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Federal Response Plan for Peacetime Nuclear Emergencies

(Interim Guidance)

ANNEX I

Guidelines for
Federal - State Relationships

April 1977

General Services Administration

Federal Preparedness Agency

FEDERAL RESPONSE PLAN

FOR

PEACETIME NUCLEAR EMERGENCIES

(INTERIM GUIDANCE)

ANNEX I--GUIDELINES FOR FEDERAL-STATE RELATIONSHIPS

APRIL 1977

GENERAL SERVICES ADMINISTRATION

FEDERAL PREPAREDNESS AGENCY

FOREWORD

Annex I, Guidelines for Federal-State Relationships, contains guidelines related to Federal-State relationships in the area of nuclear emergency preparedness planning and a conceptual example of a State nuclear emergency response plan.

Annex I is designed to assist Federal, State and local planners in developing nuclear emergency preparedness plans. As each State and locality has its own special and unique conditions and circumstances in relationship to peacetime nuclear emergencies, the degree of development of preparedness planning among States and localities will vary considerably. This document provides information to Federal, State and local officials on the Federal-State relationships involved in responding to the full spectrum of peacetime nuclear emergencies. It is not intended to prescribe a precise or rigid format, concept or technical approach for emergency plans but rather to make available, in an organized manner, the more significant guidelines and policies developed at the Federal level which should be considered or taken into account by State and local planners.

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CHAPTER I

INTRODUCTION

Although extensive precautions are taken by authorized producers and users of nuclear materials and by operators of nuclear facilities, minor peacetime nuclear emergencies occur and there is an ever-present latent hazard of more serious incidents. Prudence and common sense call for planning and preparedness measures to deal with such emergencies not because they are likely to occur but because of the potentially grave consequence to the community should one take place. The principal utility of such preparedness planning, as a practical measure, will be in the preventive activities and response actions that are developed for the less serious and more likely incidents which are to be found at the lower end of the spectrum of nuclear emergencies. Nevertheless, planning to cope with the more serious incident is also essential for the safety and well-being of the community.

For the purposes of devising systematic policy and planning for dealing with nuclear emergencies in peacetime, the Federal Preparedness Agency, General Services Administration (FPA), has developed the Federal Response Plan for Peacetime Nuclear Emergencies (FRPPNE). This plan provides guidance to Federal agencies to assure that a coherent and comprehensive approach to Federal response activities to nuclear emergencies is developed. Most importantly, it recognizes that, under our constitutional form of government, those emergencies, unless they occur in federally controlled areas or involve federally owned material or equipment, are in the first instance, a matter of concern to State and local authority. Finally it acknowledges that Federal-State cooperation is a fundamental ingredient in effective preparedness planning for nuclear emergencies, in assuring adequate operational responses to such emergencies, and in promoting compatibility between Federal and State plans.

A. GENERAL CONCEPTS

The guidelines for Federal-State relationships which are described herein, are designed to promote the most effective use of the total resources and capabilities available at all levels of government which can be brought to bear in coping with any type of peacetime nuclear emergency. They should help bring about a better understanding of Federal and State responsibilities, thus fostering harmonious and effective working relationships and the development of efficient operational capabilities at each appropriate level of government. The ultimate objective is a mutually acceptable set of relationships at both Federal and State levels that clearly outline the responsibilities of each level; and suitable cooperative arrangements between Federal and State instrumentalities that will optimize combined Federal-State preparedness and preventive measures as well as operational response capabilities relevant to nuclear emergencies.

It is fully recognized that decisions on the role and activities of State and local government agencies are the prerogatives of the individual States, and that they will reflect such considerations as differences in State administrative structure, vulnerability to and experience with disasters, and preferences that may be unrelated to the nuclear emergency problem. This document is premised on the assumption that State and local governments will accept their responsibilities to plan for and respond to peacetime nuclear emergencies. The guidelines set forth in the subsequent chapters are intended to provide a framework which will facilitate harnessing all available resources, Federal and State, in dealing with peacetime nuclear emergencies.

As a reflection of our Federal form of government and as a result of experience over recent decades in dealing with emergencies and disasters, certain general concepts or principles have evolved which provide a foundation for sound Federal-State relationships in dealing with nuclear emergencies. Some of the more important principles are the following:

(1) In the case of major emergencies or disasters posing grave threats to the public welfare and safety, both Federal and State governments have the responsibility and the authority to deal with the situation. For peacetime nuclear emergencies, it is expected that State and local governments will exercise their authority for responding to peacetime nuclear emergencies, and will have prepared plans and developed operational capabilities for the immediate actions needed to protect the public health and safety.

(2) As a central element of their response, State and local governments will commit their own available resources; Federal resources and capabilities are supplemental to those of the States and localities.

(3) The Federal government will be prepared to support State and local governments in coping with disasters and emergencies, including nuclear incidents, and will utilize Federal resources when requested by State authorities.

(4) Existing Federal-State cooperative mechanisms (e.g., State request for a Presidential disaster declaration) would be utilized to the maximum extent feasible in responding to all types of crises and emergencies.

(5) At all levels of government, emergency and disaster relief functions would be performed to the maximum extent feasible by agencies and individuals who perform similar or related functions under non-crisis conditions.

(6) Effective Federal-State collaboration in dealing with emergencies would be promoted by the designation of central agencies at both levels to serve as focal points for developing, reviewing and exercising Federal-State cooperative relationships in dealing with emergencies.

To apply the foregoing principles in a meaningful manner to the problem of nuclear emergencies occurring in peacetime, a common appreciation of the various types of possible nuclear emergencies should exist among officials at the Federal, State and local levels of government.

B. THE NATURE OF PEACETIME NUCLEAR EMERGENCIES

For the purposes of orderly planning and clarity of understanding, the FPA in the FRPPNE classifies peacetime nuclear emergencies in four categories but an emergency may rapidly move from one category to another. To achieve parallel and compatible planning, the adoption of the same classification system by State and local emergency preparedness planners would be highly advantageous. The categories which are based on the degree of seriousness of the incident, are designed to assist planners develop their operational response plans coping with nuclear incidents. It is not anticipated that separate plans would be developed for each category of nuclear emergency. Where planners have developed comprehensive emergency plans for their jurisdictions, they may wish to incorporate into those plans the special response actions that may be needed to deal with the nuclear feature of the emergency.

The categories set forth in the FRPPNE follow:

1. Category I Incidents

The distinguishing characteristics of incidents in this category are that they are limited in scope, create no widespread hazard to people and property, and can be managed under existing governmental or private mechanisms, using available resources and without recourse to extraordinary measures.

In many respects, however, incidents in this category are likely to differ widely as to specific details. They could result from mechanical failure, human error or conceivably human intent. They could be caused by natural phenomena such as earthquakes or hurricanes. The radioactive materials involved could be of any grade in commercial use (e.g., radium or cobalt for medical purposes, or plutonium in reactor cores), or they could be in the form of weapons grade nuclear materials or actual nuclear weapons. Such incidents could occur at fixed sites (reactors or storage locations) or during the transportation of nuclear materials by land, sea or air. They could result in small amounts of radioactive contamination. The consequences of these Category I incidents would be relatively less dangerous and significant than those resulting from the less likely to occur incidents falling into other categories.

Illustrations of Category I incidents are:

(1) Small leak at a nuclear power or research reactor due to mechanical failure.

(2) Fire at a nuclear weapon storage facility resulting in minor radiological contamination.

(3) Accident in a nuclear laboratory resulting in minor leaks.

(4) Damage to a nuclear weapon at a storage site with resultant minor release of radioactive material.

