

CHAPTER 4

MANAGEMENT OF ACCIDENT RESPONSE

4-1 GENERAL

a. Command and control on-site at the scene of a nuclear weapon accident rests with the agency in charge of the facility or geographic area where the accident occurs. If the accident occurs outside these boundaries, the Service or agency having custody of the weapon at the time of the accident has command and control. If the accident occurs outside the 48 contiguous states, responsibility for directing the US response shall rest with the Unified Commander in Chief in whose area of responsibility the accident occurred. If the accident occurs outside the US or its territories, the Unified Commander will coordinate with the State Department, as appropriate. "On-site" is that area around a nuclear weapon accident under the operational control of the installation commander, facility manager, Department of Defense, On-Scene Commander (OSC), or Department of Energy Team Leader (at a DoE accident), or host government official. For accidents/ incidents in the U. S., its territories or possessions, on-site includes any area established as a National Defense Area (NDA) or National Security Area (NSA). When overseas, this on-site secure area should be defined in the host nation agreement and will be referred in this document as a Security Area. This area, although not equivalent to the NDA or NSA, uses local authorities to restrict people from the immediate area of the accident for their protection and the safeguarding of weapon systems. "Off-site" is defined as that area beyond the boundaries of a DoD/ military installation or DoE facility, including the area beyond the boundary of a NDA, NSA or a Security Area, affected by a nuclear weapon accident/ incident.

b. Civil authorities/officials have primary responsibility for command and control off-site and will request Federal assistance and assets through the Federal Emergency Management Agency (FEMA). The Senior FEMA official (SFO) coordinates requests for Federal assistance to ensure that assistance is provided. If an accident /incident involving nuclear weapons results in a Presidential declaration of a major disaster or emergency, Public Law 93-288, reference (g), states the President will appoint a Federal Coordinating Office

(FCO) to coordinate the overall Federal response. The Secretary of the Army will become the DoD Executive Agent for providing additional military support (off-site) to the FCO as required, subject to the military missions and priorities of DoD.

c. The responsibility for security and command and control at, accidents/ incidents in a country outside the U.S. rests with the host country government.

d. Command and control for the Initial Response Force (IRF) and Service Response Force (SRF) at a nuclear weapon accident involves directing DoD resources and coordinating DoD actions with civilian authorities/ officials providing response to any domestic emergency.

4-2 PURPOSE AND SCOPE

This chapter provides guidance on interagency relationships at the accident site suggested response force organization and actions required during an accident response. The discussions in this chapter are applicable to the IRF and the SRF On-Scene Commanders (OSC) and their staffs.

4-3 SPECIFIC REQUIREMENTS

The basic requirements for command and control of a nuclear weapon accident response are similar for the IRF and SRF OSC'S though they vary in scope and magnitude. Specific actions taken by the respective response forces will vary because of differences in manning, resources, capabilities, and training between the IRF and SRF. As a minimum, the IRF and SRF OSC's are required to:

- a. Provide life saving/humanitarian- assistance at the accident site.
- b. Establish command and control.
- c. Safeguard classified material.

d. Protect the public and mitigate public health and safety hazards.

e. Seek the assistance and cooperation of civilian authorities/ officials and advise them of possible hazards.

f. Initiate public affairs procedures and establish direct communications with the Office of the Assistant Secretary of Defense (Public Affairs) (**OASD(PA)**).

g. Establish a NDA. When overseas, request that local authorities establish a Security Area to provide a cordon for security of classified material, and protection of the public.

h. Establish an operations area, a base camp, and a contamination control area.

4-4 RESPONSE ORGANIZATIONS “

Military and civilian response organizations which may be present at the scene of a nuclear weapon accident are:

a. Initial Response Force (**IRF**). A response force belonging to the nearest DoD activity/unit, which will take emergency response actions to establish command and control on-site pending arrival of the SRF.

(1) The IRF OSC will generally be an O-5 or O-6, as established by Service policy. An illustration of a typical response force is at Figure 4-1. He will usually remain the OSC until relieved by the SRF OSC.

(2) The IRF performs the following functions: rescue operations; fire fighting; accident site security, public affairs activities establish command, control, and communications. The IRF initiates EOD procedures; determines if hazardous materials and/or radioactive contamination are present, and if so, minimizes its spread; and establishes procedures to control the exposure of personnel to contamination.

b. Service Response Force (**SRF**). The SRF consists of a military and DoD civilian staff. The response force may be augmented by DoE scientific and technical advisors, and by specialized teams from other Services, FEMA personnel and/ or host country government officials/ representatives as required. An example of the SRF functional organization and interagency relationships is at Figure 4-2.

(1) **OSC**. The SRF OSC will be a flag/general rank officer appointed by the responsible Service/ **Unified**

Command. A Deputy OSC should be in grade of O-6 and shall manage the information flow between the site, headquarter's operation centers, and DoS. The OSC is responsible for all SRF actions at the accident site including:

(a) Safeguarding national security materials and information. Establishing a NDA or NSA. Overseas, requesting that local authorities establish a Security Area to provide a disaster cordon and security for classified material.

(b) Establishing command and control. Ensuring that special teams arriving at the accident scene are integrated into the response force with a clear chain of command and that their capabilities are known by all cleared personnel on the SRF. Communications must be established with the NMCC and other levels of authority, and frequency assignments allocated to all response teams.

(c) Establishing priorities for response/ recovery efforts.

(d) Assessing hazards involving public health and safety.

(e) Seeking the assistance and cooperation of civilian authorities/ officials and advising them of the possible hazards.

(f) Notifying civilian authorities/officials of the precautions and other measures required for the protection of public health and safety and potential impact off-site.

(g) Establishing a public affairs program for coordinating, reviewing, and approving public information and news releases. Establishing direct communications with the (**OASD(PA)**) or American Embassy/ **USCINC** as appropriate.

(h) Integrating civilian authorities/ officials/ representatives into the response force. As a minimum, coordination must be completed between civilian authorities/ officials. A liaison officer will be provided by the SFO to the OSC. Overseas, a liaison officer will be provided by the U.S. Embassy to the OSC.

(i) Assessing protective action measures and re-entry recommendations developed by the State.

(j) Coordinating with the SFO and civilian officials to develop a site restoration plan.

(k) Coordinating with the accident investigation board or team.

(1) Obtaining assets required to support response/ recovery operations.

