintain training records of all disaster control unit personnel.

Conduct a public information program.

## **WARNING SYSTEM**

A comprehensive Attack Warning System (AWS) has been established to transmit warning of attack and other emergency information throughout the Nation. It consists of three parts:

- a. The Federal portion operated by the Department of Defense, Office of Civil Defense (OCD).
- b. The State portion from the termini of Federal portion to every recognized community and operated by State authorities.
- c. The local portion using various means of warning the population.

The Federal portion, called the National Warning System (NAWAS), consists of seven *Warning Centers* located at

Headquarters, North American Air Defense Command (NORAD), and at six NORAD Regional Headquarters, plus 500 *Warning Points* throughout the United States, interconnected by leased telephone circuits.

The Warning Centers are continuously staffed by specially trained warning officers. These officers use the tactical and intelligence data at NORAD Combat Centers for declaring civil defense air raid warnings and for providing supplemental information over NAWAS.

Warning can be flashed from any of seven Warning Centers to all Warning Points. In addition, State civil defense authorities can supplement instructions over the system within their state to warning points within their state.

The State and local portion encompasses a common use of NAWAS circuits within the state, plus other means used by State and local political entities to disseminate warnings to communities and rural areas. From the Warning Points, various systems are used—police and fire networks, commercial radio stations, and teleprinter systems. Local governments then warn the public by actuating warning devices. Airports can be tied into this warning system by arrangement with State or local authorities.

Because of modern methods of warfare, however, various warnings may not be given or may come in such rapid succession that they may almost coincide. Regardless of this, planning must be initiated for each warning condition, with provisions for changing courses of action rapidly if additional warnings are received.

Types of warnings may be as follows:

### **Strategic Warning**

Strategic warning is a possibility. If there is a deterioration of international affairs, and the President has evidence of enemy intentions to launch an attack against this country, he may make a personal appearance on nationwide radio and TV networks to advise the public. The purpose of the announcement would be to calm people, stop rumors, and advise that certain preparatory measures should be accomplished. For planning purposes, it is assumed that a strategic warning would be effected at least 8 to 72 hours before the estimated time of attack.

### **SCATANA (Security Control of Air Traffic and Air Navigation Aids)**

The purpose of SCATANA is two-fold: to get civil aircraft out of the air so they do not interfere with tactical military operations, and to control electronic

air navigation aids so they cannot be used by the enemy. It will be declared by military authority and implemented by FAA air traffic control facilities. It does *not* constitute a public warning.

### EMERGENCY BROADCAST SYSTEM (EBS)

EBS is a method of communication between government and public that replaces the former CONELRAD system. In the event of war, certain radio (AM and FM) and television (aural) stations will continue to transmit information, instruction, and additional warnings to the public, both locally and through a network designed for national coverage. The stations have been provided with emergency power sources and fallout protection so that operations may be continued under adverse circumstances. Broadcasts will be on the frequency usually employed by the station, and will be conducted on a 24 hour basis. It is assumed that this method of broadcasting will closely coincide with . . .

### Air Raid Warning

This is the nonmilitary warning used to notify civil authorities that an attack upon the United States is probable, imminent, or in progress. It is based on intelligence, the military situation, command decisions with NORAD, and OCD Warning Center.

Since December 1966, the siren signals activated by civil defense officials have taken on a different mean-



ing. Both require certain emergency actions by the public.

#### **Attention or Alert Signal**

A steady blast of sirens for 3 to 5 minutes. This is to alert the public to the fact that an emergency exists, and that they are to listen to radio or TV broadcasts for further information. It *may* be used in a peacetime emergency.

#### **Attack Warning Signal**

A wailing tone of sirens for 3 to 5 minutes. This means that an enemy attack is under way and immediate protective action is to be taken. *This signal will have no other meaning.*

In some States, the Bell & Light System (see page 22) is used in place of the siren signals described above.