(5) Crash landing of an aircraft carrying a nuclear weapon, with no detonation but some minor contamination.

(6) Accident involving a vehicle transporting a nuclear weapon or nuclear materials resulting in minor radiological effects.

(7) Minor leak from a reactor used to power a naval surface ship or submarine.

(8) Minor radiological contamination resulting from an underground test.

(9) Minor radiological contamination resulting from the disposal of radioactive waste materials.

(10) Earthquake damage to a nuclear reactor resulting in minor radioactive leaks.

2. Category II Incidents

Incidents in Category II differ from those in Category I in three major respects. First, Category II incidents are confined to the threat of or potential for casualties and damage; once a nuclear detonation and/or major radiological contamination actually occur, the incident falls into Category III. Second, they have the potential for much more serious consequences to people and property than those in Category I. Third, Category II incidents require more than a routine, low-level response; specialized response actions and arrangements would be required to cope with such incidents. It is quite likely, for example, that a Governor would participate in directing and coordinating the appropriate response actions; Presidential involvement in certain types of incidents would be quite probable.

Illustrations of Category II incidents are:

(1) Theft of a nuclear weapon or other nuclear materials from a manufacturing or storage site, or while being transported; thus raising the presumption of threatened use of the weapon or material.

(2) Overtly threatened use by terrorists, other criminals or deranged persons of a nuclear weapon, nuclear device or nuclear materials for extortion or sabotage.

(3) Takeover of a nuclear reactor power plant by a terrorist group, with the threat of destruction of the reactor.

(4) Sabotage or major accident at a nuclear reactor power plant, with the potential for widespread radioactive contamination.

(5) Transportation accident involving radioactive materials, with the potential for widespread contamination.

(6) Accidental or unauthorized launch of a nuclear weapon by means of a missile or other delivery system, with the potential for impacting in the United States. (Note: This type of incident belongs conceptually in Category II only prior to impact of the weapon in the United States.)

3. Category III Incidents

These are situations in which, despite all preventive, protective and response efforts by appropriate authorities, an actual detonation of a nuclear weapon or device or widespread radioactive contamination, has occurred within the United States. While it appears highly improbable that such situations will develop in the early future, prudence and common sense dictate that governmental authorities should develop plans to respond to such contingencies.

A detonation could result from an accidental or unauthorized nuclear weapon launch. There could also be an accidental or intentional explosion of a stolen nuclear weapon or of a fabricated nuclear device. These detonations could range from a very low explosive yield to a very high one. While widespread radioactive contamination could come from such denotations, it could

also result from the sabotage of nuclear power plants or other fixed nuclear facilities, the explosion of a crude nuclear device made by terrorists, the dispersal of significant quantities of radioactive material by terrorists, or a serious accident involving the transportation of nuclear materials.

The detonation of a nuclear weapon or device could occur in an urban or built-up area causing severe property damage and/or a large number of casualties or it could occur in a remote area with little or no risk to the surrounding population.

Category III incidents may result in a large number of casualties and substantial damage requiring major, non-routine response actions. They differ from those in Category II in that the damage would be real, not merely threatened.

Category III incidents could grow out of Category II situations that have progressed to actual nuclear detonations, or to widespread radiological contamination from other sources. A Category I incident could also progress to a Category III level. Category III incidents would typically fit into one or more of these groupings:

(1) The detonation of a nuclear weapon or device resulting in casualties and/or property damage.

(2) Widespread contamination of people and property by radioactive materials.

(3) The detonation of a nuclear weapon or device and/or contamination which poses little or no threat to surrounding population and property.

4. Category IV Incidents

Category IV involves an environment of conditions which is essentially the result of the effects of Category III incidents that cannot be dealt with in a relatively short time frame; i.e., they require sustained, longer range recovery measures. Category IV conditions are differentiated from Category III incidents not so much because they involve different

kinds of hazards, but because they reflect a longer time dimension and they call for different kinds, scale and duration of response.

A Category III incident would in most instances require immediate actions in such areas as life-saving, search and rescue, emergency medical care and other damage-limiting measures. Many Category III incidents would become Category IV conditions soon after the initial emergency phase is over, since Category III incidents could in many cases involve severe casualties or damage or both. The after-effects would most likely require sustained rehabilitation and recovery efforts extending over a substantial period of time. A specific exception would be a Category III incident that involved the detonation of a nuclear weapon or device and/or contamination which posed little or no threat to surrounding population and property. An incident of this type would not usually lead to a Category IV condition.

Planning for this category of nuclear incident will require national resources and the involvement of Federal agencies. Pending the development of Federal plans and guidance in this area, State planners should assume that response actions and programs to meet recovery needs will be undertaken at the Federal level to supplement State and local efforts.

5. Nuclear Emergencies and Response Actions

In light of the above, the four categories of nuclear emergencies should be viewed as calling for different degrees of preparedness and response actions in the nuclear emergency plan or in a comprehensive emergency preparedness plan when one exists. These actions could involve several levels of government, different agencies and different operational activities.

Since under our constitutional government, the States and their political subdivisions have extensive powers for dealing with emergencies, which include peacetime nuclear emergencies, they would normally have the responsibility for any initial response actions in terms of community public health and public safety. Federal involvement, and consequently any Federal-State contacts and relationships, could be expected to become more significant as the emergency moves up the scale of seriousness and State and local response capabilities are exceeded. Thus in the event of a Category I incident, the governmental response is likely to be limited to providing support for local

authorities employing local resources and assets with the State providing any other necessary assistance. In some instances, however, certain unique technical assistance may be furnished by Federal agencies when requested by local or State authorities. A Category III incident involving a detonation of a nuclear device or widespread radioactivity would almost certainly find a heavy Federal government participation.

A table showing the impact and response measures associated with the four categories of nuclear emergencies is shown in Figure I-1.

