

# NFPA 424

## Guide for Airport/ Community Emergency Planning

### 2002 Edition



NFPA, 1 Batterymarch Park, PO Box 9101, Quincy, MA 02269-9101  
An International Codes and Standards Organization

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**NFPA 424**

**Guide for**

**Airport/Community Emergency Planning**

**2002 Edition**

This edition of NFPA 424, *Guide for Airport/Community Emergency Planning*, was prepared by the Technical Committee on Aircraft Rescue and Fire Fighting and acted on by NFPA at its May Association Technical Meeting held May 19–23, 2002, in Minneapolis, MN. It was issued by the Standards Council on July 19, 2002, with an effective date of August 8, 2002, and supersedes all previous editions.

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**Origin and Development of NFPA 424**

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The complete text was rewritten in 1986 in an informational format. The document was again rewritten in 1991. The 1996 edition was a partial revision. The 2002 edition is a partial revision.

## Technical Committee on Aircraft Rescue and Fire Fighting

**Brian Boucher**, *Chair*  
Air Canada Pilots Association, NY [L]

**Lawrence V. Powers**, *Secretary*  
Massport, MA [U]

**Keith W. Bagot**, U.S. Federal Aviation Administration, NJ [RT]  
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**Ralph Colet**, John Russo Industrial Inc., CA [M]  
**Robert L. Darwin**, Hughes Associates, Inc., MD [SE]  
**Ross A. Davidson**, U.S. Navy Air Warfare Center Weapons Division, CA [U]  
**Roger Davis**, BAA PLC Heathrow Airport, England [U]  
**Derek K. G. Dodwell**, Serco Aviation Services, England [U]  
**David A. Enz**, Tucson Airport Authority, AZ [U]  
Rep. Airports Council International, Inc.–North America  
**Kenneth R. Gilliam**, Federal Aviation Administration, FL [E]  
**B. V. Hewes**, Airport Safety Services, GA [SE]  
**Donald E. Hilderbrand**, Phoenix Fire Department, AZ [L]  
**L. M. Krasner**, Factory Mutual Research Corporation, MA [I]  
**Paul S. Meyer**, Hartsfield Atlanta International Airport, City of Atlanta, GA [U]

**John J. O'Sullivan**, British Airways, PLC, England [C]  
**Gaétan Perron**, National Defense Headquarters (CFFM-2), Canada [U]  
**Thomas Phillips**, Airline Pilots Association, PA [L]  
**Pam Phillips**, Port Authority of New York & New Jersey, NY [U]  
Rep. American Association of Airport Executives  
**Hugh A. Pike**, U.S. Air Force Fire Protection, FL [U]  
**Lee W. Prazer**, Akron Brass Company, OH [M]  
**Richard M. Radford**, Dubai International Airport, United Arab Emirates [E]  
**Michael D. Reagan**, Los Angeles City Fire Department, CA [U]  
**Robert G. Relyea**, ARFF Working Group, TX [M]  
**John M. Schuster**, 3M Company, MN [M]  
**Terry Seaborn**, Oshkosh Truck Corporation, WI [M]  
**Robert L. Shaub**, Emergency One, Inc., FL [M]  
**Bernard Valois**, Transport Canada Civil Aviation, Canada [E]  
**Ronald O. Wikander**, LM Aero, GA [M]  
**Joseph A. Wright**, ARFF Technical Services, Inc., FL [SE]

### Alternates

**Ali Zaid Mohamed Al Balushi**, Directorate General of Civil Aviation & Meteorology, Seeb [E]  
(Alt. to R. M. Radford)  
**Darrin Barth**, Hartsfield Atlanta International Airport/City of Atlanta, GA [U]  
(Alt. to P. S. Meyer)  
**Michael P. Crowe**, Oshkosh Truck Corporation, WI [M]  
(Alt. to T. Seaborn)  
**Robert J. Donahue**, Massport, MA [U]  
(Alt. to L. V. Powers)  
**Christopher Farnaby**, United Kingdom Civil Aviation Authority, England [E]  
(Alt. to T. Cash)  
**James Hotell**, U.S. Air Force Fire Protection, FL [U]  
(Alt. to H. A. Pike)  
**Frank M. E. Hughes**, British Airways, PLC, England [C]  
(Alt. to J. J. O'Sullivan)  
**Madhu Manikkam**, Emergency One, Inc., FL [M]  
(Alt. to R. L. Shaub)  
**Richard B. Mills**, Akron Brass Company, OH [M]  
(Alt. to L. W. Prazer)

**Gaétan Morinville**, Canadian Forces, Canada [U]  
(Alt. to G. Perron)  
**James F. O'Regan**, O'Regan Consulting, MA [M]  
(Alt. to R. Colet)  
**Richard E. Ottman**, 3M Company, MN [M]  
(Alt. to J. M. Schuster)  
**Paul R. Robinson**, Chattanooga, TN [L]  
(Alt. to T. Phillips)  
**Joseph L. Scheffey**, Hughes Associates, Inc., MD [SE]  
(Alt. to R. L. Darwin)  
**Gary T. Schott**, Omaha Airport Authority, NE [M]  
(Alt. to R. G. Relyea)  
**Bernard Stone**, BAA PLC Gatwick Airport, England [U]  
(Alt. to R. Davis)  
**Thomas Van Mai**, Federal Aviation Administration, DC [E]  
(Alt. to K. R. Gilliam)  
**Craig Williams**, American Association of Airport Executives, VA [U]  
(Alt. to P. Phillips)  
**Bonnie Wilson**, Airports Council International North America, DC [U]  
(Alt. to D. A. Enz)

### Nonvoting

**Mark Day**, Carmichael International Limited, England  
**Gary Hammack**, U.S. National Transportation Safety Board, DC  
**Thomas J. Lett**, Albuquerque Fire & Safety Associates, NM  
(Member Emeritus)

**Mark T. Conroy**, NFPA Staff Liaison

**David F. Short**, Charlton Kings, Cheltenham, England  
**Francois Villard**, Geneva International Airport, Switzerland [U]

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*This list represents the membership at the time the Committee was balloted on the final text of this edition. Since that time, changes in the membership may have occurred. A key to classifications is found at the back of the document.*

NOTE: Membership on a committee shall not in and of itself constitute an endorsement of the Association or any document developed by the committee on which the member serves.

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## NFPA 424

## Guide for

## Airport/Community Emergency Planning

## 2002 Edition

NOTICE: An asterisk (\*) following the number or letter designating a paragraph indicates that explanatory material on the paragraph can be found in Annex A.

Changes other than editorial are indicated by a vertical rule beside the paragraph, table, or figure in which the change occurred. These rules are included as an aid to the user in identifying changes from the previous edition. Where one or more complete paragraphs have been deleted, the deletion is indicated by a bullet between the paragraphs that remain.