(m) Establishing the Joint Hazard Evaluation Center (**JHEC**) and initiating an on-site hazard and radiation health, weapons recovery, safety and environmental monitoring

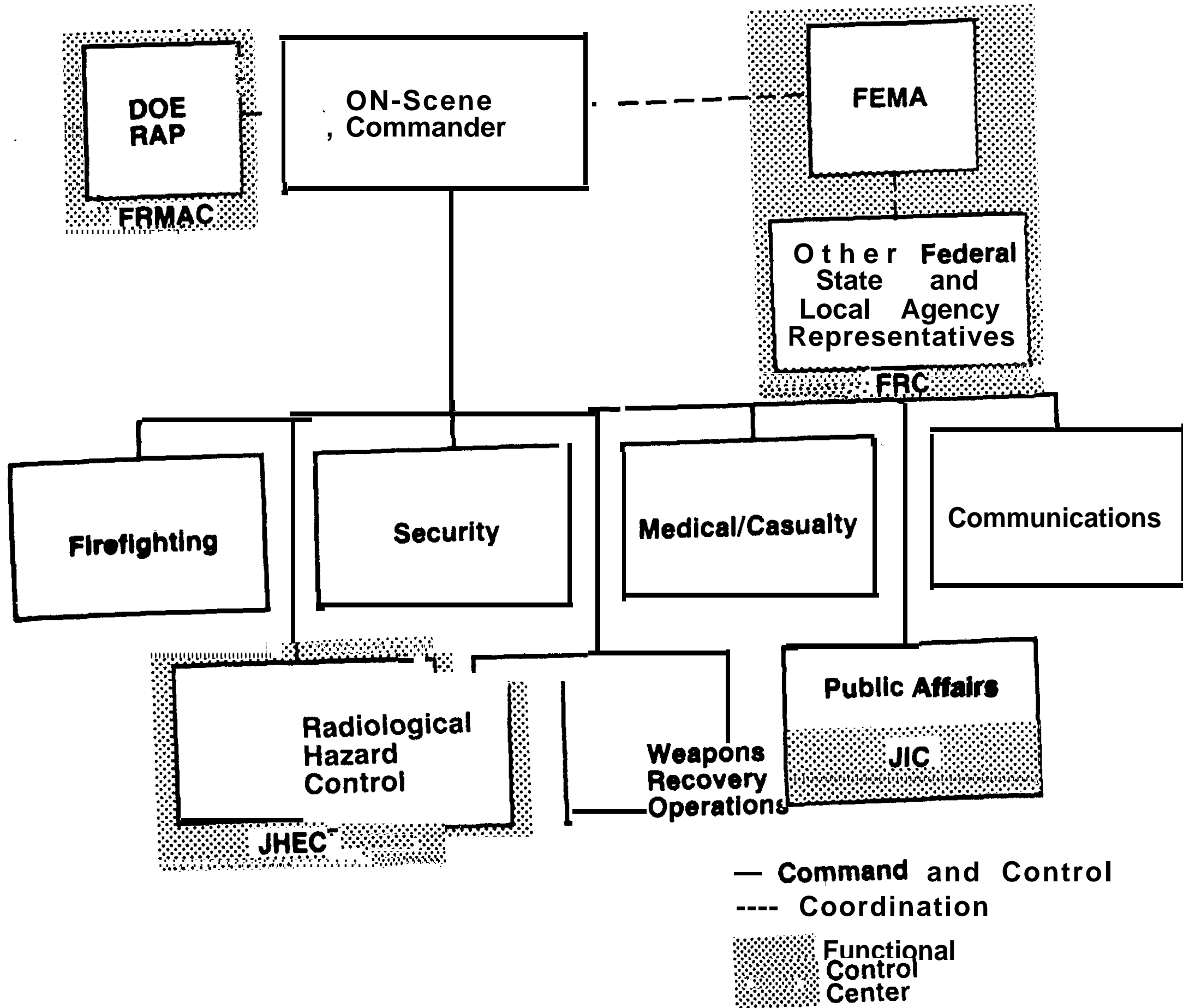


Figure 4-1. Initial Response Force (Example).