CATEGORIES OF PEACETIME NUCLEAR EMERGENCIES	DESCRIPTION	IMPACT			RESPONSE ACTIONS
		NATURE	SCOPE	DEGREE	
I	A PNE LIMITED IN SCOPE AND MANAGEABLE UNDER EXISTING PEACETIME ARRANGEMENTS WITH THE LOCAL, STATE AND FEDERAL RESOURCES READILY AVAILABLE AND WITHOUT RECOURCE TO EXTRAORDINARY MEASURES	MINOR RADIOACTIVE CONTAMINATION IN A LIMITED AREA	HUMANS, LIVESTOCK, WATER, FOOD STUFFS AND OTHER MATERIALS USED BY MAN	NO WIDESPREAD HAZARD TO PEOPLE OR MATERIALS	DAMAGE LIMITING AND CORRECTIVE MEASURES TO DEAL WITH THE EFFECTS OF LIMITED RADIOACTIVE CONTAMINATION
II	A SITUATION WHICH, WITHOUT ADEQUATE RESPONSE MEASURES, HAS THE POTENTIAL TO PRODUCE A DETONATION AND/OR WIDESPREAD CONTAMINATION	THREAT OF OR POTENTIAL FOR SERIOUS TO CATASTROPHIC DETONATION AND/OR CONTAMINATION; SIGNIFICANT PSYCHOLOGICAL COMPONENT	POTENTIALLY SAME AS CAT I PLUS MAN-MADE STRUCTURES AND FACILITIES AND SOME NATURAL RESOURCES; ACTUALLY ONLY THREAT OF CASUALTIES AND DAMAGE	POTENTIAL FOR EXTENSIVE CASUALTIES AND DAMAGE; ACTUAL PRESSURE ON CRISIS MANAGEMENT CAPABILITIES AT VARIOUS LEVELS OF GOVERNMENT	CRISIS MANAGEMENT MEASURES DESIGNED TO PREVENT OR MITIGATE THE EFFECTS OF A THREATENED EXTENSIVE TO CATASTROPHIC NUCLEAR INCIDENT
III	A SITUATION WHERE, DESPITE ALL PREVENTION AND CONTROL EFFORTS, THE DETONATION OF A NUCLEAR DEVICE AND/OR WIDESPREAD CONTAMINATION HAVE OCCURRED	CASUALTIES, DAMAGE AND CONTAMINATION NOT LIMITED TO IMMEDIATE AREA OF PNE	HUMANS, LIVESTOCK, WATER, FOOD STUFFS, MAN-MADE STRUCTURES AND FACILITIES, SOME NATURAL RESOURCES AND OTHER MATERIALS USED BY MAN	UP TO EXTENSIVE FATALITIES AND INJURIES, AND WIDESPREAD DAMAGE AND CONTAMINATION	IMMEDIATE AND SHORT TERM ASSISTANCE AND RECOVERY MEASURES FOLLOWING A CATASTROPHIC NUCLEAR INDICENT
IV	THE POST-CATEGORY III ENVIRONMENT REQUIRING LONG RANGE RECOVERY AND REHABILITATION OF THE IMPACTED AREA(S)	SAME AS III BUT CONTINUING OVER LONGER TIME PERIOD	SAME AS III	SAME AS III BUT CONTINUING OVER LONGER TIME PERIOD	SUSTAINED, LONGER RANGE RECOVERY, REHABILITATION AND RECONSTRUCTION MEASURES FOLLOWING A CATASTROPHIC NUCLEAR INCIDENT

Figure 1-1. PNES: Impact and Response Action

CHAPTER II

PEACETIME NUCLEAR EMERGENCY PREPAREDNESS AT THE STATE LEVEL

A. GENERAL

There is considerable diversity among States in terms of characteristics or factors that affect a State's vulnerability to peacetime nuclear emergencies and the extent to which preparedness planning for such emergencies has been undertaken by State authorities.

In the event that a nuclear emergency occurs in peacetime, the seriousness of the incident with which a State may have to cope will be determined in substantial part by the magnitude and nature of the nuclear detonation, by the extent and intensity of radioactive contamination if dispersal occurred or by the potential of the incident to cause casualties and property destruction. But the seriousness of the impact will also be affected by a number of other considerations and factors that will have a bearing on the State's vulnerability to such emergencies.

B. LEGAL AUTHORITY

While the precise legal basis for a State to undertake emergency preparedness planning and response activities may vary from State to State, the authority to do so appears adequate for all essential activities. In most cases, states have adopted the basic premise that the basic responsibility for coping with emergencies or disasters, natural or man-made, rests with the local authorities of the political subdivision in which the incident occurs. Those public officials are responsible for dealing with the incident until such time as it is determined that their best efforts will not be adequate to cope with the situation. At that time, and depending upon the situation, the Governor and State authorities at the request of those officials, would assume responsibility for emergency operations.

This basic premise of governmental responsibility in virtually all States is derived from State constitutions and common law. States have

supplemented those authorities by enacting specific statutes for particular emergency purposes. Thus in varying forms States have enacted statutes to enable State and Local authorities to deal with emergencies resulting from natural or man-made disasters or from hostile or war-time actions. The legislation normally made clear the Governor's responsibilities to plan for, direct and control emergency operations; established a central State office responsible to the Governor usually a disaster emergency agency, or civil defense agency (in some instances both may be present); and provided appropriate legal authorities to cope with emergencies, whether peace-time or war-time, natural or man-made. However, in few instances does such legislation specifically deal with planning for or responding to peacetime nuclear emergencies.

The advent of nuclear energy and the growing use of radioactive materials for industrial, medical, research and other purposes has led many States as a matter of public health and safety to enact into law, either by statute or executive order, regulatory measures to control and regulate nuclear facilities and radioactive materials. These authorities have normally addressed such considerations as licensing facilities, registering sources of radiation, transporting radioactive materials, standards for control of radiation, contamination of the environment and protection and safety of nuclear and radioactive materials. These measures in combination with a State's authorities with respect to disasters or civil defense situations normally give State authorities a satisfactory legal basis for undertaking preparedness planning and response activities for nuclear peacetime emergencies.

Because of the potential for serious and widespread effects which could go beyond the territorial limits of a State and which could also exceed State response capabilities, a number of States have provided a statutory basis for the Governor to enter into interstate compacts with contiguous or nearby States and with agencies of the Federal government for assistance in the event of a peacetime nuclear emergency. Compacts with other States normally pertain to a specific region and are designed to arrange for mutual aid in the event of an emergency. Agreements with Federal agencies normally

arrange for Federal assistance as may be authorized by law when requested by State or local authorities in coping with a nuclear emergency.

Appendix A lists a number of major factors which could be involved in a peacetime nuclear emergency and for which State authorities would wish to have legal authority pertaining to that factor to assure meaningful preparedness planning and response activities. In many instances, adequate authority may already exist as a part of the State's normal governmental operations, disaster emergency or civil defense activities. Each State will undoubtedly find that special considerations, constitutional and legal factors and governmental practice will lead it to develop the legal basis for peacetime nuclear emergency planning somewhat differently than other States. Appendix A is intended to provide a guideline to assure that the major and critical factors are covered statutorily.

C. STATE VULNERABILITY TO PEACETIME NUCLEAR EMERGENCIES

As a first step in assessing their capability to respond to a nuclear emergency, several States have examined their exposure to peacetime nuclear emergencies through a process termed vulnerability analysis or hazard analysis. This examination is an important element in prevention and recovery planning since comprehensive and effective plans need to be based on the knowledge and understanding of the factors that create the vulnerability to a nuclear emergency. In this connection, the status of a State's preparedness planning can in itself be a factor which affects the State's vulnerability to the effects of a nuclear emergency.

In determining the factors which contribute to a State's vulnerability to nuclear emergencies, consideration should be given to such matters as population, geography, climate/weather, geology, and the presence of nuclear facilities or materials. Obviously, a nuclear release occurring in a densely populated State has the potential for harm to a greater number of individuals than a release occurring in a State only sparsely populated due to the concentration of people and the complexities of evacuation. States with large cities (e.g., California, Illinois, New York) are likely to

suffer more serious effects from a nuclear release than those States (e.g., Alaska, Nevada, North Dakota) which have no large cities or major population concentrations.

Geography and climate/weather of a State contribute to assessing vulnerability in several ways. A State's terrain (mountains, tablelands, plains) will help determine the spread of radioactivity. Mountains can act to contain the dispersal of radioactive particles but, in a plains region, such particles may be carried by the wind across the plains contaminating a large area. Weather conditions such as rainfall and snowfall are also pertinent in a vulnerability assessment. Precipitation tends to reduce the effects of a radioactive release since it quickly carries the radioactive particles to the ground, thus preventing their spread by winds to other areas. The amount of precipitation a State receives is also related to the seasons; hence, vulnerability could be affected by the time of year during which the release occurs.

Earthquakes can affect the vulnerability of a State to a nuclear emergency. Thus, recognizing fault lines and an area's susceptibility to earthquakes becomes an important element in nuclear power plant siting and licensing procedures. An earthquake occurring in the vicinity of a nuclear power plant might damage the reactor to the extent that there could be a release of radioactive materials. These geological considerations result in extensive studies with a significant investment of time and funds by the private utilities in reaching a decision on the construction of a nuclear power plant. Similarly, the NRC in connection with its licensing procedure denotes considerable attention to this matter.