A reference in brackets [ ] following a section or paragraph indicates material that has been extracted from another NFPA document. As an aid to the user, Annex H lists the complete title and edition of the source documents for both mandatory and nonmandatory extracts. Editorial changes to extracted material consist of revising references to an appropriate division in this document or the inclusion of the document number with the division number when the reference is to the original document. Requests for interpretations or revisions of extracted text shall be sent to the appropriate technical committee.

Information on referenced publications can be found in Chapter 2 and Annex H.

## Chapter 1 Administration

**1.1 Scope.** This guide describes the elements of an airport/community emergency plan that require consideration before, during, and after an emergency has occurred. The scope of the airport/community emergency plan should include command, communication, and coordination functions for executing the plan. Throughout this document, the airport/community emergency plan will be referred to as the "Plan."

**1.2 Purpose.** This guide was written to inform airport and adjacent community authorities of current emergency planning techniques and procedures that result in the efficient utilization of personnel from all involved organizations and agencies to provide effective delivery of emergency services in the event of an aircraft-related emergency. Jurisdictional problems previously identified in actual emergencies or emergency plan exercises point out the necessity of resolving the conflicts as part of the development of the Plan. Recommendations contained herein are not intended to conflict with any local or state regulations. One of the principal purposes of this document is to alert all participants to conflicts that can exist due to multijurisdictional factors, such as conflicts between national regulations.

## Chapter 2 Referenced Publications

**2.1 General.** The documents or portions thereof listed in this chapter are referenced within this guide and should be considered part of the recommendations of this document.

## 2.2 NFPA Publications. (Reserved)

## 2.3 Other Publications.

**2.3.1 ICAO Publications.** International Civil Aviation Organization, 999 University St., Montreal, PQ Quebec, Canada H3C 5H7.

*International Civil Aviation Organization Airport Services Manual*, Part 1, "Rescue and Fire Fighting," 1990.

*International Civil Aviation Organization Airport Services Manual*, Part 5, "Removal of Disabled Aircraft," 1996.

**2.3.2 Air Transport Association of America.** Air Transport Association of America, P.O. Box 511, Annapolis Junction, MD 20701.

*International Air Transport Association — Guidelines for Airport Operators and Airport Authorities on Procedures for Removal of Disabled Aircraft.*

## Chapter 3 Definitions

**3.1\* General.** The definitions contained in this chapter apply to the terms used in this guide. Where terms are not included, common usage of the terms applies.

## 3.2 NFPA Official Definitions.

**3.2.1\* Approved.** Acceptable to the authority having jurisdiction.

**3.2.2\* Authority Having Jurisdiction (AHJ).** The organization, office, or individual responsible for approving equipment, materials, an installation, or a procedure.

## 3.3 General Definitions.

**3.3.1 Airborne Emergency.** Those emergencies that affect the operational integrity of an aircraft while in flight. The seriousness of these emergencies can be defined by using alert status guidelines stated in FAA terms, and aircraft emergencies for which services may be required, as defined in *International Civil Aviation Organization Airport Services Manual*, Part 1, "Rescue and Fire Fighting."

**3.3.2 Aircraft Accident.** An occurrence associated with the operation of an aircraft that takes place between the time a person boards the aircraft with the intention of flight and the time such person has disembarked, in which a person suffers death or serious injury as a result of the occurrence or in which the aircraft receives substantial damage.

**3.3.3 Aircraft Incident.** An occurrence, other than an accident, associated with the operation of an aircraft, that affects or could affect continued safe operation if not corrected. An incident does not result in serious injury to persons or substantial damage to aircraft. [402:3.3]

**3.3.4 Aircraft Operator.** A person, organization, or enterprise engaged in, or offering to engage in, aircraft operation.

**3.3.5 Airline Coordinator.** A representative authority delegated by an airline to represent its interests during an emergency covered by this guide.

**3.3.6 Airport/Community Emergency Plan.** Establishment of procedures for coordinating the response of airport services with other agencies in the surrounding community that

could be of assistance in responding to an emergency occurring on, or in the vicinity of, the airport.

• **3.3.7 Airport Manager.** The individual having managerial responsibility for the operation and safety of an airport. The manager can have administrative control over aircraft rescue and fire fighting services but normally does not exercise authority over operational rescue and fire matters.

**3.3.8 Airside (Airport Operational Area).** The movement area of an airport, adjacent terrain, and buildings or portions thereof, access to which is controlled.

**3.3.9 Air Traffic Control Provider.** A service established to provide air and ground traffic control for airports. (This includes airport control tower and airport flight information services.)

### **3.3.10 Area.**

**3.3.10.1 Care Area.** Location where initial medical care is given to injured.

**3.3.10.2 Collection Area.** Location where seriously injured are collected initially.

**3.3.10.3 Holding Area.** Location where the apparently uninjured aircraft occupants are transported.

**3.3.10.4 Medical Transportation Area.** That portion of the triage area where injured persons are staged for transportation to medical facilities under the direct supervision of a medical transportation officer.

**3.3.10.5 Staging Area.** A prearranged, strategically placed area, where support response personnel, vehicles, and other equipment can be held in an organized state of readiness for use during an emergency.

**3.3.11 Biological Agents.** Biological materials that are capable of causing an acute disease or long-term damage to the human body. [1999:3.3]

**3.3.12 Command Post (CP).** The location at the scene of an emergency where the incident commander is located and where command, coordination, control, and communications are centralized.

### **3.3.13 Emergency Exercise.**

**3.3.13.1 Aircraft Emergency Exercise.** Testing of the emergency plan and review of the results in order to improve the effectiveness of the plan.

**3.3.13.2 Specialty Emergency Exercise.** One or more specialty agencies fully involved in an exercise to test or give the agency practice in its specialty.

**3.3.14 Emergency Medical Technician (EMT).** A person trained to administer emergency medical treatment more advanced than basic first aid.

**3.3.15 Emergency Operations Center.** A fixed, designated area to be used in supporting and coordinating operations during emergencies.

**3.3.16 Grid Map.** A plan view of an area with a system of squares (numbered and lettered) superimposed to provide a fixed reference to any point in the area.

**3.3.17 Incident Command System (ICS).** The combination of facilities, equipment, personnel, procedures, and communications operating within a common organizational structure with responsibility for the management of assigned resources

to effectively accomplish stated objectives pertaining to an incident (as described in the document Incident Command System) or training exercise. [1670:1.3]

**3.3.18 Incident Commander (IC).** The person in overall command at an emergency.

**3.3.19 Investigation.** A systematic inquiry or examination. [1033:2.1]

**3.3.20 Mobile Emergency Hospital (MEH).** A specialized, self-contained vehicle that can provide a clinical environment that enables a physician to provide definitive treatment for serious injuries at the accident scene.