*FAA Communications system can be helpful.* In addition to NAWAS and civil defense procedures, the airport disaster control organization receives warning information in connection with the FAA's wartime operation function. FAA Air Route Traffic Control Centers are fully responsive to Air Defense Emergencies declared by NORAD. Under these conditions, the FAA carries out extraordinary emergency services relating to military support. Among others, these include:

Security Control of Air Traffic and Air Navigation Aids (SCATANA) would be fully or partially imposed in certain geographic areas. Implementation of full SCATANA provides for the grounding of aircraft in flight and the control of electronic air navigation aids, such as VOR, VORTAC, TACAN, DECCA, SHORAN, and LORAN.

Full SCATANA action is made known to all air route traffic control centers, flight service stations, and airport traffic control towers. The information is also relayed to airline dispatchers and in many cases to airport authorities. Where FAA facilities are located at airports, procedures can be developed locally for the airport's Disaster Control Officer to receive this information.

In addition to the widely used sirens, the Office of Civil Defense recognizes the need for more direct methods of notification. Government and industry have collaborated in development of several additional systems.

*Bell & Light* is a local telephone company service available in many areas of the country. It consists of a special telephone dial located at a central point—usually the official State or local civil defense warning control point—connected by normal telephone circuits to any number of *Bell & Light* signal boxes, installed at locations where warnings are received. The signals usually associated with the following numbers are:

Bell & Light #1—Test or preliminary.

Bell & Light #2—Attack alert.

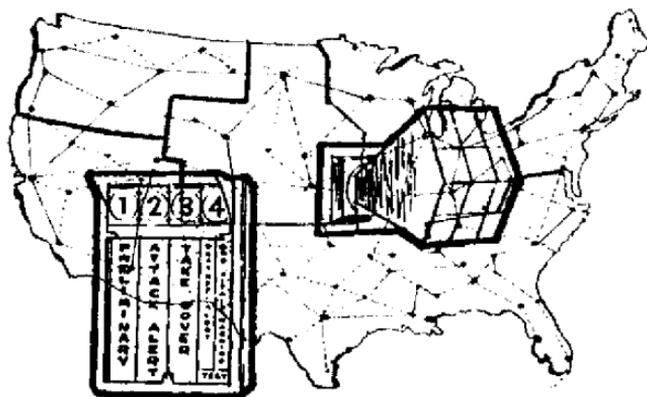
Bell & Light #3—Take cover.

Bell & Light #4—Local choice (could be test or weather alert).

Exact meanings are determined by State or local civil defense authorities. Numbers 2 and 3 can automatically sound appropriate sirens. In each signal box a bell sounds a distinctive code ring for the type of warning and a light flashes on and off behind the appropriate number.

*The Group Alerting System* is a technique whereby regular telephone circuits are used to simultaneously contact specified individuals for relaying messages.

*Voice Sound System.* Through the use of amplifiers and loudspeakers a high sound intensity can be generated over vast outdoor areas. Voice instructions may be supplemented by standard civil defense signals over this system.



## EVACUATION TO SHELTERS

With the increasing availability of shelters, the concept of evacuation is undergoing change. Initially, where shelters were not available, most plans were predicated on the basis of evacuation from suspected target areas. This concept remains valid when shelter space is not available. As adequate shelters do become available, plans for evacuation must change accordingly.

To determine why, we must look again at the lethal effects of nuclear weapons. In an all-out war, virtually the entire Nation will be subjected to lethal levels of radiation from fallout. Without adequate shelter in this radiation field, survival would be impossible. Therefore, initial evacuation plans should be based on *evacuation to fallout shelters*.

As more and more shelters become available and we can choose between shelters in possible target areas and shelters in nontarget areas, our plans for evacuation would, of course, change. Initially, however, shelter space will be identified in existing structures and evacuation plans should be based on evacuation to shelters that are available now.

Evacuation routes to shelters should be developed and this information published as part of an employee information program. Special attention should be given to evacuation routes that cross runways because aircraft operations may be taking place.

## SHELTERS

In the event of nuclear war, fallout shelters offer the best single nonmilitary defense measure for the protection of the greatest number of people. Shelters should be developed for airport employees, tenant personnel, and transients.

### **The National Shelter Survey**

The National Shelter Survey, conducted by the Department of Defense, identifies potential shelter capacity in all existing structures, the level of protection now available within structures, and determines the requirements for improvement, where needed. All airports are urged to take full advantage of this program.