A State's vulnerability is also related to the number of nuclear facilities and the quantities of nuclear materials (civilian or military) located and/or transported within its borders. States that have a larger number of nuclear power plants or facilities than other States are likely to be more vulnerable to a nuclear emergency. Similarly, those States which have major air, highway and railway centers are likely to be more vulnerable because of the large number of shipments of nuclear materials being transported across their borders.

In evaluating State vulnerability, it is important to consider the possibility of terrorist threats. With increasing terrorist activities nationwide, it is realistic for States to be concerned over possible nuclear materials related threats. Recent studies show certain States to be particularly vulnerable to bombing incidents. By analogy, these States may also be vulnerable to nuclear incidents caused by terrorists. The vulnerability of States to a nuclear emergency as a consequence of terrorist activity could increase as terrorists make more frequent use of nuclear materials as either targets of their actions or as weapons to accomplish desired ends or for the purposes of threats and blackmail. As international proliferation of nuclear materials provides the terrorists with additional potential sources of nuclear materials, the potential vulnerability of States could increase.

Other considerations which need to be taken into account in assessing vulnerability are: States with high vulnerability factors increase the vulnerability of contiguous States because of the dangers of spread of radioactivity; the extent to which a State has developed its preparedness planning for the range of possible nuclear incidents lessens its vulnerability; and the degree to which contiguous States are prepared for a nuclear emergency.

In preparing vulnerability or hazard analyses, State planners should consult with those Federal agencies which can provide essential data for the analysis. For licensed nuclear power facilities within a State, information on safety and hazard factors pertaining to the particular facility can be obtained by studying applicable sections of the Final Safety Analysis Reports prepared by the licensee as required by NRC. Similarly, the Energy Research and Development Administration (ERDA) can provide data with respect to facilities and activities involving nuclear materials which are controlled by that Federal Agency and are located or occur within the State undertaking the vulnerability analysis. Within the limits of security, the Department of Defense and the Armed Forces can provide information on nuclear weapons/devices and related activities which could affect a State's vulnerability to a nuclear emergency for which it should plan. Other agencies such as the FBI, the U.S. Weather Service, the U.S. Geological Survey, EPA, PHS, etc., can provide information and basic data on technical aspects of the analysis involving that agency's particular expertise.

D. STATE PREPAREDNESS PLANNING FOR NUCLEAR EMERGENCIES

Within a State, one agency is usually given primary responsibility for preparedness planning for peacetime nuclear emergencies and has the central role for coordinating State response operations to meet such emergencies. In some States, it is a special agency often called the Office of Emergency Services (OES); in others it may be delegated to an existing agency with other primary responsibilities. Most States have enacted separate statutes defining responsibilities for the emergency services and radiation control functions and designating different State agencies for those activities.

In most States, the OES (or its equivalent) is directly responsible to the Governor and is responsible for overall planning and subsequent operational response coordination for peacetime nuclear emergencies. It also would normally be concerned with conventional civil defense, natural disaster response, search and rescue, the operation of the State "Emergency Operation Center," and the coordination and supervision of emergency preparedness training and exercises. The OES in carrying out its responsibilities would receive technical support from the appropriate State agencies, i.e., the Radiological Health Office (RHO) on radio-activity and decontamination matters.

In a few States, the RHO has been given primary responsibility for nuclear emergency planning and response, at least for Category I incidents. However, if the incident should become more serious, falling into Categories II, III or IV, it would require an increased effort at the State level and the OES (or its equivalent) probably would assume a larger operational role. The RHO, however, normally performs radioactivity monitoring and related laboratory analysis. Usually it has the authority to act in emergencies, but during planning stages, it normally limits its activities to furnishing technical information and assistance to the OES.

At the local level, preparedness planning for peacetime nuclear emergencies is primarily the responsibility of the county/city level emergency agencies and law enforcement officials. Where a coordinator is a full-time official, he usually can accomplish the degree of preparedness directed by the State OES, though local agencies normally

depend heavily on the State for assistance. At nuclear facilities (e.g., nulcear power plants), the facility owner/operator will normally have developed emergency preparedness plans and will have coordinated them with the appropriate State and local agencies.

The policies and plans of the States concerning nuclear emergency preparedness are as different and diverse as are the States themselves. With very few exceptions, State nuclear emergency preparedness plans are concerned primarily with fixed-site nuclear power generating facilities and, in some instances transportation incidents. Most States have not begun to plan with the same degree of detail for other categories of peacetime nuclear emergencies such as theft, extortion, threat, blackmail, terror or accidental detonation of a nuclear weapon. Response planning for peacetime nuclear emergencies, as it is more fully developed at the Federal level, should result in responsible Federal agencies providing more definitive advice and guidance to State authorities on the Federal role in nuclear emergencies.

E. INTERSTATE COOPERATION

In order to lessen their vulnerability and to respond more effectively to peacetime nuclear emergencies, 35 States have entered into cooperative assistance arrangements (Figure II-1). The Southern Interstate Nuclear Board, the Southern Emergency Response Council, the Western Interstate Nuclear Board and the New England Interstate Agreement each provide for their member States assistance and support capabilities in the event of a nuclear incident. (Although the States in the Midwest have formulated a similar agreement, it has not yet gained Congressional approval.) Such agreements provide information on what resources each State has available to cope with peacetime nuclear emergencies and which could be called upon by other States party to the agreement in the event help is needed. The arrangement also serves to facilitate coordination of response efforts across State borders.