**3.3.21 Moulage.** A reproduction of a skin lesion, tumor, wound, or other pathological state. Applied for realism to simulate injuries in emergency exercises.

**3.3.22 Mutual Aid.** Reciprocal assistance by emergency services under a prearranged plan. [402:3.3]

**3.3.23 Paramedic.** A medical technician who has received extensive training in advanced life support and emergency medicine. These personnel are usually permitted to administer intravenous fluids and other drugs that can arrest a life-threatening physiological condition.

### **3.3.24 Perimeter.**

**3.3.24.1 Inner Perimeter.** That area which is secured to allow effective command, communication, and coordination control and to allow for safe operations to deal with an emergency, including the immediate ingress and egress needs of emergency response personnel and vehicles.

**3.3.24.2 Outer Perimeter.** That area outside of the inner perimeter that is secured for immediate-support operational requirements, free of unauthorized or uncontrolled interference.

**3.3.25 Rendezvous Point.** A prearranged reference point, that is, road junction, crossroad, or other specified place, where personnel/vehicles responding to an emergency situation initially proceed to receive directions to staging areas or the accident/incident site or both.

• **3.3.26 Stabilization.** The medical measures used to restore basic physiologic equilibrium to a patient, to facilitate future definitive care, in order to ensure survival.

**3.3.27 Triage.** The sorting of casualties at an emergency according to the nature and severity of their injuries.

**3.3.28 Triage Tag.** A tag used in the classification of casualties according to the nature and severity of their injuries.

## **Chapter 4 Elements of Emergency Planning**

### **4.1 General.** (See Annex C.)

**4.1.1** It is the function of the airport operator to develop a plan and procedures for all perceived emergencies applicable to the airport's characteristics and operation. The Plan should describe the coordination of the actions to be taken in an emergency occurring at an airport or in its vicinity. It should be built around an incident command system compatible with provider agencies.

**4.1.2** "During the emergency" considerations depend on the exact nature or location of the incident or both. The location

should dictate the agency responsible for management of the emergency. As the nature of the incident changes from emergency operations to the investigative phase, the appropriate investigative agency should assume command and responsibility for the incident scene. All agencies responding to the incident should know, in advance, their respective roles and responsibilities and whom they report to and who reports to them.

**4.1.3** “Post-emergency” considerations also should be given considerable attention. Transition of authority and other legal factors should be discussed and preplanned. Consideration should be given to the restoration of protective services in order to permit continuation of normal airport/aircraft operations and public protection that were disrupted by the emergency. Due to specialized training and equipment, ARFF units should be made available for response as expeditiously as possible.

**4.1.4** The recommendations contained in this document are based on the requirement that rescue of aircraft occupants and other related accident victims is the primary operational objective. Effective operations require a great deal of preplanning and regular exercises that provide an opportunity for realistic training of personnel from all agencies that will be involved in the incident.

**4.1.5** It is crucial that response agencies consider local weather conditions and nighttime operations while developing details of the Plan. For example, low temperatures can freeze medical solutions or tubing during protracted extrication operations. Severe weather conditions also can negatively affect fire fighting foam solution. Precautions should be taken, where necessary, to mitigate weather induced physical problems such as hypothermia and dehydration. Such considerations should apply to emergency personnel, as well as victims of the accident.

#### **4.1.6 Amendment of the Plan.**

**4.1.6.1** The airport operator should maintain the master records of the Plan and transmit to each participating agency amendments, additions, and revisions as appropriate.

**4.1.6.2** The scope of the Plan should include command, communication, and coordination functions for executing the Plan. The Plan should be constructed using a modular and severable format in order to facilitate revisions of specific elements without having to rewrite the entire Plan. The Plan should be reviewed on an annual basis by all participants. The review should include a comprehensive analysis of lessons learned from training sessions, incidents, geographical and physical changes, legal and technical changes, and other factors that can influence the adequacy of the Plan.

**4.1.7 Training Costs.** The costs of a major training exercise can be a considerable factor for even the smallest of airports. Budgetary planning for training costs should include salaries for personnel; consumables such as fuel, extinguishing agent, medical supplies, legal advice; and other necessary items, such as food for all participants.

#### **4.2 Types of Emergencies and Emergency Alerts.** (See Annex D.)

**4.2.1** Many different types of emergencies can strike a community. However, when creating an airport/community emergency plan, the focus should be on aircraft-related incidents. Preparation including risk assessment for other types of emer-

gencies should be addressed in the pre-emergency planning documents built around the special nature of those incidents.

**4.2.2** Most aircraft accidents occur within the airport operational area. However, experience has shown that the most devastating aircraft accidents have been those that occur off-airport, involving structures. It is therefore necessary to design a plan that provides for the needs of both.

**4.3 Essential Elements of the Plan.** The following should be considered as essential elements of an airport/community emergency plan:

- (1) Establishment of formal instruments/agreements/joint powers, and so forth, to initiate development and implementation of the Plan
- (2) Detailed planning for 24-hour response, communications, logistics, and so forth
- (3) Agreement for incident command and control systems and procedures (all agencies involved within the emergency plan should be aware of each other's defined duties)
- (4) Funding for practice
- (5) Regular and “as needed” Plan updates
- (6) Public relations efforts that bring popular and political support to maintaining readiness

## **Chapter 5 Agencies Involved**

### **5.1 Agencies.**

**5.1.1** The Plan should have an up-to-date list of all agencies involved. In addition to agency identification, the list should include current telephone numbers, e-mail addresses, and names of primary contact persons. This list should be reviewed, revised as necessary, and distributed to all agencies on a regular basis.

**5.1.2** The first step in a viable airport emergency plan is to have the cooperation and participation of all concerned airport/community authorities and agencies. Those that should be involved are as follows:

- (1) Air traffic control services
- (2) Rescue and fire fighting services (departments)
- (3) Police/security services
- (4) Airport operator
- (5) Emergency medical services, including ambulance services, hospital coordination center
- (6) Hospitals
- (7) Aircraft operators
- (8) Government services
- (9) Communications services
- (10) Airport tenants
- (11) Transportation authorities (land, sea, and air)
- (12) Rescue coordination center
- (13) Civil defense
- (14) Mutual aid agencies
- (15) Harbor patrol and/or coast guard
- (16) Military
- (17) Clergy
- (18) Public information office/news media
- (19) Mental health agencies
- (20) Customs
- (21) Public utilities
- (22) Postal authorities
- (23) Veterinary service

- (24) Coroner
- (25) Volunteer organizations (for example, International Red Cross)
- (26) Civil engineering contractors

**5.2\* Air Traffic Control Services.** For emergencies involving aircraft, the airport traffic control provider is required to contact the rescue and fire fighting service and provide information on the type of emergency, such as the type of aircraft, number of persons on board, fuel quantity, and location of the accident, if known. After the initial call, mutual aid agencies should be provided the airport grid map reference, rendezvous point, and, where necessary, the airport entrances to be used. Alternately, this function can be assigned by the Plan, either in whole or in part, to another organization or unit. The Plan also can specify that air traffic control services is responsible for initiating the notification of local fire departments and other appropriate agencies in accordance with procedures established in the Plan. The Plan can assign this function to another agency, such as the local fire department dispatching center, but it is very important that this extremely crucial function be well-documented and understood by all concerned. It will be the responsibility of the traffic control provider to restrict airport operations on the depletion of fire cover and/or if the runways are obstructed. This will be communicated by a "Notice to Airmen" (NOTAM).