### **Dual-Purpose Use**

Dual purpose space utilization is the practical approach to shelter development. In normal use, a dual-purpose shelter may be an employee cafeteria, a basement work area, or a subsurface vehicle parking facility. Key

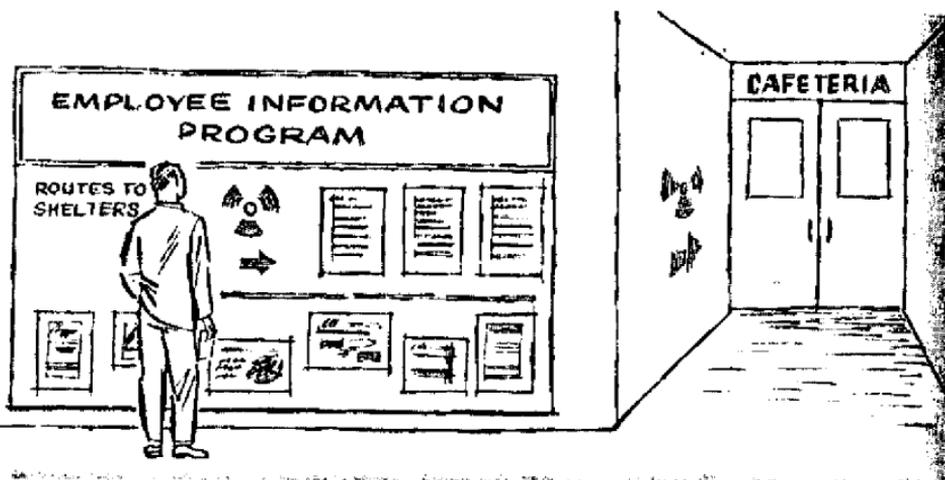
points would have quick convertability, adequate shielding, and proper ventilation.

### Shelters From Scratch

If adequate shelter areas cannot be created in present buildings at your airport, you would probably construct new ones. Engineers and architects can design these structures to withstand varying degrees of blast, fire, and fallout. A shelter can take one of several forms; there are many designs for blast and fallout shelters. Some are all concrete, others are a multiple corrugated-steel arch set on a concrete slab. The latter shelters can be built above ground with a completely covered earth mound; partly underground with an earth cover; or entirely underground. An underground shelter can be designed as the subbasement for a building to rise on this foundation later. Whatever the choice, you should give the shelter some peacetime use.

### Shelter Management

The airport executive is responsible for the existence and operation of fallout shelters at his airport. Shelter management planning, therefore, is an important segment of overall disaster control planning. The Shelter Officer should be selected with care, and once selected, should be provided with training to enable him to do his job well. The Shelter Officer would make provision, if at all possible, for accommodating employees' families in the shelter. Shelter assignments, warning signals, and other information could be included in an employee emergency handbook or information sheet.





## EQUIPMENT AND SUPPLIES

Emergency equipment and supplies will be required when disaster strikes. Vehicles will be needed for transporting emergency teams and supplies. Special equipment will be needed for radiological monitoring and decontamination. Medical supplies will probably be required in greater than normal quantities. Shelter supplies, an emergency power source, communications equipment, and other material will be needed for the survival and recovery of your airport.

In many cases, equipment and supplies already in existence at your airport can be identified and scheduled for use during emergency periods. This is particularly true with normal hardware such as police vehicles, utility trucks, communications equipment, etc. Special items such as radiological monitoring equipment, dosimeters, sufficient medical supplies, and shelter supplies will normally not be available. The following instruments may be procured on a "share-cost" basis through your State Civil Defense:

### **Monitoring equipment:**

One dosimeter for each employee.

Sufficient dosimeter chargers for instrument servicing.

Radiological Survey Meters (Geiger Counters).

CD-V-715 This is the workhorse of radiological monitoring. It detects gamma radiation over a range of 0 to 500 roentgens per hour. It will be used in surveys following an attack to determine when it is safe to leave the shelters and during decontamination cleanup operations.