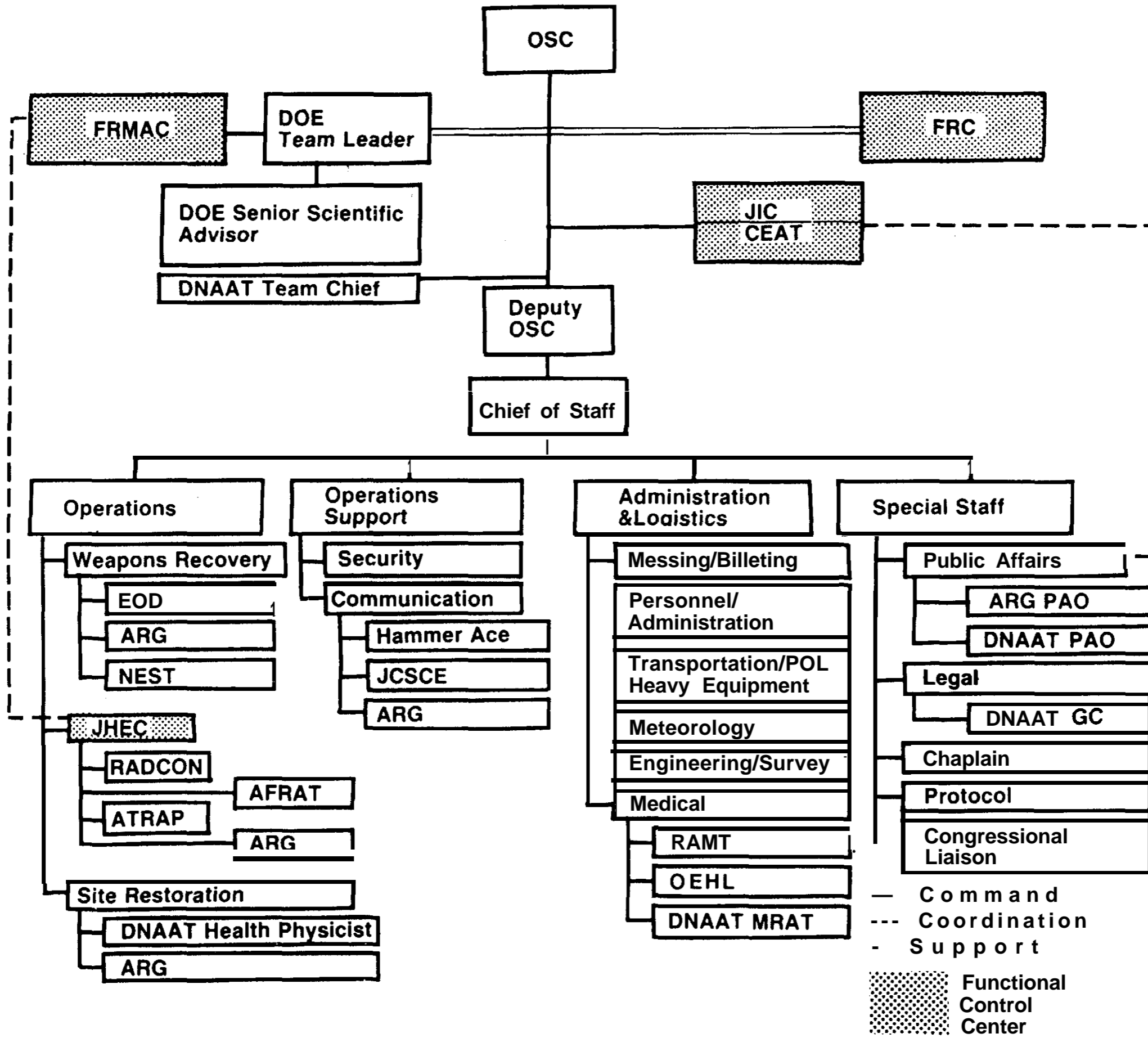


Figure 4-2. Service Response Force Functions and Interagency

program. Off-site coordination will be with the Federal Radiological Monitoring and Assessment Center (**FRMAC**) and civilian authority response elements, as appropriate.

(n) Assisting the involved country government official/ representative in ensuring the health and safety of individuals within the country. Response force officials and the Embassy representative will assist in implementing measures that satisfy host government requirements.

(o) Providing required medical, logistics, and administrative support, including that needed by DoE response organizations.

(2) SRF Staff Members. Members are responsible to the OSC and include expertise in hazardous materials and radiological safety, security, medical, EOD, public affairs, and legal areas. Representatives from DoE, **JHEC**, and the site restoration planning group should serve as staff members to improve response force effectiveness. More than one person may be required to keep the OSC apprised of all on-going hazardous materials and radiological related activities. Protocol officers should facilitate visits to the accident scene by senior civil and military officials.

c. DoE Accident Response Group (**ARG**). The composition of the ARG, including specialized equipment, will be selected to meet the requirements of the accident or incident. Initially, the ARG will deploy a Team Leader, Senior Scientific Advisor, and specialists to assess the situation and determine what additional DoE assets are required.

(1) Deployment of additional equipment and personnel will be coordinated through the DoD Joint Nuclear Accident Coordinating Center (**JNACC**) and the DoD OSC.

(2) The ARG is responsible to the OSC for on-site activities at a DoD nuclear weapon accident. In the event of an accident or significant incident affecting off-site areas, the DoE Team Leader has specific responsibilities and activities implemented through the Federal Radiological Emergency Response Plan (**FRERP**), reference (c).

d. Federal Emergency Management Agency (**FEMA**). FEMA will establish a Federal Response Center (**FRC**) at a location selected in cooperation with State and local authorities. The FRC located near the accident scene will initially be manned by an Emergency Response Team (**ERT**) deployed by FEMA. The FRC and the DoD on-scene command post have similar functions and

representatives should be exchanged. The FRC will be concerned primarily with **nonradiological** off-site support to the state and local agencies. At FEMA's request, the ERT will include a General Services Administration (GSA) representative to assist the response force in obtaining local services and supplies.

e. Defense Nuclear Agency Accident Advisory Team (**DNAAT**).

(1) The DNAAT assists an OSC and his or her staff in the response operations following an accident. The advisory team is composed of personnel knowledgeable in nuclear accident response requirements, health physics, radiation medicine, public affairs, legal implications and site restoration. This team is available upon request and can deploy as soon as transportation becomes available. When deployed, the team is responsible to the OSC.

(2) Request for services or additional information about the DNAAT should be directed to the DoD **JNACC**.

f. Other Organizations

(1) Accident Investigation Boards. A Service accident investigation board, and, if appropriate, the National Transportation Safety Board (**NTSB**) will dispatch investigation teams to the accident site. Commensurate with personnel and public safety, the OSC should support the activities and administration/documentation requirements of these teams.

(2) The Services and the DoE maintain various teams with specialized training applicable to nuclear weapon accident response. When a team is deployed, it is responsible to the OSC, either directly, or through the DoE Team Leader. These teams are discussed in Chapter 20.

(3) State and Local Response. In an off-installation accident, State and local police, firefighters, and medical treatment personnel may be the first to respond. The **IRF** should coordinate directly with personnel from State and local agencies. State and local authorities establish control over any portion of the hazardous and radiological control area which extends beyond the NDA or NSA. Upon dissolution of the NDA or NSA, State and local authorities will become the controlling authority for any portion of the accident site not under Federal control (e.g., military installations). The SRF OSC should provide essential information to state and local **authorities**.

(4) For accidents/ incidents outside the U. S., its territories, and possessions:

(a) On and off-site authority for a nuclear weapon/ components accident/ incident rests with the host Government officials/ representatives. The American Embassy provides the diplomatic and political focal point to the host government.

(b) The host government officials/ representatives will ensure the health and safety of individuals within the country and will be assisted by the response force staff or the Embassy to implement measures to satisfy host government requirements.

4-5 CONCEPT OF OPERATIONS

The concept of operations presents actions of the IRF and SRF and assumes a “worst case” accident; that is, a nuclear weapon accident off a military installation with the spread of contamination. Also the concept presents difficult weapon recovery problems, public involvement, extensive logistic support requirements, the need for extensive deployed communications support, and complex site restoration problems.

a. Response Phases. Response can be divided into two phases.

(1) Initial Phase. Included in this phase are those immediate measures taken by the nearest DoE or DoD installation to provide a U.S. government presence, humanitarian support and assistance, and designation and deployment of a response force. Accidents **will** be expeditiously reported directly to the National Military Command Center (NMCC) and/or the Service operations center in accordance with JCS Pub 1-03.6. Upon receipt of accident notification, the appropriate IRF and SRF will be **identified and** tasked, and specialized teams alerted and prepared for immediate deployment. A simplified notification plan is illustrated in Chapter 1, Figure 1-1.

(2) Follow-on Phase. The SRF, during the **follow-on** phase, continues those actions initiated by the IRF, and commences long term actions to return the environment to an acceptable condition. Weapon(s) recovery and site restoration are the primary objectives of this phase.

b. Response Considerations. As the OSC assesses the accident, the following differences between a nuclear weapon accident and other accidents should be considered:

(1) Classified Material. In accidents involving nuclear weapons/components, classified materials must be located, recovered and protected.

(2) Contamination.

(a) Non-radiological hazardous materials may be released due to weapon system damage. The problem may consist of **various** hazardous materials, for example, solid or **liquid** missile propellants, oxidizers, or high explosives. A high explosive detonation could disperse hazardous materials several hundred meters around an accident site. **Aerosolized** hazardous materials could be released and dispersed downwind. The materials would remain in the area unless diffused by aeration, neutralization, or removal. The toxic materials may present a serious hazard to the general public and require immediate and effective reaction by public affairs personnel to allay public apprehension.