### 5.3 Rescue and Fire Fighting Services (Departments).

**5.3.1\*** The primary responsibility of airport rescue and fire fighting personnel is to save lives. Property endangered by aircraft incidents and accidents occurring on or near the airport should be preserved as far as practical. To achieve this objective, fire control normally is defined as "securing" the area to prevent any reignitions. There can be aircraft accidents, however, where fire does not occur or where the fire is rapidly extinguished. In every case each action taken is aimed at providing the most immediate attention possible to survivors of the accident with special emphasis on the initial care and timely transportation of the immediate care (Priority I) victims to the appropriate trauma center.

**5.3.2** Rescue and fire fighting personnel should receive emergency medical training that meets the minimum standards of their state and local jurisdictions. The stabilization of seriously injured victims can depend entirely upon these first-arriving personnel. Coordination with other responding personnel having advanced medical expertise (paramedics and medical doctors) should be addressed in the Plan.

**5.3.3** The fire fighting officer in command should be identified by a standard distinctive uniform. In addition, the Plan should provide for a highly visible vest or other apparel with reflective lettering, front and back, that reads "INCIDENT COMMANDER."

**5.3.4** Only fire fighting and rescue personnel wearing approved fire fighting protective clothing and equipment should be allowed in close proximity to an aircraft accident site [300 ft (100 m) from any point on the aircraft or any fuel spillage is usually considered a safe distance].

**5.3.5** As part of the interagency planning process, health and safety risks associated with an aircraft accident/incident should be communicated to other agencies that could become involved. The incident commander of the ARFF response should ensure that other agencies working within the immediate crash site are aware of the potential hazards, and

the appropriate personnel protective clothing/equipment that could be required.

### 5.4 Police/Security Services.

**5.4.1** In an airport emergency, it should be expected that the first police or security officer to arrive at the scene will initiate site security procedures and request reinforcement as needed. It should be expected that these responsibilities will be spelled out in the Plan, identifying the responsible law enforcement agency for the accident site and providing for a smooth transition of command should responsibility for site security shift from one agency to another.

**5.4.2\*** Congestion-free ingress and egress roads should be established immediately for emergency vehicles. The security services, police force, or other appropriate local authorities should be expected to ensure that only persons with specific tasks are allowed at the scene of the accident, and they also should be expected to route the normal traffic away from or around the accident site.

**5.4.3** The Plan should provide for the prevention of unauthorized access to the accident site and for preserving the site undisturbed for investigation purposes.

**5.4.4** A mutual aid program should be instituted between all potentially involved security agencies, for example, airport, city, local, and governmental security forces; mail inspectors; and, where appropriate, military police and customs officials.

**5.4.5** A method of easy identification of responding emergency personnel should be implemented at security check points to ensure that appropriate emergency personnel have immediate access to the accident site. "Emergency Access" identification can be preissued by the airport operator to emergency personnel for use during an emergency.

**5.4.6** In many cases it is not possible or practicable for vehicles of mutual aid fire departments, ambulances, and so forth, to proceed directly to the accident/incident site. It should be essential that the emergency plan include procedures for meeting at a designated rendezvous point or points. A rendezvous point also can be used as a staging area where responding units can be held until needed at the accident site. Suitable accommodation should be provided at the rendezvous point(s) for the rendezvous point officer to facilitate the briefing of incoming officers in charge of supporting services. Adequate telephone and radio provisions should be available. Those controlling the rendezvous point should also consider the suitability of vehicles to adverse terrain conditions at the accident site in order to prevent obstruction of the access route by disabled vehicles. Staging of vehicles can prevent traffic jams and confusion at the accident scene.

**5.4.7** To easily identify and distinguish the security/police officer in command, a distinct colored vest with reflective lettering displayed front and back should be utilized.

### 5.5 Airport Operator.

**5.5.1** The airport operator is responsible for establishing, promulgating, and implementing the Plan and designating a person to take charge of the overall operation at the command post. (Incident command should rest with the agency having jurisdiction.) The Plan should call for the airport operator to ensure that the information on names, e-mail addresses, and telephone numbers of offices or people involved in an airport emergency is kept up-to-date and distributed to all concerned. The Plan also should set up necessary meetings

of the airport emergency plan coordinating committee, composed of key personnel from participating agencies for critique of the Plan, after it has been tested or implemented. The airport operator should be responsible for closing the airport, or part of it, and ensuring that aircraft operations are resumed only when circumstances permit aircraft to operate safely without interfering with rescue activities.

**5.5.1.1** The removal of disabled aircraft should be part of the plan. It would be incumbent on the airport operator to ensure that airlines using the airport have made adequate plans and arrangements either separately or conjointly to ensure prompt arrival of recovery equipment and qualified personnel.

**5.5.2** To easily identify and distinguish the airport operations officer, a distinctive colored vest with reflective lettering displayed front and back should be utilized.

## **5.6 On-Scene Medical Services.**

**5.6.1** The purpose of medical services is to provide triage, medical care, and transportation to accident victims. The optimal goal should be transport of the immediate (Priority I) victim to the appropriate trauma center.

**5.6.2** It is essential that the medical aspects of the Plan be integrated with other local community emergency plans and agreements.

**5.6.3** A medical coordinator should be assigned to assume command of the emergency medical operations at the accident site. In some cases, it might be necessary to appoint an interim medical coordinator, who will be relieved when the designated medical coordinator arrives. An interim medical coordinator should be assigned by the airport rescue and fire fighting command personnel.

**5.6.4** Medical and ambulance services can be an integral part of the airport services, particularly whenever an ambulance service is a part of the airport's rescue and fire fighting service. Whenever medical and ambulance services are not available at the airport, prearrangement with local, private, public, or military medical and ambulance services should be made. The plan should ensure the dispatch of a satisfactory assignment of personnel, equipment, and medical supplies. To ensure a rapid response, the plan can include arrangements for land, sea, and airborne transportation of medical services to the scene, and the subsequent transportation of persons requiring immediate medical care. Prearrangements are necessary to ensure the availability of doctors and other medical personnel for all airport emergencies.