CD-V-700 This instrument has a lower range and will be used for food monitoring and for detailed equipment decontamination and personnel monitoring upon entering a shelter.

In addition, items of protective clothing are necessary for monitoring and decontamination personnel. These include coveralls, headcovers, booties, breathing masks, and gloves.

The number of instruments and amount of equipment can best be determined following monitor training and a special evaluation of your needs.

Instruments to measure radiation from accidents involving nuclear material are discussed in FAA's publication, "Radiation Safety for Civil Airports."

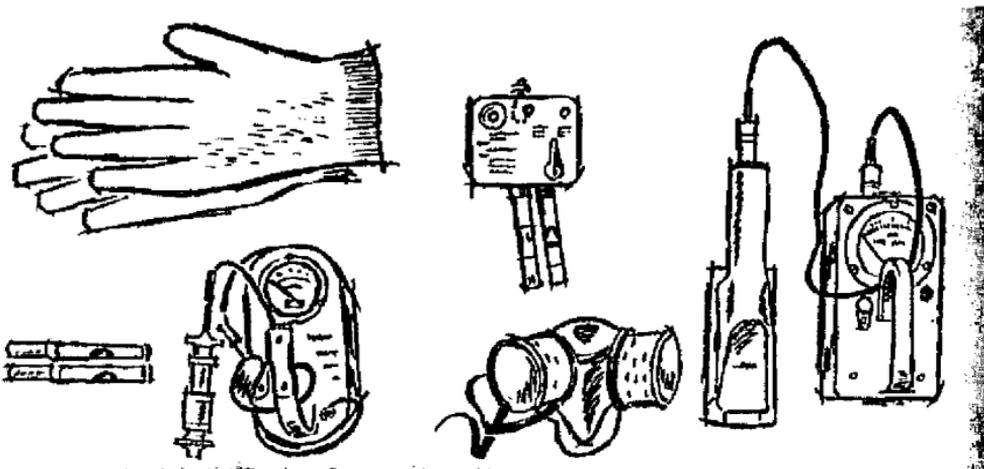
A list of all available equipment and supplies that will be used in an emergency should be prepared by the disaster control staff and made part of the planning section of your disaster control plan. Conditions for continued storage and regular maintenance of this material should also be included in this section. This information will serve as a ready reference and planning guide to the disaster control staff.

The Federal Government will assist in the procurement of certain equipment and supplies needed for the survival and recovery of your airport. This program is conducted by the Office of Civil Defense in cooperation with State and local civil defense authorities.

### MUTUAL AID AGREEMENT

Overall disaster control planning for an airport community remains the responsibility of the airport manager. Tenant organizations at an airport are individually responsible for the protection and welfare of their own employees. Individual tenant disaster control plans are based on specific tenant needs; the Airport Disaster Control Plan is based on the composite needs of the entire airport community.

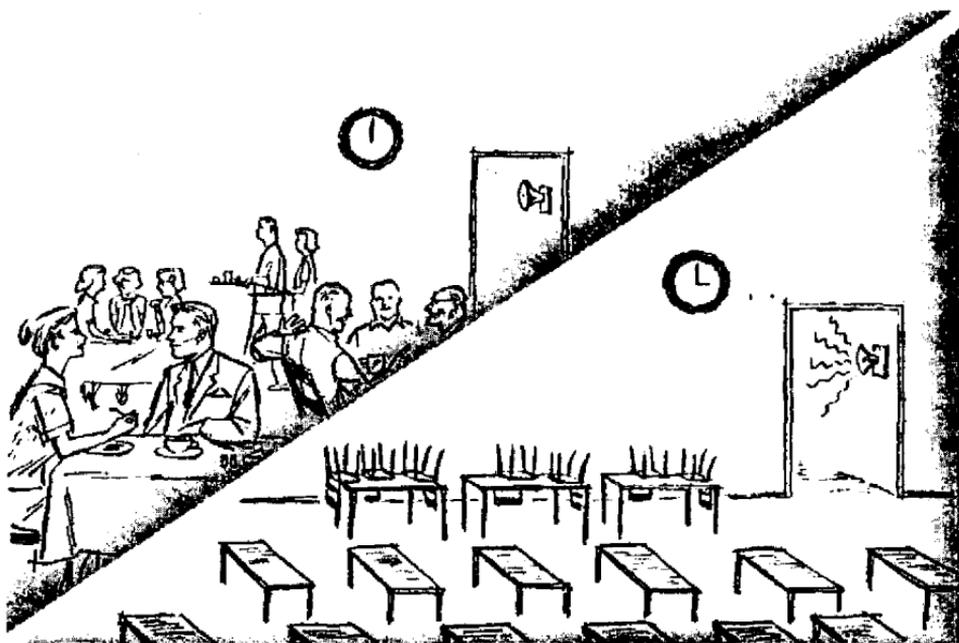
To obtain the greatest use of personnel, shelters, equipment, and facilities to meet the emergency needs of the airport community, you must develop an organized mutual use of these resources. To provide for mutual use of existing resources, mutual aid agreements are established between tenants and the airport authority. Mutual aid agreements should be in writing and a copy of each agreement made part of the Airport Disaster Control Plan.