(b) The radiological hazards released by the burning or high explosive detonation of a nuclear weapon or weapon components may consist of isotopes of plutonium, uranium, and possibly **tritium**. Wind velocity and other meteorological conditions, the height of the cloud or plume containing the radioactive material, and **terrain**, all influence the extent to which contamination may be spread. After the contaminant has fallen to the ground, it may be resuspended by wind or mechanical action. The long term carcinogenic effects of inhaled plutonium represents the greatest hazard to the general public; actions to assess specific risk must be promptly initiated. Public perception of the radiological hazard may be disproportionately larger than the actual hazard.

(3) Public Affairs. An immediate, but temporary, threat to the safety of the nearby public may exist from toxic or explosive hazards associated with the accident. However, the less immediate radiological hazard has historically been of greatest concern to civil authorities and the general public. Although DoD policy is to neither confirm nor deny the presence of **nuclear** weapons or components at a specific location, such confirmation **shall** be made either when required to protect public safety or to reduce or prevent widespread public alarm.. In locations outside the United States, its territories and possessions, the OSC must have the approval of the appropriate Commander-in-Chief (**CINC**) and host government, through the American Embassy, prior to exercising the exceptions (reference: DoD Directive 5230.16, Nuclear Accident and Incident Public Affairs Guidance). Early notification of actual accident associated hazards, and of what can and is being done to reduce the risk, is a key issue in allaying” public concern. Media interest and public scrutiny will be **intense**; the OSC and his staff must prepare to address those public concerns related to nuclear accidents as they assess the accident situation.

c. Response Force Actions. The initial actions of the response force upon arrival at the accident scene will be directed toward stabilizing the situation and defining the problem. The following paragraphs describe some of the actions required:

(1) Command Post (CP). The IRF should establish a CP to accommodate the arriving personnel and equipment of the SRF. This facility should serve as the focal point of command and control as the accident response expands. All accident response elements must report to the CP which will facilitate continuity of command and control during the transition from IRF to SRF.

(a) The CP may be located within the NDA or NSA. Access routes and prevailing winds will determine the direction and distance of the CP from the accident scene and contaminated area. The CP should be located so that normal wind shifts will not interfere with operations and require relocating the CP. Figure 4-3 provides a sample accident site organizational diagram. Consideration should be given to establishing the CP, the DoE ARG operations center, and the communications center in a restricted area to simplify the protection of classified information. The FRC and CP will exchange liaison representatives to coordinate off-site actions and concerns.

(b) Communications. Among the various agencies, frequency management is important. Communications at the accident site may be limited initially. When establishing initial communications from an off-base accident site, consideration should be given to using radio or telephone through the nearest military installation. Also, relay via local police communications channels may provide a viable initial communications channel. Until record communications are established, specific relay instructions should be included in telephonic communications, and consideration should be given to conference calls to keep all concerned commands informed. Situation reporting according to Service/ agency directives should be initiated as soon as possible. Effective communication within the response force, with higher authorities, and with Federal, State and local and /or involved country agencies responding to the accident is essential to command and control. The CP should be established by the IRF with adequate communications to maintain command and control between the accident site, SRF, and NMCC.

(2) Fire Suppression. Weapons and other materials involved in the accident pose a danger to firefighters.

If for any reason, the response force does not arrive on-scene soon after the accident, civilian firefighters should be advised of the possible presence of hazardous materials, including high explosives. All safety precautions should be taken including electromagnetic radiation (EMR) restrictions. Specific firefighting guidance is contained in Technical Publication TP 20-11, TM 39-20-11, Navy SWOP 20-11, Air Force TO 11N-20-11, references (k), (l), (m), and (n).

(3) Casualty Identification and Treatment. The rescue and treatment of casualties should receive high priority. Until proven otherwise, casualties should be considered as having been contaminated by radioactive material. For this reason, officials at hospitals and clinics to which casualties are evacuated should be notified of the possibility of radioactive contamination so that proper measures can be taken. Ensure of compliance with DoD notification procedures. As soon as the presence or absence of radioactive contamination is confirmed, these officials should be advised. Casualty handling procedures are described in Chapter 14.

(4) Assessment. The OSC determines the accident situation, status, and implications of the accident. Determination and reporting of whether contamination was released is of highest priority. The OSC assesses the extent of the hazard(s), accident response elements must report to the CP which will facilitate continuity of command and control during the transition from IRF to SRF.

(5) Air Sampling. Air sampling provides an effective means of determining airborne and downwind contamination at the accident scene. Within approximately 1 hour after the high explosive detonation or fire extinguishment, the OSC should have air sampler(s) placed downwind from the accident. Monitoring and decontamination, as appropriate, will be provided for personnel positioning air samplers.

(6) Identification of Public Health Hazards. Once an evaluation has been made, the effect of any hazards and the potential impact of the hazards to public health must be determined. If required, coordination should be made with civilian officials to inform the public of protective action measures to minimize undesirable effects on the public. This action is time sensitive and must be completed rapidly. Radiological hazards and possible actions to minimize hazards are discussed in Chapter 5. Hazardous materials which may be present are discussed in Chapter 9.

(7) Public Affairs. The OSC must establish or ensure direct communication with OASD/ PA. A Joint Information Center (JIC) must be established and public affairs measures implemented to ensure that timely, accurate and consistent information is available at the