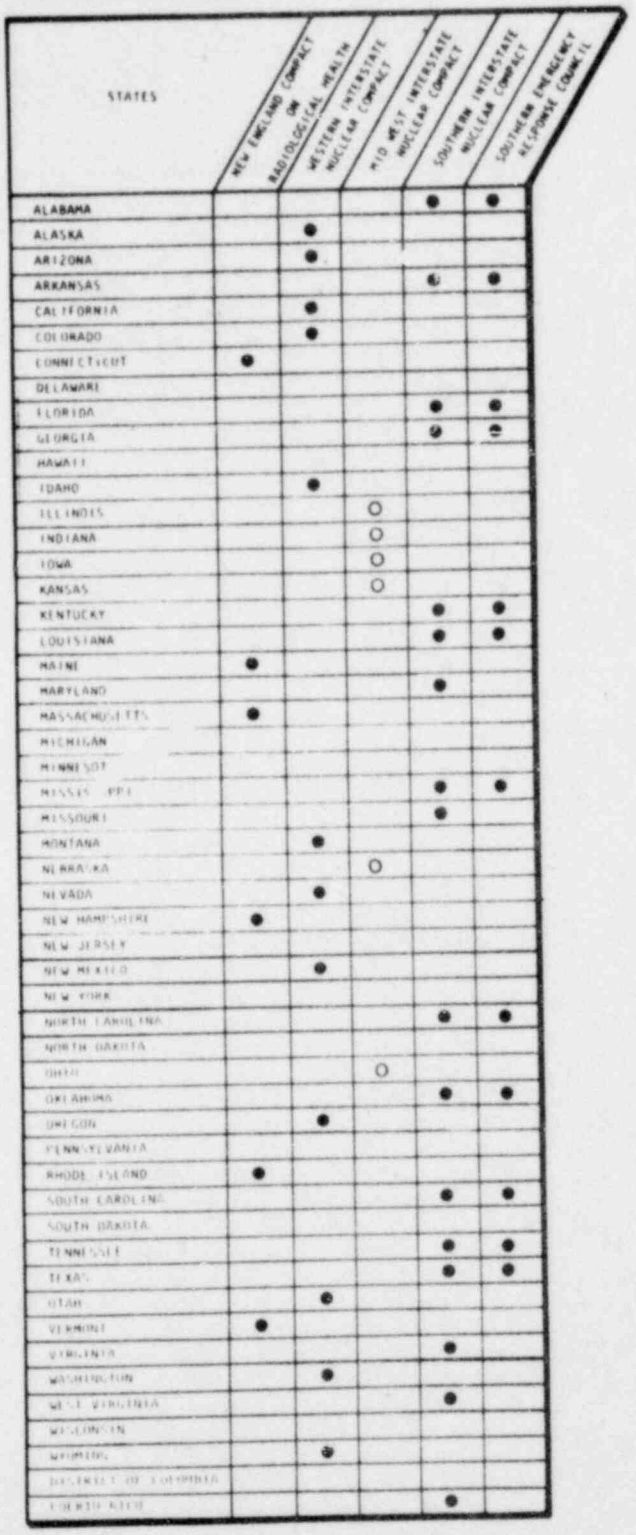

Figure II-1. Interstate Agreements

F. SUMMARY

In summary, most States have formulated plans for peacetime nuclear emergencies. These plans would permit State and local authorities to respond satisfactorily to most Category I incidents and in some instances the radiological defense phase of those plans would permit the authorities to cope with some aspects of a nuclear detonation. Very few States have included in their nuclear emergency plans provisions for dealing with Category II incidents involving nuclear threat or blackmail or the theft of nuclear weapons or materials. For emergencies resulting from the detonation of a nuclear weapon or device (Category III), State authorities have not developed specific plans for that category of incident but would rely upon emergency preparedness plans and nuclear emergency plans to deal with the disaster, particularly the problems of radioactivity and contamination. States have not prepared specific plans or response plans or responses for Category IV situations believing the magnitude of the event would require Federal assistance. Nevertheless, even in such situations, the States should be able to provide significant resources, which would be supplemented by Federal resources and assistance to permit dealing with the incident in a satisfactory manner.

CHAPTER III

FEDERAL CAPABILITIES FOR PLANNING AND RESPONDING TO NUCLEAR EMERGENCIES

A. INTRODUCTION

For many years the Federal government has been concerned with emergency preparedness for a variety of contingency situations ranging from natural disasters to general nuclear war. In recent years, particularly with the growth of a nuclear industry in the United States and the proliferation of nuclear weapons and materials, a number of Federal agencies have been engaged in various aspects of preparedness planning for nuclear emergencies that might occur in peacetime. Thus far those nuclear emergency incidents which have occurred have been of relatively minor scope. The potential for more serious emergencies clearly exists and preparedness planning is essential to the protection of the public health and safety of the national welfare.

B. LEGAL AUTHORITY

As a broad generalization, adequate authority exists in the Federal statutes to provide a legal basis for those actions which may need to be taken promptly by Federal authorities directly or to assist State and local authorities in coping with a nuclear emergency (see Appendix B). In particular, the Atomic Energy Act of 1954, as amended, and the Energy Reorganization Act of 1974, provide adequate statutory authority to enable the President through such agencies as NRC, ERDA, DOD and the FBI to take such actions as may be warranted by the incident. Those legislative acts are supplemented by the constitutional authorities of the President and by other statutes enabling Federal agencies to provide assistance, rescue services and other damage limiting measures, either directly or through State and local authorities. It is likely, in addition, that in the event of a particularly serious incident, the President would seek special Congressional authorization and appropriation of funds to undertake specific long range programs to deal with the recovery and reconstruction problems that would be involved.

C. EXISTING FEDERAL POLICIES AND PLANNING

The central focus of policy and planning guidance related to nuclear emergencies is the "Federal Response Plan for Peacetime Nuclear Emergencies" (FRPPNE) issued by the FPA. It represents a major and comprehensive approach to this complex problem. It establishes, for planning purposes, the four categories of nuclear emergencies; sets forth policy guidelines, assumptions and planning guidance to facilitate the development of a coordinated Federal response capability; and assigns responsibilities to Federal departments and agencies for particular aspects of operational response planning and for support planning for the four categories of emergencies.

The principal policy guidelines established by the FRPPNE are:

(1) Primary emphasis in planning and preparedness will be placed on preventive measures to deter or control nuclear emergencies.

(2) Maximum feasible use will be made of existing legislative and executive authorities, existing response plans and existing organizational structures and coordinating mechanisms.

(3) Federal operational response plans will be designed to support State and local emergency preparedness and response efforts.

The FRPPNE designates operational response planning agencies for emergencies in Categories I, II and III, and charges FPA, as an interim measure, with developing an approach to planning for Category IV situations. The general task assigned to operational response planning agencies is management of the effort required to produce complete, coordinated Federal operational plans for responding to the incident category concerned (see Appendix C). More specifically those agencies are charged with:

(1) Determining the complete list of Federal and private supporting agencies and enlisting their assistance.

(2) Providing planning guidance for the supporting agencies, including as appropriate, such elements as assumptions, casualty estimates and property damage estimates that can be used as a standard data base for planning.

(3) Ensuring that all functions essential to an effective response are included in the planning for which the operational response planning agency has overall responsibility. These functions should include the technical tasks required to assess, counteract and control radiological effects; the humanitarian activities designed to minimize the impact on individuals; and the recovery measures directed at restoring essential services to the affected area.

The FRPPNE also directs Federal operational response planning agencies to coordinate with State governments on general State and local considerations related to nuclear emergency planning and response. Federal support agencies are similarly charged with coordinating their efforts with their State government counterparts concerning response measures. The FPA, with responsibility for overall direction of the nuclear emergency planning effort, is charged with providing assistance in resolving possible Federal-State problems related to such emergencies and with encouraging the States to produce nuclear emergency response plans as part of their general emergency planning activities.

Thus, the FRPPNE establishes the general framework for the development of more specific and more extensive Federal-State relationships in dealing with nuclear emergencies. The highlights of existing Federal policies and response planning as they affect those relationships and which should aid emergency planners at the State level are summarized below. Although each category is discussed separately, the policies and planning involved applies to more than one category of nuclear emergency. For example, planning designed to cope with minor radiological contamination (Category I) should be appropriately applicable and relevant to contamination problems in Category III incidents.

1. Category I Incidents

Since by definition Category I nuclear emergencies are relatively small scale events with limited impact, they will be managed primarily by State and local response capabilities. Regional or other field elements

of Federal agencies may become involved with their State counterparts, but the involvement will normally take the form of "on-the-spot" assistance. Toward this end Federal agencies have developed guidance on dealing with Category I nuclear emergencies to aid their regional or field offices in rendering assistance to State and local authorities.

a. General Planning Guidance: Radiological Incidents

The Federal Preparedness Agency has published a Federal Register Notice, dated December 24, 1975, entitled "Radiological Incident Emergency Response Planning: Fixed Facilities and Transportation." This notice or "statement of responsibilities" contains a number of provisions relevant to Federal-State relationships in dealing with nuclear emergencies. To assist nuclear emergency preparedness planners, the responsibilities of the various Federal agencies concerned with nuclear emergency response planning were set forth.

(1) The Nuclear Regulatory Commission (NRC) is the lead agency in radiological incident emergency response planning, training and other assistance activities covered in the Federal Register Notice. NRC is responsible for:

(a) Development and promulgation of guidance to State and local governments in coordination with other Federal agencies for the preparation of radiological emergency response plans.