## RECOMMENDATIONS

On beginning your disaster control plan, you will find deficiencies in many vital areas. Personnel will require training; acquisition of special equipment and supplies will be necessary; and certain facilities will need modification to serve as fallout shelters. In some areas shelters will have to be started from scratch. Recommendations essential for full effectiveness of your disaster control plan should be listed as a final planning element within this section of your plan.

The keynote of emergency use of facilities, supplies, and equipment should be *dual-purpose use*. Where possible and practical, emergency plans should identify and plan for the use of material already in existence. Only when essentially needed resources are not available should a recommendation be listed for their acquisition. The recommendations listed will become a management planning tool for budgeting and planning; consequently, full justification should be included to support each recommended item.



able conditions in the order they might normally appear. Realize that early warnings may not be given or that warnings may come in such rapid succession that they may coincide. Actions should be put into effect according to the warning received; and when succeeding warning conditions are announced, the disaster control organization should advance all operations as rapidly as possible to include those prescribed for the new condition.

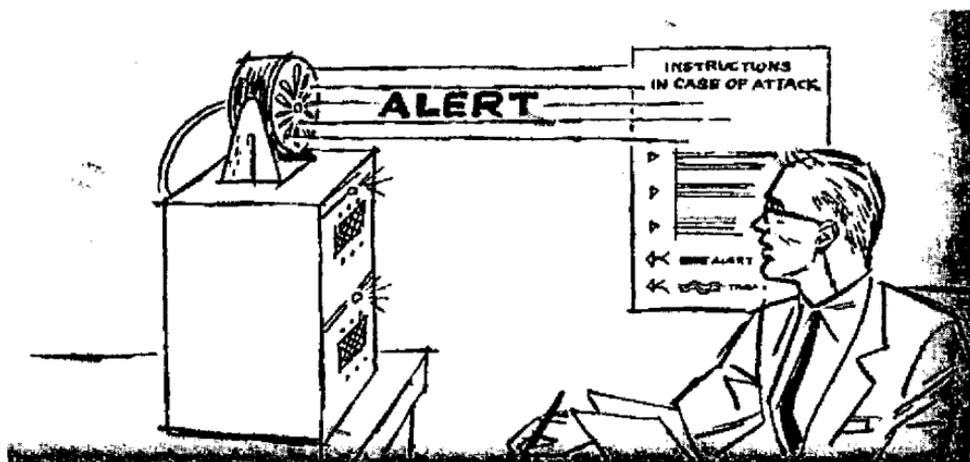
Here is a complete list of emergency conditions. The suggested functions listed after each warning are intended for guidance only. As you develop a disaster control program and organize your airport, you will determine the need for additional actions and recorded procedures.

### STRATEGIC WARNING

Strategic warning is a possibility. If there is a deterioration of international affairs, and the President has evidence of enemy intentions to launch an attack against this country, he may make a personal appearance on nationwide radio and TV networks to advise the public. The purpose of this announcement would be to calm the people, stop rumors, and advise that certain preparatory measures should be accomplished.