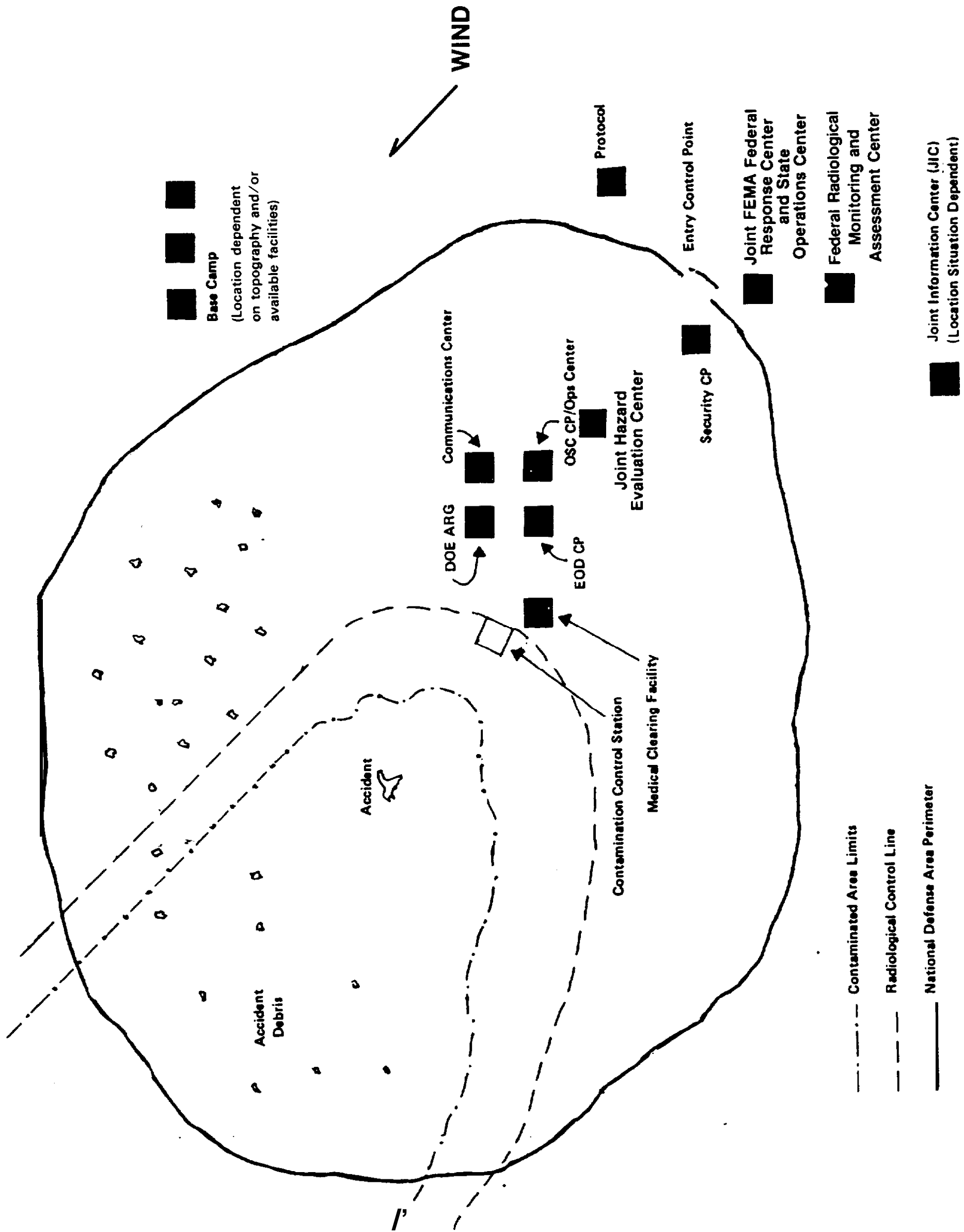


Figure 4-3. Sample Accident Site Organization.

accident scene. Since a great deal of information will be generated at the accident site and more than one organization will be collecting and analyzing data, all information must be coordinated within the JIC before release to the media or general public. Additionally, the public affairs officer must be informed of all information provided to civil authorities/ foreign government officials by the OSC or his designated representative. Public affairs actions are discussed in more detail in Chapter 16.

(8) Reconnaissance Operations.

(a) Confirmation of weapon location and status may not be possible until fires are extinguished, the wait time is observed, and the wreckage can be examined. Reconnaissance and Render Safe Procedures by EOD personnel should commence as soon as possible. Radiological considerations, protective measures requirements, and/ or re-entry recommendations on the initial entry are discussed in Chapter 5, and EOD entry procedures in Chapter 15. If contamination is present, actions to determine the extent of contamination should be initiated immediately. The initial reconnaissance should provide enough information to determine subsequent actions and priorities. The initial reconnaissance should provide or confirm the following:

1. Casualties (injured and deceased) not previously found, their number, location, and extent of injuries. Injured people will be moved to a safe area.
2. Weapons and components condition, location, and chance of. explosions.
3. Existence of radioactive contamination and levels of it.
4. Explosive hazards present.

(b) Other specialists or emergency personnel may be part of the initial reconnaissance team if the OSC considers them essential. The OSC will approve all entries into the exclusion area prior to the weapons being declared safe. As a safety precaution, the senior EOD person entering the accident site should be the initial reconnaissance team chief. The team chief should ensure that team members are briefed on emergency, safety, and other procedures before entering the accident site. If possible, still photography should be used to depict the accident site and area, document findings, and assist in developing the weapon recovery procedures. Positive measures should be taken to prevent electromagnetic (RF) energy from initiating explosive devices. Also, **unsecure** radio transmission and the use of classified information and data which may cause undue alarm

to outside listeners, should be avoided. Vehicles and equipment used in a contaminated area during reconnaissance may be left for future use, but must be checked for contamination before leaving the accident site. The radiological control area need not be established prior to reconnaissance team entry. However, the following should be considered by the OSC: establish an initial or cursory contamination control line at least 100 meters upwind of the initial contaminant or hazard, so that exiting initial reconnaissance team members can be monitored and decontaminated, if required. If contamination is present, determine the actual area which is contaminated so that appropriate actions can be taken, and civil authorities can be advised of the extent of the problem. Procedures for completing the initial perimeter survey of the contaminated area are discussed in Chapter 5. Atmospheric Release Advisory Capability (ARAC) projections discussed in Appendix 5C will provide a worst case estimate of the contaminated area to assist in planning the survey.

(9) Hazard Assessment.

(a) Radiation Monitoring/ Control. The first priority is to determine if contamination has been released. Upon making this determination, heavy demands will be **placed** upon available radiation detection instruments and personnel. A contamination control station should be established as soon as equipment and personnel are on-scene unless it has been determined that all weapons are intact and that there was no spread of contamination. The reconnaissance team need not wait for the contamination control station to be established before entering the **area**; however, the reconnaissance team and any civilian personnel in the contaminated, or potentially contaminated area, should be processed through the initial contamination control line or the contamination control station upon exit from the area. When contamination is present, immediate actions should be initiated to obtain information on the extent of contamination, establish radiological control lines, and notify medical treatment facilities which may have contaminated casualties or emergency response equipment. If resources are available, assistance in monitoring and decontaminating response forces should be offered. The amount of radiation monitoring equipment available to the response force may preclude simultaneous accomplishment of all actions, and the OSC must establish priorities based on the hazard to the general public and responding forces.

1. Prior to departing for the accident site, the response force, if not on the notification system, should .

provide its Service operations center with an appropriate TELEFAX phone number for delivery of ARAC projections of downwind radiation doses and contamination depositions. If a TELEFAX device is deployed to the accident site, the on-site phone number should be provided for direct data receipt. Specific accident data provided in Appendix 5C should be provided to ARAC directly, or through the Service operations center or JNACC.