(b) Review and concurrence in such plans, to include correlation among State, local government, licensee and national plans.

(c) Issuance of guidance to other Federal agencies concerning their authorities and responsibilities and authorities in providing assistance to State and local governments in radiological incident emergency response planning.

(2) The Environmental Protection Agency (EPA) is responsible for providing assistance to State agencies with radiological emergency response tasks in the development of their emergency plans relative to nuclear facilities and transportation incidents. For this purpose, EPA has issued "Protective Action Guides" which provide practical guidance for consideration by State and local officials who are responsible for developing criteria to use in dealing with radiological emergencies that would present a hazard to the public.

(3) The Energy Research and Development Administration (ERDA) is responsible for:

(a) Providing guidance, consistent with NRC guidance, to State and local governments on the development of that portion of their radiological incident emergency response planning which is related to ERDA-managed and operated facilities and ERDA-controlled radioactive materials in transit;

(b) Cooperation with the involved Federal agencies in the development and implementation of radiological emergency response planning assistance for State and local governments, consistent with NRC guidance; and

(c) Through the Interagency Radiological Assistance Plan develop an interagency arrangement for rendering rapid and effective radiological assistance to State and local governments using Federal resources.

(4) The Department of Health, Education and Welfare (DHEW) is responsible for assisting State health departments, State hospital associations, and other professional organizations and ambulance services in the development of plans for the prevention of adverse effects from exposure to radiation, including the use of prophylactic drugs.

(5) The Department of Transportation (DOT) is responsible for providing guidelines, in cooperation with NRC and other Federal agencies, and consistent with NRC guidance, for the development of that portion of State and local emergency plans pertaining to transportation incidents involving radioactive materials; and for assistance to State and local governments in emergency planning for such transportation incidents.

(6) The Defense Civil Preparedness Agency (DCPA) is responsible for assistance to State and local authorities in planning the emergency preparedness actions required to provide the mechanisms for coordinating emergency operations in response to radiological incidents, consistent with NRC guidance.

(7) The Federal Disaster Assistance Administration (FDAA) is responsible for:

(a) Providing guidance to State and local authorities on the disaster preparedness aspects of State emergency planning for fixed nuclear facilities and transportation incidents involving radiological materials, consistent with NRC guidance.

(b) Recommendations to NRC as to appropriate planning actions necessary for review of State and local planning activities.

(8) The Federal Preparedness Agency (FPA) is responsible for general monitorship of radiological emergency response planning and training, and specifically for:

(a) Review and endorsement of NRC guidance and planning assistance to State and local governments.

(b) Assistance in solving Federal-State problems related to Federal responsibilities.

(c) Encouragement of States to produce plans related to nuclear incidents as part of their general State emergency planning.

(d) Assistance to NRC, ERDA and DOT in developing priorities, when required, for providing planning assistance to State and local governments.

(e) Facilitating State and local contacts for NRC, ERDA, and DOT.

b. Radiological Incidents at Fixed Nuclear Sites

An important related guidance document is NRC's NUREG 75/111 (formerly WASH 1293), "Guide and Checklist for the Development and Evaluation of State and Local Government Radiological Emergency Response Plans in Support of Fixed Nuclear Facilities."

(1) Radiological emergency response planning guidance is provided to State and local governments for occurrences which might have an impact on public health and safety arising from the operation of any type of fixed nuclear facilities, including licensed nuclear power plants, reactor fuel reprocessing plants, test and research reactors, and other facilities using or producing large quantities of radioactive materials.

(2) Guidance data is provided for inclusion in State Radiological Emergency Response Plans, and in other State and local emergency plans as appropriate.

(3) Detailed, specific guidance is provided for the development of State and local government radiological emergency response plans in support of fixed nuclear facilities. This guidance includes extensive checklists of essential functions for which planning is needed, an example planning concept, a representative list of involved government and private organizations, a listing of potential functional capabilities relevant to radiological emergency response planning, and a "checklist of key review points" for use in monitoring plan development.

The document also contains a number of suggestions to the States to guide their emergencies planners:

(1) States should maintain general plans for providing emergency services and resources anywhere within their borders, and the States' radiological emergency response plans should be made a part of, or serve as annexes to, the general emergency response plans.

(2) States should encourage and support the development of local emergency response plans which should be agreed to by the State, the involved local authorities, the nuclear facility operators, representatives of contiguous States, and regional representatives of NRC and other concerned Federal agencies.

(3) Key State and local authorities and nuclear facility operators should meet at least annually to review and update their coordinated plans.

(4) State and local governments that are developing comprehensive emergency preparedness plans for dealing with floods, earthquakes or other disaster situations which might necessitate large scale displacement of people and the provision of various emergency services, should also consider integrating their nuclear emergency plans into those comprehensive emergency plans.

(5) Nuclear facility operators should make arrangements with State and local organizations for special emergency functions such as ambulance, medical, fire and police services. If nuclear preparedness planning for emergencies at such facilities is to be meaningful, this is virtually a mandatory requirement. State and local authorities should consider taking the initiative to assure that facility operators do make such arrangements.

(6) The importance of accident assessment by facility operators is stressed and the need for prompt recommendations by operators to State and local governments concerning protective measures is underscored. State and local governments should consider developing a capability to undertake accident assessments to supplement the capability of facility operators and to provide senior public officials with an independent assessment.

c. Radiological Incidents During Transportation

Many of the planning elements applicable to fixed nuclear facility incidents also have applicability in dealing with transportation accidents involving nuclear materials. But accidents in the latter category have certain unique characteristics which warrant separate guidance. Accordingly, NRC working with the DOT intends to issue a separate guidance document dealing with transportation accidents.

d. Incidents Involving Federally Controlled Nuclear Materials

The Department of Defense (DOD) provides guidance on responding to radiological incidents involving nuclear weapons or other nuclear materials under DOD control. The basic statement of DOD responsibilities in this area is contained in DOD Instruction 5100.52 Subject: "Radiological Assistance Responsibilities in the Event of an Accident Involving Radioactive Material", dated January 11, 1967. Each of the military services has established internal organizational and procedural arrangements for responding to radiological incidents falling within their jurisdictions.

Similarly, ERDA provides guidance on incidents with respect to nuclear weapons or other nuclear materials under its control. This guidance is available to State and local agencies concerned with response planning for radiological incidents through the ERDA Regional Coordinating Offices for radiological assistance.

Useful unclassified information on safety precautions, potential health hazards, and emergency procedures applicable at the scene of an accident involving nuclear weapons is contained in a joint DOD/ERDA publication, "Guidance and Information on Nuclear Weapons Accident Hazards, Precautions and Emergency Procedures," (WASH 1274), October, 1973.

e. Other Federal Agency Assistance

1) Interagency Radiological Assistance Plan (IRAP)

IRAP is a Federal interagency arrangement which provides a means for rendering rapid and effective radiological assistance utilizing Federal resources in the event of a peacetime nuclear emergency for the protection of the public health and safety. ERDA is the designated agency under the Plan responsible for administration, coordination and implementation of emergency measures in cooperation with the participating Federal agencies. Although IRAP is a Federal plan, it anticipates cooperation and reciprocity with State and local authorities in the event of an emergency.

The IRAP has been formally promulgated by ERDA through its Radiological Assistance Plan which is designated as ERDA-60, dated July 1975. "ERDA-60" describes the responsibilities and types of assistance available from the participating IRAP agencies and the locations and phone numbers of ERDA Regional Coordinating Offices and describes the national and regional capabilities of the IRAP agencies.