### SCATANA

This announcement does *not* constitute an air raid warning and no warning signals will be sounded. It may be declared by military authority to restrict air traffic movement, under emergency SCAT rules, when no attack is under way.



Upon receipt of a **STRATEGIC WARNING** or an announcement of **SCATANA**, the Disaster Control Officer should call an emergency meeting of the disaster control staff and make an assessment of the readiness of the airport. Contact would be established with the local Civil Defense Director for a situation briefing. Guided by the urgency of the situation, the disaster control staff would review the actions listed in the Emergency Operations Section of the Airport Disaster Control Plan and take the steps necessary for successful execution of the plan. Actions taken during this period would be those that insure prompt receipt of subsequent warnings and make available survival and recovery of equipment.

### **ATTACK WARNING SIGNAL**

Upon receipt of an air raid warning via **NAWAS**, local procedures will be instituted for warning the public. In some States, this may be an immediate sounding of the Attack Warning Signal or, if time permits, the warning is disseminated as a *preliminary warning* (Bell & Light #1) to enable disaster control forces, police and other emergency personnel to take essential preparatory actions before notifying the public. In such cases sirens would be sounding for public notification approximately 15 minutes after receipt of the Air Raid Warning from the State Warning Offices.

Upon receipt of an Attack Warning Signal, the disaster control organization would become fully mobilized. The major phase of the Airport Disaster Control Plan would become operational and maximum effort would be advanced to assure survival of airport personnel.

Following are representative actions for the disaster control staff. Emergency operations for your airport would, of course, be tailored to your needs. The items listed are in general terms and are intended for guidance only.

#### **DISASTER CONTROL OFFICER**

1. Mobilize the disaster control staff and activate the command center.
2. Notify all tenant organizations that a condition of warning exists.

#### **RADIOLOGICAL OFFICER**

1. Alert all radiological team personnel to report to predesignated points.
2. Transfer radiological detection and de-

contamination equipment not already in the shelters to shelters.

3. Check the operation of radiological equipment.
4. Issue personnel dosimeters.
5. Establish and review the operation of decontamination stations.
6. Review procedures such as radiation survey, reporting and area decontamination.
7. Prepare situation status and operation readiness report, as required by the Disaster Control Officer.

### **SHELTER OFFICER**

1. Alert all shelter team personnel to report to the shelter.
2. Convert all shelter areas to full shelter occupancy.
3. Check operation procedures for mass feeding, supply control, chore assignment, sleeping accommodations, ventilation, standby power, etc.
4. Assemble records or forms for control of personnel as they enter the shelter.
5. Prepare situation status and operation readiness report as required by the Disaster Control Officer.

### **ENGINEERING OFFICER**

1. Alert all engineering team personnel to action.



2. Transfer equipment and supplies to shelter areas or emergency locations. (Note: Detailed instructions and individual assignments should be made and attached to this plan.)
3. Complete the installation or connection of emergency utilities in shelters.
4. Proceed with protective emergency construction at shelter entrances and other needed areas.
5. Check emergency operating procedures for all standby equipment.
6. Prepare situation status and operation readiness report as required by Disaster Control Officer.

#### **COMMUNICATIONS OFFICER**

1. Initiate the call-up procedures to alert personnel of all teams to report to emergency stations.
2. Transfer all communication equipment not already in shelters to designated shelters.
3. Proceed with the installation of emergency communication equipment in the disaster control command center.
4. Conduct operational check of all communications equipment.
5. Prepare situation status and operation readiness report as required by the Disaster Control Officer.

#### **MEDICAL OFFICER**

1. Alert all medical team personnel to report to emergency duty stations.
2. Transfer medical supplies not already in the shelters to shelters, and set up hospital and emergency first-aid stations.
3. Check operation procedures for subsequent warning conditions.
4. Prepare situation status and operation readiness report as required by the Disaster Control Officer.

## **FIRE CONTROL OFFICER**

1. Alert all fire control team personnel to report to emergency duty stations.
2. Transfer specified fire department equipment to emergency locations. (Note: Detailed assignments should be part of normal fire department instruction.)
3. Conduct emergency operational check on water supply system components.
4. Enforce emergency fire regulations.
5. Prepare situation status and operation readiness report as required by the Disaster Control Officer.