**5.6.5** The Plan should designate a medical transportation officer whose responsibilities would include all of the following:

- (1) Alerting hospitals and medical personnel to the emergency
- (2) Directing transportation of casualties to hospitals properly suited to the particular injury
- (3) Accounting for casualties by recording route of transportation, hospital transported to, and casualty's name and extent of injuries
- (4) Advising hospitals when casualties are en route
- (5) Maintaining contact with hospitals, medical transportation, the senior medical officer, on-scene command post, and the command post

## **5.7 Hospitals.**

**5.7.1** Participating hospitals should have contingency emergency plans for blood donations and to provide for mobiliza-

tion of necessary medical trauma teams to the accident site in the shortest possible time. Availability of qualified personnel and adequate facilities at the hospitals are vital. Therefore, it is important to establish in advance an accurate list of surrounding hospitals classified according to their effective receiving capacity and specialized features, such as neurosurgical ability or burn treatment.

**5.7.2** The distance from the airport and the ability to receive helicopters should be considered. Reliable two-way communication between the incident command post and these entities is important. The alert of an aircraft accident should be made to a single medical authority/agency, which then alerts all appropriate facilities according to a local medical communications network.

**5.7.3** It is essential that hospitals continually communicate through a central control point to facilitate distribution of critically injured patients. Information regarding availability of a specific trauma center, operating room, and ward space should be collected at a central control point, designated in the Plan, and disseminated to the medical transportation officer at the scene.

## **5.8 Aircraft Operators. (See Annex E.)**

**5.8.1\*** The aircraft operator/company of an aircraft involved in an accident should be expected to provide full details of aircraft-related information, such as the number of persons on board, fuel, and cargo information. This information is vital to the incident commander and can influence the tactics and strategies used to deal with the emergency.

**5.8.2** Aircraft operators also should be responsible for providing first arrangements for any uninjured survivors who need to continue their journey or require accommodation or other assistance. They also might be responsible for contacting deceased passengers' next of kin. Clergy, police, international relief agencies (Red Cross, etc.), and mental health agencies will normally assist in the accomplishment of this task.

**5.8.3** The proper disposition of all cargo, mail, and baggage aboard an aircraft involved in an accident is the responsibility of the aircraft operator. Permission to remove these items from the aircraft can be granted by the incident commander after the emergency has been abated and the requirements of the accident investigators have been met.

**5.8.4** The airport emergency plan should designate an agreed resource to respond to emergencies that involve a chartered, private, military, or other nontenant aircraft operator.

**5.9 Government Agencies.** In order to avoid conflict and confusion between participants, the airport emergency plan should clearly define the obligation, controls, and limitations placed on the airport operator by government agencies. Post-accident investigation, unlawful seizure of aircraft, bomb threats, and bombings can fall into jurisdictions other than that of the airport operator. The environmental or rivers protection agency or both should be aware of the potential hazards from an aircraft accident to ensure that measures are in place to prevent contamination through fuel spillage, fire fighting media, airborne particulate, and oxidization of metals. The Plan should reflect procedures for informing these agencies of an accident.

**5.10 Communication Services.** Arrangements should be made to provide all airport agencies involved in an emergency

with two-way communication capabilities. The Plan also should provide an adequate communication network to be maintained with the off-airport agencies responding to an emergency. The Plan should call for the command post and emergency operations center to have the capability of freely communicating with all participating agencies. Cellular telephones can be extremely effective. Amateur, military, and civil defense radio networks are worth considering as a back-up.

**5.11 Airport Tenants.** Airport tenants and their employees should be considered a prime source of readily available equipment and manpower who might have intimate knowledge of the airport and aircraft. They can be invaluable, especially if their backgrounds include medical training, food preparation, or transportation. It is important that these persons be deployed under supervision and assigned specific functions to avoid duplication of efforts and the possibility of disrupting other emergency operations.

#### **5.12 Transportation Authorities (Land, Sea, Air).**

**5.12.1** In an emergency, vehicles are needed to carry out rescue operations, transport personnel, and haul supplies and debris. Responsibility for the control of vehicles to be used during an emergency should be assigned to a designated transportation officer. The emergency plan should include an inventory and assignment of transportation and mechanical equipment held at the airport, such as transportation vehicles, trucks, diggers, cranes, and cars, with contingency plans for staff to be called to operate the equipment.

**5.12.2** In airport emergencies, provision should be made for an easily identifiable guide vehicle(s), equipped with two-way radio communication, to lead groups of vehicles from the rendezvous point(s) or staging area to the accident site to avoid interference with aircraft operations.

**5.12.3** To easily identify and distinguish the transportation incident commander, a distinct colored vest with reflective lettering displayed front and back should be utilized.

**5.12.4** Suitable rescue equipment and services should be available for use at an airport where the area to be covered by the appropriate services includes water or swampy areas or other difficult terrain that cannot be fully served by conventional wheeled vehicles. This is particularly important where a significant portion of approach and departure operations takes place over these areas.

**5.13 Rescue Coordination Center.** Rescue coordination centers can play a significant role in an aircraft accident occurring in the vicinity of an airport if the site of the accident is not known or if rescue facilities in addition to those available at or near the airport are required to be brought into action. Rescue coordination centers should have means of immediate communication with all rescue units within their areas of responsibility, including units able to provide aircraft, helicopters, and special rescue teams and, where appropriate, with coastal radio stations capable of alerting and communicating with surface vessels. Assistance from these units can be essential in responding to an accident in the vicinity of the airport. It is therefore suggested that the potential role of the rescue coordination center be specifically highlighted in the proposed airport emergency plan document in a separate paragraph.

**5.14 Civil Defense.** The airport emergency plan should be integrated with the local community civil defense emergency plan and with local search and rescue teams. Consideration

should be given to the role the airport may have as a result of coordination with civil defense officials and in support of any civil defense emergency plan requirements.

#### **5.15 Mutual Aid Agencies.**

**5.15.1\*** Airport emergencies can be of such magnitude that local rescue and fire fighting, security, law enforcement, and medical services are inadequate to handle the situation. It is therefore strongly recommended that written mutual aid agreements be initiated to ensure the prompt and orderly response of these agencies.

**5.15.2** All mutual aid agreements should be reviewed or revised annually. Telephone and personnel contacts should be reviewed and updated monthly.