2. Equipment and personnel limitations may preclude the response force from conducting detailed radiation surveys of the accident site. If contamination is present, available radiation monitoring equipment will be needed to:

a. Monitor and decontaminate response personnel/ vehicles, bystanders, nearby residents, and affected medical treatment facilities.

b. Perform an initial perimeter survey to determine the extent of contamination and position for establishing a contamination control area.

c. Operate the contamination control station.

d. Determine which, if any, security posts are in the contaminated area.

(b) Hazard Evaluation. Include an evaluation of all the hazardous materials present. ,

(10) Weapon Recovery Operations. Weapon recovery operations commence with reconnaissance and continue until the weapons and/ or components have been removed from the accident site. Locating and determining the status of the weapons and weapon components should receive a high priority. Until the location and status of the weapons can be determined, fragmentation **distances** should be considered when establishing the CP, NDA, NSA or Security Area and positioning security guards and other personnel. Render safe procedures (**RSP**) shall be conducted by EOD personnel. Until this action is taken by certified technicians, *no* personnel should be allowed into the area without the OSC'S approval. Specific EOD books (series 6) cover RSP operations and must be followed unless situations or conditions dictate a need for procedural deviations. Only emergency RSP actions should be performed to achieve site stabilization. If site stabilization has been achieved, continuation of RSP beyond emergency procedures should be suspended until the SRF and DoE **ARG** can arrive. Necessary weapon recovery procedures should then be developed jointly by EOD and ARG personnel and modified to assure maximum safety. Plans for packaging and shipping the damaged weapon(s) or their components will be an

integral part of these **procedures** and must be approved by the OSC prior to implementation.

(11) Security (Physical and Classified Material).

(a) A security perimeter should be established as soon as possible. Civilian response personnel will establish some form of control to keep nonessential personnel from interfering with the civilian response actions. Coordination with civilian law enforcement agencies should be conducted to ensure that adequate security is provided for the weapons until the response force arrives. Upon arrival of the response force, establishment of a NDA or NSA as discussed in Chapter 13, should be considered. In overseas areas, cooperation with local authorities allows establishment of a disaster cordon or a Security Area. This area, -although not equivalent to the NDA or NSA, utilizes local authorities to restrict personnel from the accident site for their protection and safeguarding weapon systems.

(b) Debriefings. The OSC is required to debrief all personnel with **access** to classified information. A comprehensive debriefing procedure should be established to gain all possible information from response force personnel who observed the accident and its aftermath, or who were in the accident area. Information gained from these debriefings may also assist in subsequent accident investigations and aid in planning for initial response actions.

(12) Protective Measures, **Re-Entry** Recommendations and Recovery Plan. The protective measures recommendations include procedures to protect personnel and resources in the hazard area. These actions include **notification**, protective measures, and controlled evacuation. The **re-entry** recommendations include procedures to remove or decontaminate materials and to return contaminated land/resources to an acceptable condition. The recommendations will be incorporated into the recovery **plan. Details** on protective measures and recovery are contained in Chapter 5.

(13) SRF Organization and Operation of the Accident Scene.

(a) The Operations Area. The operations area provides facilities for the OSC, command and control, response, recovery and restoration functions. This area will be located far enough from the accident site to ensure that the operations area is free of airborne contamination and, in the event of a wind change, the area is out of the contamination area. Figure 4-3 provides a sample accident site organizational diagram.

1. Space (an area approximately 100 meters x 150 meters) is furnished for the following functions

with the DoE, FEMA, and civilian authorities counterparts or equivalents as appropriate:

- a. OSC or DoE Team Leader.
- b. On-Scene CP.
- c. On-Scene Control Group (DoE ARG, and/ or the EOD team).
- d. JHEC

2. Other facilities which should be provided include:

- a. Communications area.
- b. Control group briefing area.
- c. Personnel and dosimeter control point.
- d. Radiation equipment repair area.
- e. Vehicle park.
- f. Medical control point.
- g. VIP/ visitor reception/briefing area.
- h. Messing.
- i. Rest area.
- j. Latrines.

(b) The base camp.

1. The base camp includes those logistical, administrative, billeting, and recreation functions to support recovery and restoration requirements. The nearest military installation should be used as the base camp if practicable. (The distance from the installation or terrain may require setup in the field.) The IRF unit commander or the nearest Installation Commander will set up and operate the base camp.

2. The base camp will be located farther from the accident than the operations area is located from the accident. Base camp facilities will include as a minimum:

- a. Personnel control point.
- b. JIC.
- c. Helipad
- d. Material receiving point.
- e. Clean clothing and bulk issue area.
- f. Mess] ration breakdown point.
- g. Billeting area.
- h. Shower and latrines.
- i. Administrative vehicle park area.
- j. Water and POL point.

(c) The Contamination Control Area. The Contamination Control Area (CCA) includes facilities for monitoring and decontaminating personnel,

resources and vehicles. The CCA incorporates the contamination control line (hot line), the contamination control station, personnel and equipment processing lines, and material/casualty transfer point. Consideration should be given for using building(s) or tent(s) for setup of the contamination control station and contamination control line. Multiple processing lines will be used to facilitate personnel processing. Contaminated materials and run-off will be contained and maintained for DoD disposition.

d. Service Response Force. Upon arrival at the accident site, the SRF continues actions initiated by the IRF, and initiates additional actions as required. **Specific** operations and actions of concern to the SRF are addressed below.

(1) Command, Control and Communications.

(a) Upon designation of the SRF, the commander establishes communications with the response force or the response force's base command center to obtain all **possible** information and coordinate SRF arrival and **expected** requirements. The DoE ARG composition, travel plans, and support requirements are obtained through the Service operations center or JNACC.

(b) Upon arrival at the accident site, the SRF commander should be briefed by the IRF OSC and meet with senior State and local emergency response authorities or host-country officials. The briefing should cover the status, functions, capabilities, and support requirements of all organizations, agencies, and specialized teams on-scene. An overflight of the accident site is recommended. Upon completion of turnover briefings, the SRF commander should assume the duties of OSC. All members of the response force should remain on-scene until the OSC determines that they are no longer required.

(c) As soon as all radiological data is known, preparation of a site recovery and restoration plan should be directed. FEMA, state, and local authorities and host government officials must be included in the planning and management of site restoration operations.

(d) Initial communications capabilities on-scene may be inadequate and should be improved as soon as possible.

(e) Congressional relations support must be provided as required.

(2) Public Affairs. The OSC should form a Community Emergency Action Team (CEAT) at some point after weapons recovery. The CEAT, coordinated

with FEMA or affected country representatives, would provide a direct interface with the public through a variety of means that could include town meetings.

(3) Hazard Evaluation.