2) Joint Nuclear Accident Coordinating Center (JNACC)

To provide a central information and notification point for peacetime nuclear incidents, ERDA and DOD established JNACC at Albuquerque, New Mexico. JNACC maintains world-wide information on military services and ERDA equipment and personnel resources to provide radiological assistance. It is manned by an ERDA element and a DOD element.

The assistance of the DOD and/or ERDA radiological emergency teams may be obtained by State or local authorities by calling the nearest ERDA Regional Coordinating Office or the commanding officer of the nearest military installation. Explosive Ordnance Disposal (EOD), decontamination (DECON) and radiological monitoring (RADMON) teams, nuclear health physicists, radioactive hazards specialists and other technical personnel are available through JNACC. Specialized equipment to detect and monitor radiological hazards will be brought by the responding team.

JNACC can draw on the overall response capabilities of the military services and ERDA resources to aid in coping with a nuclear emergency. Each military service and ERDA maintain personnel and equipment for such purpose.

3) U.S. Armed Forces Assistance

The Commanding Generals of First, Fifth and Sixth Armies have developed plans to provide assistance in the event of an incident in their area of responsibility. Nuclear emergency teams, "Explosive Ordnance Disposals (EOD)" teams and radiological emergency teams are maintained for assistance to State and local governments. The Navy and the Air Force also maintain response forces capable of assisting State and local authorities in the event of a nuclear incident.

The assistance of military nuclear incident response forces can be requested or arranged for through the JNACC, the Commanding General of the appropriate numbered Army or through the closest major military installation.

2. Category II Incidents

In recent years, there have been a limited number of threats to detonate nuclear devices in the United States, but such threats have turned out to be hoaxes. There have been no actual or threatened, unauthorized or accidental nuclear weapon launches affecting the United States. And no major nuclear reactor accidents or major nuclear transportation incidents have occurred. Thus actual experience in coping with and responding to Category II nuclear emergencies has been very limited. Nevertheless an incident of this type could introduce unprecedented requirements for coordination and collaboration between Federal and State authorities.

a. Nuclear Theft, Extortion or Sabotage

The FBI is charged by law with investigating all incidents of sabotage involving nuclear facilities, materials and/or weapons; thefts of nuclear weapons and/or materials; or any extortion using nuclear components, devices or materials. The FBI has, over the years, developed extensive cooperative relationships with State and local law enforcement officials which

often reach back over many decades. Presidential directives of September 6, 1939, January 9, 1943, and July 24, 1950 call upon law enforcement officers throughout the nation to report promptly to the FBI all information relating to espionage, sabotage and subversive activities. The 1950 directive also suggested that "all patriotic organizations and individuals" likewise report all such information to the FBI. It can be expected that, in the event of a nuclear incident, the FBI would rely on its established working relationships for appropriate coordination with State and local law enforcement authorities.

Upon notification of an incident involving a nuclear threat or extortion, the theft of nuclear materials or weapons, or sabotage at a nuclear installation, the FBI would become the lead agency. As such it would have the responsibilities for the investigative and technical activities. In the case of a nuclear threat, the FBI would be the coordinating agency and a major contributor to the preparation of an assessment of the threat. It would bring together its judgments and views, those of ERDA on technical aspects and those of the NRC and of other agencies or sources which can contribute to the assessment. The FBI would then make this assessment available to the Governor, Mayor or other appropriate public official. The responsibility for any actions involving the public upon determination of a credible threat would rest with the Chief Executive of the political subdivision where the incident occurs or with the Governor of the State.

In carrying out its responsibilities, the FBI would maintain liaison and coordination with appropriate DOD, ERDA, NRC and other Federal agencies which could provide technical assistance and support on measures designed to counter or neuturalize an extortion threat or to recover stolen nuclear materials. For technical support, the FBI in most instances will look to ERDA as the primary agency to direct or supervise technical operations involved in the search and analysis of the purported nuclear device and in determining the technical credibility of a threat.

In its relationship with the State and local law enforcement authorities, the FBI would look to those authorities to undertake those measures decided upon as being necessary for the safety of the community. These could involve area isolation and cordoning, evacuation,

traffic control, local security, fire fighting services and local basic law and order activities.

b. Accidental or Unauthorized Launch of Nuclear Weapons

The possibility exists that accidental or unauthorized launches of nuclear weapons could occur originating outside the U.S., with weapon impact within the J.S. In recognition of this possibility, the U.S. and U.S.S.R. in 1971 entered into a Nuclear Accident Agreement, which provides for mutual and timely notification in the event of an authorized or accidental launch involving a possible detonation of a nuclear weapon. Appropriate notification procedures have been instituted to implement the Agreement. The Department of Defense has primary responsibility for responding to an accidental or unauthorized launch of a nuclear weapon. By following notification and warning procedures, the military services would provide rapid advice to the proper State authorities, and warning to the populace if time permits through civil defense procedures.

c. Nuclear Accident

The third group of Category II incidents concerns accidents at nuclear power reactors, facilities or in the transportation of nuclear weapons/materials which have the potential for widespread hazards or damage to people and property. It can be anticipated that initially the guidelines and responsibilities described for Category I incidents would be applicable but precautionary measures would be taken at the Federal level to alert an emergency or crisis management structure which could rapidly assist the State and local level in the event the incident became more serious and exceeded State and local response capabilities. This structure would monitor the incident, take those precautionary measures as may be needed to cope with a serious nuclear emergency (Category III) and alert those Federal authorities and agencies which might become involved in operational response activities.

3. Category III Incidents

There has thus ar been no actual experience with a nuclear detonation or with widespread radioactive contamination in the United States; and guidelines specifically designed to apply to Federal-State relationships

in dealing with Category III nuclear emergencies are only in the early stages of development. There has, however, been significant experience with related kinds of emergencies: large-scale natural disasters and minor radiological incidents. While that experience is not conclusive nor sufficient to provide a basis for guidelines for this category, it does provide some useful indicators. Clearly, it can be anticipated that the basic responsibility for coping with a Category III emergency will rest with the State authorities but that the Federal government will be prepared to provide large scale assistance or under certain unusual or extenuating circumstances to assume the basic responsibility for dealing with the emergency.

The scope and magnitude of a Category III incident would require the utilization of emergency or crisis management machinery at both the State and Federal level. To assure effective coordination of State and Federal response operations, it is likely that the President, for most serious incidents in this category would dispatch a Personal Representative to maintain liaison with the Governor and to coordinate and manage Federal operations.

At the Federal level, the Department of Housing and Urban Development (DHUD) is charged with responsibility for developing a comprehensive, coordinated Federal operational plan for responding to Category III contingencies, and specifically for coordinating with State and local disaster assistance agencies on plans for providing and utilizing Federal assistance. Guidelines already exist on Federal-State relationships for dealing with natural disasters which can assist State emergency preparedness planners in providing for the role of Federal assistance in their plans for a Category III nuclear emergency. Among the key documents containing such guidelines are:

(1) Federal Disaster Assistance--Final Regulations, published in the Federal Register of May 28, 1975, by DHUD/FDAA. These regulations established channels and institutional arrangements for Federal-State contacts required for the purposes of requesting, authorizing and administering Federal disaster assistance.

(2) Digest of Federal Disaster Assistance Programs, prepared by DHUD/FDAA and published by the U.S. General Printing Office. This

Digest is designed to serve as an initial source of information for private citizens and public officials in need of a particular kind of disaster assistance.