## **SECURITY OFFICER**

1. Alert all security team personnel to report to emergency duty stations.
2. Establish emergency vehicle and pedestrian routes with markers or barriers as appropriate, in accordance with the approved route map.
3. Position security personnel in preparation for evacuation to shelters.
4. Transfer needed security equipment and materials to shelters.
5. Post shelter entrance security watch to assist shelter management teams and radiological monitors.
6. Provide emergency police protection where required.
7. Prepare situation status and operation readiness report as required by Disaster Control Officer.

## **PERSONNEL OFFICER**

1. Establish a source of clerical assistance for shelter management and record purposes.
2. Establish a list of shelter occupants having special talents—religious leadership, entertainment ability, etc.
3. Organize a staff to produce a shelter morale and information bulletin.



## TAKE COVER

A wailing tone of sirens for 3 to 5 minutes. This signifies that an attack on your area of the country is imminent and adequate shelter should be sought immediately.

The disaster control staff and team members would continue to carry out service functions until the habitability of shelters is assured or until ordered to seek shelter by the Disaster Control Officer.

## POSTATTACK OPERATIONS

Postattack operations would be under the direct control of the Disaster Control Officer, with various functions delegated to staff members. Your ability to recover from a nuclear attack will depend largely on the degree of planning done beforehand. In your planning, picture the problems attack would create for your airport—and prepare now to cope with them.

After a nuclear attack, first activities will consist of operation of the shelters and the establishment of communications. The shelter officer will be in charge of overall shelter operations and will seek assistance from other staff members as required. The Communications Officer will establish communications with the local civil defense authorities, the FAA, and other organized disaster relief or survival groups. In the postattack period there will be a desperate need for information. Shelter occupants will want to know about their facilities, their homes, the community; you will need to know about local radiation levels, local supplies of food, fuel, and other supplies, about casualties, about damage to the airport and the community. You will also want to know about other airports.

Decontamination will be the next major problem. Recovery of the airport will be necessary to establish transportation routes to other airports that are clear. Your airport could serve as the hub for survival of your community if decontamination efforts are successfully conducted and operations have begun.

The Radiological Officer will direct all decontamination operations. He would reinforce his teams with members of the fire and police units. Initially, teams would be able to foray briefly into areas contaminated by fallout. These areas would be cleared by flushing, sweeping, and possibly bulldozing. Teams would work in relays, to expose each team member to minimum radiation. Careful records on individual exposure would be kept in accordance with procedures developed by the Radiological Officer. First, recovery operations would be directed to runways, taxiways, and