(a) Radiation Monitoring/ Hazard Control. Radiological surveys are required to define the contamination area and identify any personnel exposed to contamination. The SRF is responsible for **all on-site** operations. DoE is responsible for coordinating **off-site** radiological monitoring and assessment activities of Federal agencies through the FRMAC in accordance with reference (c). Also, civil authorities may conduct monitoring and survey operations, and are responsible for control of off-site contaminated areas. To obtain a consolidated and consistent presentation of the best data available, on-site radiological monitoring and surveying must be coordinated by the **JHEC**, as described in Chapter 5. The radiological hazard to response personnel and the general public are a major concern of Federal, State, and local authorities and involve country government officials. All personnel must be kept informed. An effective health safety program should be initiated as soon as possible. State, DoE and host country government personnel are responsible for monitoring and treating the general **public**; however, military assistance can be offered and may be required until sufficient civilian equipment and personnel are available.

1. The DoE has an Aerial Measurement Survey (**AMS**) capability that can determine the extent and severity of contamination. This capability should be coordinated with the DoE team leader.

2. Ground **surveys** are required to confirm and refine the results of aerial surveys. Military assistance may be requested for ground surveys conducted outside the NDA, NSA or Security Area. If possible, initial ground surveys should be performed within **5** days of the accident because the contamination may migrate into surfaces and become more difficult to measure and remove. The USAF Air Transportable Radiac Package (ATRAP) team can field, calibrate, and repair all instruments to provide standardization.

(b) **Hazard** Assessment. The JHEC assesses the radiological and non-radiological hazards at a nuclear weapons accident/ incident. Also, for assessment and ultimate clean-up of radiological and non-radiological materials, a respiratory protection program should be established to ensure the health and safety of each person entering the controlled area.

(4) Weapon Recovery Operations. Accident conditions, the time required to locate the weapon(s), and the availability of qualified EOD personnel determine to what extent RSP have been accomplished prior to the SRF'S arrival. If the weapon(s) were in a stable environment and time permitted, RSP may have been held in abeyance until the SRF and DoE ARG arrive. The condition of the weapons should be assessed carefully prior **to** movement, even if RSP were performed by the response force. If all weapons and components have not been located when the SRF arrives, an extensive search may be required to find them.

(a) Weapons involved in an accident **may** have suffered substantial internal structural damage. When time permits, joint EOD and DoE inspection and assessment of weapon damage is desirable. The high priority given to weapon recovery operations does not inherently imply a need for rapid action. Safety is of utmost importance.

(b) A staging area should be established outside the contaminated area, but within the NDA, or host government Security Area, where weapons, components, and hazardous material can be packaged for shipment and stored until shipment may be made.

(c) A large number of personnel maybe required to conduct searches for weapons, weapon components, and explosive hazards. EOD personnel will supervise searches by available personnel on-site after providing appropriate briefings on search and safety procedures. Search procedures are discussed in Chapter **15**.

(5) Security. Site security is established by the response force and/ or civil **authorities**. Additional security is required for temporary weapon storage areas, the communications center, and other areas where classified material is kept or discussed. A badging and identification system should be implemented to facilitate passage of civilian and military response personnel and teams. When DoD resources, such as nuclear weapons, components, and other classified materials are removed from the accident site, justification for an NDA, or NSA with military control no longer exists, although a radiological hazard may still exist. Therefore, transition from military control should be coordinated with civil authorities.

(6) Claims. A nuclear weapon accident which results in contamination will generate a large number of claims by civilians. A claims processing facility should be established where people can gain access easily and is **mutually** agreeable to local officials. This location must be publicized.

(7) Site Restoration. A comprehensive and detailed plot of the contaminated area is essential for developing an accurate site restoration plan. Determination of clean-up levels will be a major issue and require the concurrence/ agreement of Federal and State authorities and host country government officials. Most of the site restoration work occurs after weapon or components removal. The SRF and the appropriate response force elements will assist civil authorities/ officials in performing site restoration work. Federal assistance to the state is coordinated by the SFO.

e. Logistic Support.

(1) Arrangements must be made for feeding, billeting, and for sanitation facilities at or near the accident site. The extent and specific requirements for these facilities depend primarily on location, environmental conditions, the number of personnel involved, and the expected duration of response operations. Until messing and billeting arrangements are established, all personnel should arrive with sufficient personal items to meet their needs for a period of 2 to 3 days without significant external support. In remote areas, extremely austere conditions should be anticipated with only limited support for 7 to 10 days.

(2) Weapon recovery operations, radiological and site restoration operations, and base camp requirements determine the type and amount of logistic support required. Historical data supports initial planning for 1000 people for up to 6 months.

f. Reporting and Documentation.

(I) **Reports are** prepared according to applicable Service directives. In addition to the reports of the OSC, the DoE has reporting requirements that should be considered when establishing response force communication capabilities. Parent organizations of specialized units and teams on-scene should be information addressees on situation reports. The OSC staff must recognize the need to provide information up the **chain-of-command** to keep the Washington policy organization informed. If adequate information is not provided, direct communication to the site will be established to obtain status. Information expected or requested by various agencies and officials may include:

(a) On-scene response forces by Service or Agency.

(b) Status of weapon recovery operations.

(c) Status and results of radiological surveys.

(d) Status and results of personnel monitoring, including number of people contaminated, and the radiation doses received.

(e) Names, SSN, and service/agency of **all** participants and visitors.

(2) Documentation of the accident response effort is essential. In addition to the documentation requirements of the accident investigation teams, all aspects of the accident response itself should be documented to permit improvement of response procedures. Even in accidents with little or no spread of contamination, complete documentation of radiological surveys is necessary because questions concerning the accident may arise many years later. Early in the accident response, a responsible official should be tasked with the primary responsibility for documenting events and recording data for historical records.

4-6 ACCIDENT RESPONSE PLAN DEVELOPMENT

Development of the accident response plan should begin during planning and training, and those portions of the plan which may be accident specific completed as soon as practicable. The plan should establish priorities for expected actions, provide procedures to be followed, and identify what coordination may be required with other accident response organizations. The accident response plan outlined in Appendix 4-A should not be confused with the site restoration plan developed in conjunction with civil authorities. The operations annex to the accident response plan should include:

a. A description of all expected operations and their interrelationships.

b. Identification of those activities responsible for expected operations and methods for coordinating elements.

c. Identification of required equipment and personnel for the operations center.

d. A description of the operations center organization, responsibilities, and procedures for the response operations.

e. Procedures for liaison with other agencies' operations centers (for example, FEMA and State).

APPENDIX 4-A

ACCIDENT RESPONSE PLAN

4-A-1 GENERAL

Every nuclear weapon accident has its own unique requirements, priorities, and problems. Also, the specific forces responding to each accident will vary, as will the type and amount of support required. Although numerous unpredictable variables are involved in a nuclear accident, the key to a successful response is planning. Many actions and procedures required in response to an accident are known and can be planned in advance. However, some planned actions and procedures may not be required, or may require modification to meet specific circumstances encountered. All response forces should draft as much of an accident response plan and its associated annexes as possible to be prepared when, and if, called upon.