**5.16 Harbor Patrol and Coast Guard.** Harbor Patrol and Coast Guard services are vital to airports adjacent to large bodies of water. Coordination of such services should be included in the Plan where applicable. Communication requirements to obtain the immediate response of such services (and the ability to communicate during the emergency) should be an essential ingredient of the Plan. If the area where the boats are to be operated is subject to freezing, vehicles suitable for operation on ice (i.e., hovercraft, swamp boats, etc.) should be available. (*See Annex F*)

**5.17 Military.** Where a military installation is located on or in the vicinity of an airport, a mutual aid agreement should be initiated to integrate personnel with command, communication, and coordination functions of the emergency plan.

**5.18 Clergy.** The Plan should include advance agreements with clergy of all faiths to provide comfort to casualties and relatives.

**5.19 Public Information Officer.** A public information officer should be designated. This officer should coordinate and release factual information to the news media and also should coordinate public information statements between all parties involved. It is recommended that the television and radio news media be requested to withhold the release of accident information to allow sufficient time for adequate security to be established. Past history has shown that, as knowledge of the accident spreads, onlookers flock to the site and interfere with emergency vehicles' access to the incident.

**5.20 Mental Health Agencies.** The emergency plan should include the local mental health agencies. Therapeutic treatment as well as follow-up procedures for dealing with the possible long-term effects of the emergency should be available for survivors, relatives, eyewitnesses, and emergency scene personnel.

**5.21 Customs.** The Plan should include agreed procedures required by the customs authority for the examination of baggage and freight to ensure that dutiable goods and contraband is not being brought into the country illegally.

**5.22 Public Utilities.** An airport has a heavy reliance on the supply of public utilities; the Plan should include agreed procedures in the event of a potential emergency, which affects the supply of gas, electricity, water, and communications.

**5.23 Post Office.** Postal services include the transportation of mail by air; the Plan should include procedures for the retrieval of official post, which might be carried on aircraft that have been involved in an accident.

**5.24 Veterinary Service.** Procedures should be in place within the Plan to ensure that in the event of an aircraft accident, veterinary services respond immediately.

**5.25 Coroner.** The Plan should reflect agreed upon procedures for temporary mortuary arrangements, which should be located remote from public view, large enough for its intended use, with electricity, running water, and suitable screening. Fire department facilities or any facility used by responding emergency personnel should not be used for this purpose.

**5.26 Volunteer Organizations.** Within the airport envelope many volunteer organizations exist that support the local community and that at a time of crisis have contingency plans in place to render assistance. It is important that when compiling a plan these organizations are approached as to facilities or support they may be able to offer to complement the plan. (e.g., International Red Cross, etc.).

**5.27 Additional Support Services.** Where necessary, airport operators should ensure that the plan reflects additional support by the use of external civil engineering contractors.

## Chapter 6 Functions of Each Agency for an Aircraft Accident On-Airport

**6.1\* General.** The airport/community emergency plan should be implemented immediately upon an aircraft accident occurring on-airport. Responding agencies should comply with Section 6.2 through 6.10.

### 6.2 Action by Air Traffic Control (ATC) Services.

**6.2.1** Air traffic control services should initiate emergency response by using the alarm communications system. (See Figure 6.2.1.)

**6.2.2\*** Information on the location of the accident, giving grid-map reference or identifying terrain or landmark features should be immediately provided by air traffic control services. Initial details should include the type of aircraft. Subsequent information should include details such as the occupants, fuel on board, aircraft operator (if known), and the presence or absence of any dangerous goods, including the type, quantity, and location.

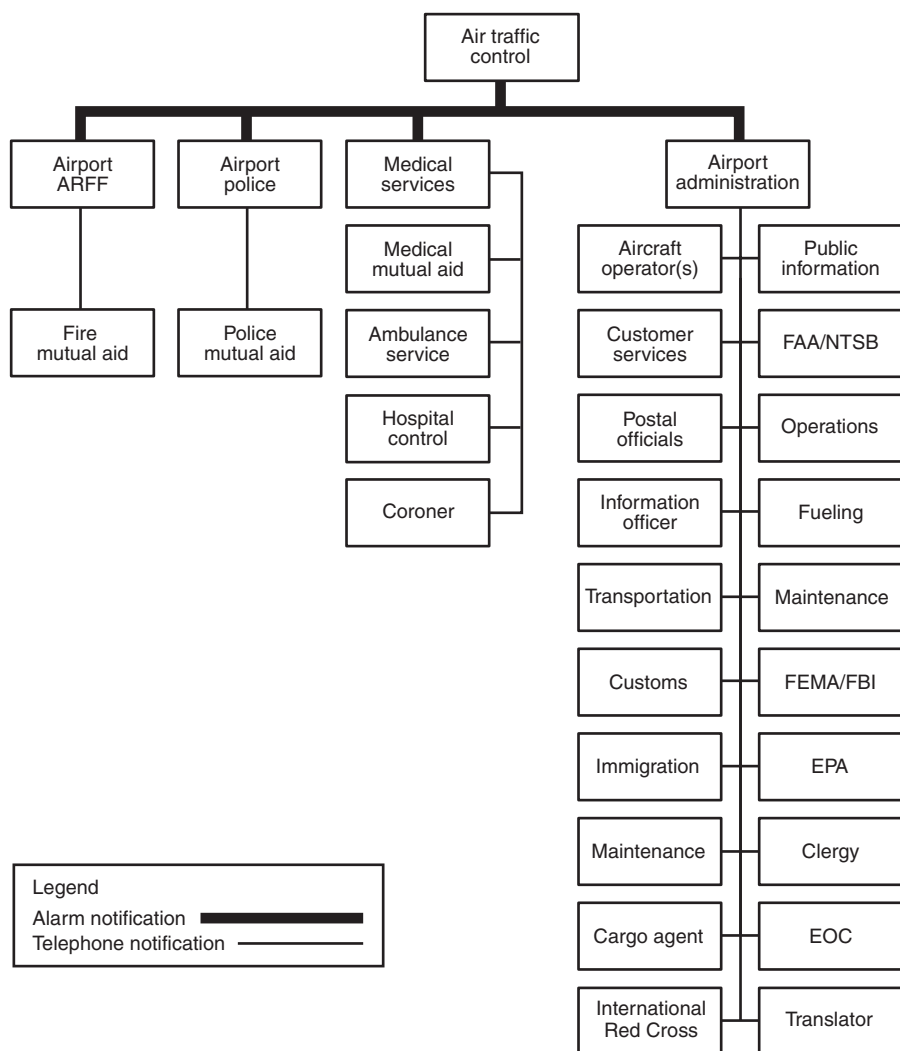


FIGURE 6.2.1 Sample Notification Chart — Aircraft Accident On-Airport.

**6.2.3** Air traffic control should initially restrict aircraft operations to the degree necessary to prevent expansion of the accident scenario and facilitate emergency response.