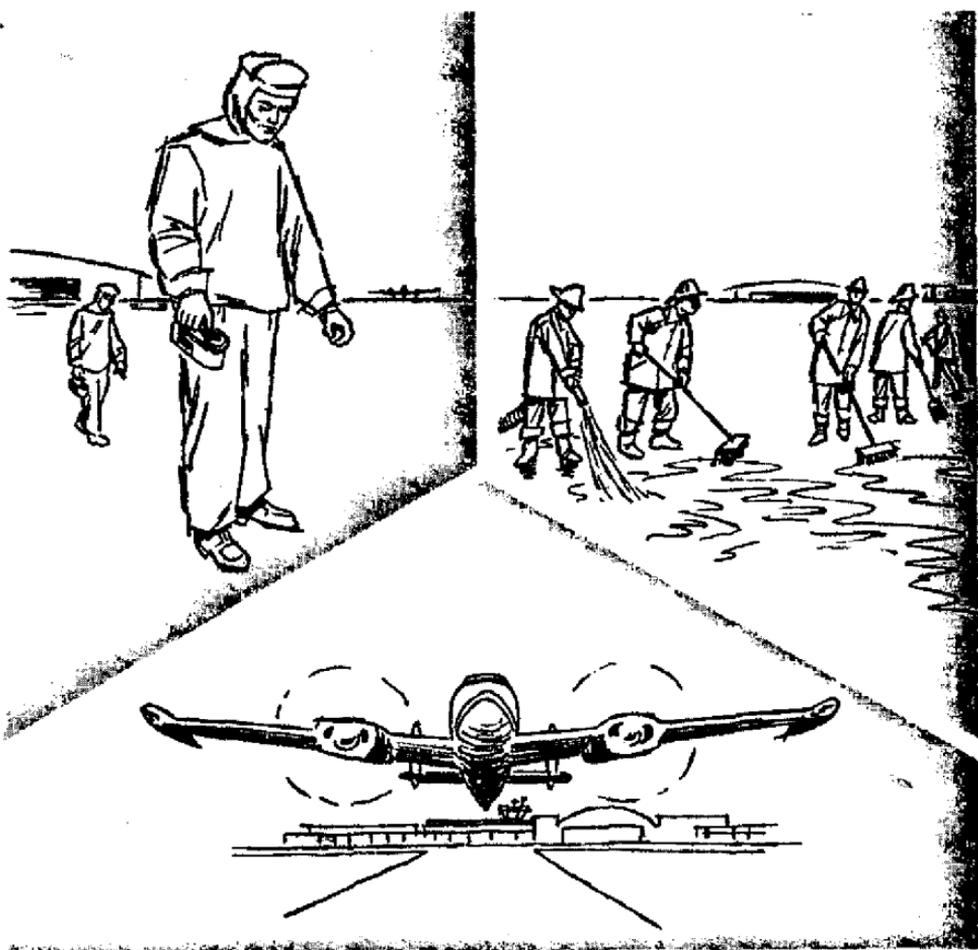
essential operating areas in an effort to begin operations as early as possible.

The Disaster Control Plan for your airport should also include plans for long-range recovery. Vital records, continuity of management, and emergency financial procedures should all be adequately provided for by advance planning.

Larger airports may require certain managing and operating personnel to proceed with local government officials to an alternate operating headquarters.

### NATURAL DISASTERS

The disaster control organization does not replace the normal management of the airport nor its regular police, fire, crash, or other protective organizations. It supplements and expands these to meet whatever disaster may threaten or strike. Separate emergency operations should be delineated for disaster conditions to which your area is prone—fire, crash, flood, hurricane, tornado, etc.



## APPENDIX

This is where copies of detailed procedural information, special operating instructions, and tenant emergency actions are recorded. These contrast with action tabs in that they are specific in nature and do not function as a check list for quick action. Items in this section are developed over a period of time as special skills and equipment become available.

### HELP IN PLANNING FOR SURVIVAL

There are several places where management of airports and aeronautical facilities can obtain assistance in developing plans for disaster survival, reducing vulnerability, and improving emergency operating capability. These include the Federal Aviation Administration, your State and local civil and defense authorities and various industrial and trade associations.

Your nearest FAA Regional Headquarters or District Airport Office is prepared to provide direct assistance in every are of disaster control planning. These FAA offices will also serve as a source of training information on a variety of courses conducted by the OCD, colleges and universities, State and local organizations, and FAA. Tuition-free attendance can be arranged for your personnel.

### RECOMMENDED READING

- Nuclear Attack and Industrial Survival*—McGraw-Hill—A Special Report, January 1962.
- Fallout Protection*—Department of Defense, Office of Civil Defense Booklet, December 1961.
- AC 150/5240-6A *Radiation Safety for Civil Airports*—an FAA Advisory Circular, December 27, 1965.
- AC 150/1930-1 *Radiological Decontamination of Civil Airports*—an FAA Advisory Circular, August 19, 1966.
- Radiological Protection and Decontamination of Civil Aircraft*—an FAA booklet dated November 1962 available from the Superintendent of Documents, Washington, D.C. 20402; price \$0.65.



**AIRPORT INVENTORY**

**PLANNING THE DISASTER  
CONTROL ORGANIZATION**

**EMERGENCY OPERATIONS**

**APPENDIX**

DEPARTMENT OF TRANSPORTATION  
FEDERAL AVIATION ADMINISTRATION  
Washington, D.C. 20590

Official Business

POSTAGE AND FEES PAID  
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