4-A-2 PURPOSE AND SCOPE

This appendix provides basic guidelines and information which should be contained in an accident response plan. The response plan is intended to identify actions and procedures to be used at the accident scene commencing with the arrival of the response force and continuing through site restoration and the return home of the response forces. Possible site restoration procedures should be included as an annex to the SRF accident response plans to assist in preparation of site restoration plans in conjunction with civil authorities.

4-A-3 BASIC ACCIDENT RESPONSE PLAN

The basic accident response plan should state the situation, the mission, the method of execution, logistics arrangements, command relationships, and communications links.

a. **Situation.** The situation section should provide facts surrounding the accident and accident location, the status of response efforts at the time the plan was prepared, and other key planning factors which may have an impact on mission accomplishment. Information which might be contained in this section, if known, includes:

(1) The number, type, condition, and location of weapons and weapons components involved.

(2) The number of military and civilian personnel injured or killed and the disposition of all casualties.

(3) Radiological, explosive, and other hazards expected to be encountered.

(4) A summary of initial response actions and problems encountered, including chronology of significant events.

(5) The area of contamination, either projected or surveyed.

(6) Habitation and terrain features which may impact on operations or be affected significantly by the accident (for example, watersheds, nearby residences or population centers, major roads or thoroughfares, animal feed lots, or other farming enterprises).

(7) Public awareness of the presence of nuclear weapons, either by official announcement or **observation/** assumption.

(8) Status of arrangements with civilian authorities including establishment of National Defense Area (**NDA**), or Security Area if required.

(9) Civil and military response organizations or teams on scene, or requested, and their specific functions or capabilities.

b. **Mission.** This section contains a statement of the tasks and objectives to be accomplished by the accident response force. Normally there will be two major objectives: weapon(s) recovery and site restoration. Scattering of weapon parts by high explosive detonations, an unlocated weapon, and specific site restoration objectives are factors to be considered when stating the mission.

c. **Execution.** In the first subparagraph, give a summary of the tentative plan. In subsequent subparagraphs, assign specific tasks to each element of the response force based upon the element's functional capabilities. All organizations and teams, whether civilian or military, working in the **NDA** or Security Area or reporting to the OSC should be considered a part of the response force. The plan must delineate the reporting structure and responsibilities of the various response force elements. Moreover, guidance on the

interface with civilian authorities should be provided, and the plan should identify the response force role in joint activities, such as public safety, the JHEC, and the JIC. If desired, instructions applicable to two or more elements of the response force may be placed in a final subparagraph headed "Coordinating Instructions."

d. Logistics and Administration. This section contains a statement of the administrative and logistic arrangements applicable to the operation. Billeting, transportation, and airheads or other key supply points/routes to support the operation should be identified. Some requirements may not be known until engineers have determined what equipment is required to restore the site. If lengthy, or not ready for inclusion when the rest of the plan is completed, this section may be issued separately.

e. Command and Communications. **Command** relationships for the entire operation should be stated with expected changes of command indicated, and time or event at which such changes will occur. These changes may be in overall command, such as would occur when the SRF commander relieves the IRF commander. Additionally, changes should be stated within areas, such as civilian security forces relieving the military security forces following removal of weapons, weapon components, and other classified information from the accident site. Plans should ensure communications links between all organizations participating in the response force, with participants' parent organizations, and with organizations supporting the response force. Many organizations will arrive with some degree of organic communications which should be coordinated by this plan. **COMSEC** and **OPSEC** requirements should be identified.

4-A-4 ACCIDENT RESPONSE PLAN ANNEXES

Annexes to the accident response plan should provide in-depth guidance for operations in functional areas which are applicable to the response effort. They should include all actions which must be performed, including supplementary information indicating which actions require coordination with other elements to insure safety and/ or optimum use of assets. Areas in which annexes may be desired are:

a. Task Organization (if not included in basic plan). Integrating the actions of the multitude of units and organizations, both civilian and military, responding to a nuclear weapon accident is essential to an efficient

response operation. Organizational relationships will vary as the response operation progresses, most notably when the NDA or Security Area is dissolved. The Task Organization annex should identify all units and organizations responding to a nuclear weapon accident, their capabilities, and their relationships. At a minimum the following units and organizations should be considered:

- (1) Initial Response Force.
- (2) Service Response Force.
- (3) Department of Energy Accident Response Group.
- (4) Specialized Service Teams.
- (5) Federal Emergency Management Agency, including the Senior FEMA Official, i.e., FRC.
- (6) Defense Nuclear Agency Nuclear Weapon Accident Advisory Team.
- (7) Other Federal agencies responding to the accident.
- (8) Civilian/ Host country agencies responding to the accident.

b. Operations. This annex should identify those actions which will, or may be required, assign responsibilities for execution of identified actions, and establish procedures for coordinating and controlling all actions at the accident site, i.e., FRC liaison officer.

c. Hazard/Radiological Safety/ Health Physics. This annex should define the responsibilities of all agencies and elements with a hazard/radiological capability and establish a comprehensive hazard/radiation control program.

d. Communications. This annex should establish communications requirements and communications operating procedures.

e. Security. This annex should describe the responsibilities and procedures of the security forces.

f. Medical. This annex should describe responsibilities and special procedures used by the medical staff.

g. Weapons Operations. The Weapons Operations Annex should establish the procedures used for weapons recovery operations.

h. Public Affairs. The Public Affairs Annex should provide procedures for the coordination and release of public affairs information. This annex should include:

(1) Procedures to ensure that **all** press releases are coordinated properly with the OSC and other key staff members prior to release.

(2) Guidance on selecting the location for, representation to, and operation of the Joint Information Center.

(3) **Pre-coordinated** contingency releases for confirming the presence of nuclear weapons, and checklists prescribed by DoD Directive 5230.16, reference (b).

i. Logistic Support. The logistic Support Annex should provide procedures for establishing and maintaining support for response force operations. Chapter 17 provides **guidance** and recommended procedures for the development of this annex.

j. Legal. This annex should provide procedures for establishment of a claims center. Chapter 16 contains a discussion of legal problems which maybe encountered following a nuclear weapon accident.

k. Site Restoration. The Site Restoration Annex should identify possible methods to restore an accident site and contaminated area. A separate Site Restoration Plan will be developed in coordination with Federal, State, and local authorities and will probably require that an environmental assessment and engineering study be made. The Site Restoration Annex **should** provide information to guide the response force and be of use in drafting a site restoration strategy. Chapter 19 discusses site restoration issues which may assist in preparation of the Site Restoration-Annex.