**6.2.4** An appropriate Notice to Airmen (NOTAM) should be initiated by the airport, for example, "Airport rescue and fire fighting protection reduced/unavailable until (insert time) or until further notice due to aircraft accident." (Note that this notice may be automatic if so delineated in the plan.)

**6.2.5** Air traffic control should confirm that the actions above were completed, utilizing pre-established checklists, indicating notification time(s) and name of person(s) completing action(s).

**6.2.6** Air traffic control should immediately establish restricted airspace over the immediate vicinity of the accident to facilitate evacuation of casualties by helicopter and preclude interference with emergency operations by nonemergency flights.

### **6.3 Action by Rescue and Fire Fighting (RFF) Services.**

**6.3.1** An alarm for an aircraft accident on the airport will normally be received from the air traffic control services. When, however, an alarm is received from any other source, or an accident is observed, or there is reason to consider that one is imminent, the airport rescue and fire fighting services should initiate immediate action. The air traffic control services should be informed by the responding fire fighting services as to the nature of the alarm, its location, and the response initiated.

**6.3.2** Airport rescue and fire fighting services should carry out as follows:

- (1) Proceed via established access routes to the incident as indicated by air traffic control services
- (2) Advise mutual aid fire departments while en route of the following:
  - (a) Rendezvous point
  - (b) Staging area(s)
  - (c) Manpower and equipment required for support if known
  - (d) Any other pertinent information
- (3) Immediately establish an on-scene command post

**6.3.3** Command authority at any accident site should be pre-determined according to the jurisdictional responsibilities of the agencies involved and as designated in the airport/community emergency plan.

**6.3.4** Prior agreement should be reached between the on-airport rescue and fire fighting service and the off-airport mutual aid fire departments as to who is best equipped to fight fires in aircraft hangars or other airport structures. Additionally, there should be prior agreement as to which agency will be in command when an accident involves an aircraft or an airport structure or both.

### **6.4 Action by Police/Security Services.**

**6.4.1** The first security/police officer to arrive should coordinate with the incident commander and, to the extent possible, immediately establish free traffic lanes on ingress and egress roads for emergency vehicles, initiate security responsibility, and request reinforcements as needed. Traffic flow and site security should be the primary responsibility of police and security personnel. They should notify the appropriate communications center of the location of the accident and available

means of access and egress. After consultation with the incident commander, they should initiate traffic control measures in order to aid responding emergency vehicles. They should notify the airport security communications center or the incident commander (where appropriate) of the location of the accident, access, ingress, and egress roads available, and where responding security personnel should make initial response and recommendations for setting up roadblocks away from the accident site to aid responding emergency vehicles. Responding police vehicles should not proceed directly to the accident site, but set up appropriate roadblocks at least two to three blocks away, as directed by supervisory authority to prevent road congestion.

**6.4.2** Security personnel and police should handle traffic in the vicinity of the accident site, admit only authorized emergency personnel to the scene, keep unauthorized persons from the accident site, and be responsible for preservation of the accident scene.

**6.4.3** All unnecessary traffic should be routed away from and around the accident site.

**6.4.4** The emergency site should be cordoned off as soon as possible to exclude intruders, media, sightseers, onlookers, and souvenir hunters. Appropriate markings should be prominently displayed to advise all persons of possible hazards that can cause serious injury should they encroach on the area.

**6.4.5** Communications between all security check points and the command post or emergency operations center or both should be established as soon as possible.

**6.4.6** Identifying arm bands, site passes, I.D. tags, or other indication of empowerment should be issued by the authority having jurisdiction and monitored by the security services.

**6.4.7** Special security provisions should be instituted for the protection of the flight crew, flight data recorders and cockpit voice recorders, any official post involved, and any dangerous goods that could be present.

### **6.5 Action by Airport Operator.**

**6.5.1** The airport operator representative should respond to the accident site and, as needed, set up an easily identifiable mobile command post. The mobile command post should be adequately staffed by senior representatives able to make decisions involving the following types of operations:

- (1) Airport
- (2) Security
- (3) Medical
- (4) Aircraft
- (5) Aircraft recovery
- (6) Aircraft fueling

**6.5.2** The airport operator should commence pre-established checklist procedures that verify the following:

- (1) The airport emergency operations center has been activated.
- (2) Mutual aid police procedures have been initiated and secondary notification calls have been made.
- (3) Medical and ambulance services have been alerted and their arrivals verified at the designated rendezvous point or staging area.
- (4) Mutual aid fire departments have been notified and escort has been provided for their access to the accident site.

- (5) The affected aircraft operator has been notified and information obtained on any dangerous goods or hazardous materials on board the aircraft, for example, explosive substances, flammable gases and liquids, combustible solids, oxidizing substances, poisonous substances, radioactive materials, or corrosives, total number of occupants (passengers, crew non-revenue generating passengers, infants).
- (6) Liaison has been established with air traffic control services concerning the closure of airport areas, designation of emergency response corridors, and issuing of voice advisories and Notices to Airmen (NOTAM) advising of status of airport rescue and fire fighting protection.
- (7) Government aircraft accident investigation authorities, such as the National Transportation Safety Board (NTSB), have been notified (if military aircraft is involved the appropriate military organization should be notified).
- (8) The meteorological department has been notified to make a special weather observation.
- (9) Arrangements have been made for the affected runway to be surveyed immediately by the appropriate personnel to identify the location of crash debris and to ensure that the debris be secured pending release by investigating agencies.
- (10) Airspace reservation coordination offices (Air Traffic Flow Control Office), if any, have been advised of airport capabilities.
- (11) Medical Examiner's/Coroner's Office has been notified to assist with fatalities if necessary.
- (12) Temporary morgue facilities have been identified and designated.

**6.5.3** In conjunction with mutual aid police, the airport operator should carry out the following:

- (1) Designate rendezvous points and staging areas for the inner and outer perimeters
- (2) Assign security personnel at the staging area or rendezvous point or both to escort vehicles so as to ensure the orderly flow of emergency personnel to the accident site, particularly the provision of escort for ambulances responding to the rendezvous point and from the staging area
- (3) Assign parking areas for escort vehicles and ambulances, giving consideration to the need for rapid deployment when dispatched
- (4) Prophylactic (preventative) medical treatment for all personnel engaged in response, investigation, and recovery
- (5) Protective clothing for those involved in investigation and recovery

**6.5.4** The airport operator also should, to the extent possible, arrange to have available the following services as could be required:

- (1) Portable emergency shelter for use by other than medical services
- (2) Lavatories
- (3) Drinking water
- (4) Ropes, barriers, and so forth
- (5) Food service
- (6) Mobile or portable lighting
- (7) Portable heating system
- (8) Cones, stakes, flags, and signs
- (9) Machinery, heavy equipment, and extraction tools

- (10) Communications equipment such as megaphone, portable telephone, and so forth
- (11) Fuel removal equipment

**6.5.5** The airport operator should provide the initial briefing for their airport public information officer. They should then coordinate, where appropriate, with the public information officer of the aircraft operator involved to provide the following:

- (1) Media releases for the various media officers from the agencies involved
- (2) Briefings and statements that will be released to the media

**6.5.6** Upon concurrence of the chief fire officer, police/security chief, and the medical coordinator, the airport operator's incident commander should notify all participating mutual aid organizations of termination of the airport emergency. Note that this might not terminate all actions and responsibilities of participating agencies.

**6.5.7** The aircraft operator representative should make arrangements for bus transportation from the accident site to the designated traumatized holding area. Transportation of the walking wounded from the scene should be permitted only after consultation with the medical coordinator. Passengers should be under medical supervision while awaiting transportation, during transport, and at the receiving processing site.

**6.6 Action by Medical Services.** The medical coordinator should coordinate with the medical transportation officer and medical services the following:

- (1) Verify that mutual aid medical and ambulance services have been alerted and verify their subsequent arrival at the rendezvous point or staging area and that a medical communication network is established
- (2) Organize the necessary action for triage and treatment of the casualties and their eventual evacuation by appropriate means of transportation
- (3) Provide control and dispatch of the casualties to the appropriate hospitals by land, sea, or air
- (4) Maintain an accurate list of the casualties including names, as available, and their destination for treatment
- (5) Coordinate, with the airport operator and the aircraft operator concerned, the transportation of the apparently uninjured to the designated holding area
- (6) Arrange for the restocking of the medical supplies, if necessary
- (7) Provide medical analysis of the walking wounded or traumatized

**6.7 Action by Hospitals.** Hospitals listed in the emergency plan should be prepared to do the following:

- (1) Provide medical care to the casualties when they arrive
- (2) Provide doctors and trauma teams in accordance with the airport/community emergency plan
- (3) Ensure that adequate doctors and nurses, blood, operating rooms, intensive care, and surgical teams are available for emergency disaster situations, including aircraft accidents

**6.8 Action by Aircraft Operators.**

**6.8.1** An aircraft operator representative should report to the command post to coordinate the aircraft operator activities with the incident commander.

**6.8.2** The aircraft operator representative should provide information regarding occupants and dangerous goods or hazardous materials on the aircraft. These include explosive substances, flammable liquids or gases, combustible solids, oxidizing substances, poisonous substances, radioactive materials, and corrosives. Information of this nature should be relayed as soon as possible to the chief fire officer and the medical coordinator.

**6.8.3** The aircraft operator staff should proceed to the designated uninjured holding area. The aircraft operator representative at the uninjured holding area should appoint a receptionist, registrars, and welfare coordinators from staff who have been previously trained in these functions.

**6.8.4** The aircraft operator representative who is in command of the uninjured holding area should oversee the overall operations by making arrangements for commissary items, clothing, telephone facilities, and additional medical services if required.

**6.8.5** The receptionist should meet the transportation vehicles as they arrive from the scene of the accident and direct the passengers to the registrars' tables where they will be processed. The receptionist also should explain where toilet facilities, telephones, and other amenities are located. However, migration outside the holding area should be prevented until each person transported to the holding area is identified and processed according to the Plan.

**6.8.6** The registrar should record the passenger's name on the manifest and determine what reservation requirements are desired, that is, hotel accommodation, air transportation, or other modes of transportation, and so forth, and any persons to be notified of the passenger's physical or mental condition and potential plans. The registrar then should make out an identification tag or sticker and place it on the passenger. When their registration is completed, the registrars then should direct passengers to the welfare coordinators.

**6.8.7** Welfare coordinators and mental health specialists trained in stress management should proceed with the following:

- (1) Give support and comfort to relatives and friends of persons on board the aircraft involved
- (2) Register relatives and friends waiting at the airport for information about persons on board
- (3) Provide care, comfort, and assistance to the walking injured and uninjured survivors and responding personnel (if required)
- (4) Assist in the provision and serving of refreshments to waiting relatives and friends

The welfare plan should provide for a suitable location to carry out the functions as well as procedures for alerting and coordinating welfare organizations.

**6.8.8** The aircraft operator should provide notification of the aircraft accident to the following:

- (1) Health and welfare agencies
- (2) Customs, where applicable
- (3) Immigration, where applicable
- (4) Post office
- (5) Environmental protection agencies, where applicable

**6.8.9** An aircraft operator official should arrange for the initial notification of relatives and friends.

**6.8.10** News releases by aircraft operators should be prepared in conjunction with the airport public information officer and liaison officers from other agencies involved in the accident.

**6.8.11** The aircraft operator is responsible for the removal of the wrecked or disabled aircraft as soon as authorized by the Accident Investigation Board or its designee. For aircraft removal technique, see *International Civil Aviation Organization Airport Services Manual*, Part 5, "Removal of Disabled Aircraft." Also see *International Air Transport Association — Guidelines for Airport Operators and Airport Authorities on Procedures for Removal of Disabled Aircraft*.

**6.9 Action by Government Agencies.** The following government agencies can be required to take appropriate action as indicated in their emergency plan:

- (1) Accident Investigation Board
- (2) National Aviation Administration (e.g., FAA and CAA)
- (3) Health and welfare
- (4) Post office
- (5) Customs
- (6) Immigration
- (7) Agriculture
- (8) Public works

#### **6.10 Action by the Public Information Officer.**

**6.10.1** All media personnel should be directed to a designated news media staging area for news media personnel authorized to cover an airport emergency. Selection of staging areas should take into consideration media needs for photography and video transmission. At this area the following should be provided:

- (1) Latest briefing
- (2) Communications (telephones)
- (3) Transportation service to and from the scene of the emergency, where permissible and where it will not interfere with rescue, medical treatment of casualties, and the accident investigation

**6.10.2** Only members of the news media, freelance reporters, and photographers wearing a valid regular police working news media card should be admitted to the briefing area or permitted in the designated news media staging area or transported to the scene of the emergency.

**6.10.3** In general, the official authority for news releases concerning an aircraft emergency should be one of the following:

- (1) A public information officer designated by the airport operator
- (2) The representative of the aircraft operator involved
- (3) Both (1) and (2)
- (4) Upon assumption of jurisdiction, the lead investigative agency

**6.10.4** Under no circumstances should the news media or any other personnel not involved in life saving or fire fighting operations be permitted inside security lines until all rescue operations have been completed and the area has been declared safe by the chief fire officer. When establishing security lines, the interests of news coverage should be taken into account insofar as rescue operations permit.

#### **6.11 Organization Charts.**

**6.11.1** Organization charts should be prepared for each anticipated type of emergency situation, off-airport incident, on-airport incident, earthquake, or flood.