(3) DHUD publication, Eligibility Handbook Under Public Law 93-288, December, 1975. This Handbook is designed to provide guidelines for determining eligible applicants for public assistance. The Handbook includes a description of the Federal and State elements in the field organization for providing disaster assistance.

(4) DHUD Publication, Handbook for Applicants, December 1975, provides instructions and guidance to local applicants and officials (including States, counties, cities or other political subdivisions of States) in the administration of the Disaster Relief Act of 1974.

(5) DHUD Publication, Handbook for Disaster Assistance Center Managers, February 1975, is intended as a guide and reference manual for managing and operating Federal disaster assistance centers in the field.

4. Category IV Incidents

Current Federal policy recognizes that it may not be practicable to prepare detailed response plans in advance for the contingency represented by the requirements for long-range recovery and rehabilitation of an area or areas affected by a major nuclear incident (Category IV conditions). Prediction of precise conditions is not possible; and, in any event, time would be available for detailed planning during the immediate and short-term recovery phases following a Category III incident.

Title V of PL 93-288 does provide some general guidance on economic recovery for disaster areas that would have relevance to Federal-State relationships in dealing with a Category IV situation. This part of the law is intended to provide assistance, after the period of emergency aid and replacement of essential facilities and services, for any major disaster area which has suffered a severe dislocation of its economy. Responsibility under this law for coping with long-range recovery problems has not been assigned to a Federal agency. Pending a specific Presidential delegation

in this area, FPA is charged with being prepared to provide advice to the President on approaches to program decisions in this area and on alternative administrative arrangements for responding to Category IV conditions.

D. SUMMARY

Much has been achieved at the Federal level in moving toward a more effective capability for responding to the full range of peacetime nuclear emergencies. Increasing effort is being placed on the development of concepts, policies, planning guidance and procedures to assure realistic and effective response operations by Federal agencies. This effort by the responsible Federal agencies to prepare their plans and, as appropriate, guidelines for State planners, will provide a clear and sound basis for Federal and State relationships during response operations in a nuclear emergency.

CHAPTER IV

FEDERAL-STATE PLANNING AND RESPONSE RELATIONSHIPS

A. INTRODUCTION

Federal-State planning and response relationships relevant to peacetime nuclear emergencies are in the early phases of development. At the Federal level, intensive work on all types of potential nuclear emergencies has been undertaken in the past two or three years; less has been done at the State level and it usually has been focused on radiological incidents involving relatively minor consequences. However, the growing emphasis on broader nuclear emergency preparedness planning by the Federal government will bring Federal-State operational relationships for all such emergencies into increasingly sharper focus. The principal governmental functions where those relationships will be involved are shown at Figure IV-1. Some functions are exclusively Federal, others State, and many will involve both levels of government.

The functions that would need to be performed in planning for and responding to the various categories of nuclear emergencies cover a wide substantive range of governmental activities. They could involve a large number of departments, agencies and offices at both the State and Federal level. In some departments and agencies, two or more major component elements could have important functions. Some of these functions may need to be performed only during the planning phase; some would be needed during an actual emergency; and some would be relevant in both phases.

A large proportion of the functions that would need to be performed in planning for or responding to nuclear emergencies would, in the first instance, be undertaken by State and local governments; one or more Federal agencies, however, could have responsibilities for supplementing or supporting State and local efforts in carrying out these functions. Federal involvement, and consequently Federal-State contacts and relationships, should be expected to become more significant as the nuclear emergency moves up the scale of severity and as State and local response capabilities are exceeded.

1.	PLANNING AND PREPAREDNESS FOR PNE'S
	a. ISSUING PLANNING GUIDANCE
	b. DEVELOPING RESPONSE PLANS
	c. REVIEWING PLANS
	d. MAINTAINING EMERGENCY OPERATIONS CENTERS
	e. MAINTAINING EMERGENCY COMMUNICATIONS FACILITIES
	f. MAINTAINISG RADIOLOGICAL MONITORING CAPABILITIES
	g. TRAINING
	h. TESTING AND EXERCISING PLANS AND FACILITIES
2.	COORDINATION OF PNE RESPONSES
	a. NOTIFIC.TION, ALERTING AND WARNING
	b. SITUATION MONITORING
	c. INCIDENT ANALYSIS AND ASSESSMENT
	d. DECISION MAKING
	e. EMERGENCY PUBLIC INFORMATION
	f. COORDINATION WITH STATE AND LOCAL AUTHORITIES
	g. COORDINATION WITH REGIONAL ORGANIZATIONS
	h. COORDINATION WITH OTHER NATIONS
3.	INVESTIGATIVE AND INTELLIGENCE MEASURES
	a. INVESTIGATION OF NUCLEAR THREATS AND THEFTS
	b. APPREHENSION OF TERRORISTS OR EXTORTIONISTS
	c. DETECTION, NEUTRALIZATION AND RECOVERY OF NUCLEAR DEVICES OR MATERIALS
	d. NEGOTIATIONS WITH TERRORISTS
4.	PUBLIC SAFETY MEASURES
	a. MAINTENANCE OF LAW AND ORDER
	b. SEARCH AND RESCUE
	c. FIREFIGHTING
	d. VITAL INSTALLATION SECURITY
	e. TRAFFIC CONTROL
	f. AREA ISOLATION/QUARANTINE
	g. EVACUATION
	h. CONTROL OF REENTRY
5.	PUBLIC HEALTH MEASURES
	a. EMERGENCY MEDICAL SERVICES
	b. RADIOLOGICAL MONITORING (INCLUDING WEATHER INFORMATION)
	c. DECONTAMINATION
	d. PROTECTIVE MEASURES FOR FOOD AND WATER SUPPLIES
	e. IDENTIFICATION OF DEAD, AND MORTUARY SERVICES
	f. TOXIC WASTE DISPOSAL
6.	PUBLIC WELFARE MEASURES
	a. EMERGENCY REGISTRATION
	b. EMERGENCY FEEDING
	c. EMERGENCY SHELTER
	d. EMERGENCY FINANCIAL AID
	e. TEMPORARY HOUSING
7.	OTHER ESSENTIAL PUBLIC SERVICES
	a. WATER SUPPLY
	b. DEBRIS CLEARANCE
	c. EMERGENCY RESTORATION OF UTILITIES
	d. EMERGENCY TRANSPORTATION
	e. EMERGENCY TELECOMMUNICATIONS
	f. EMERGENCY MANPOWER COORDINATION
	g. EMERGENCY FISCAL MEASURES
	h. EMERGENCY MAIL SERVICE
8.	ECONOMIC STABILIZATION MEASURES
	a. FINANCIAL ASSISTANCE TO LOCAL GOVERNMENTS
	b. PRICE-WAGE-RENT CONTROLS
	c. PRIORITIES AND ALLOCATIONS
	d. LABOR-MANAGEMENT RELATIONS
9.	LONGER RANGE RECOVERY ACTIVITIES

Figure IV-1. Principal Functions Involved in Preparedness Planning and Response Activities

To assist State officials concerned with emergency preparedness planning and responses, the following sections seek to describe generically the relationships of Federal agencies with those of State and local agencies for the four categories of peacetime nuclear emergencies defined by FPA.

B. CATEGORY I INCIDENTS

Most incidents likely to occur in this category will be relatively minor and will not involve elaborate arrangements for planning or response actions between Federal and State and local agencies.

1. Incidents at Federally Controlled or Owned Facilities (Figure IV-2)

For incidents which involve nuclear facilities or materials owned by a Federal agency (e.g., DOD, ERDA or TVA), that agency would have the primary responsibility for planning for and responding to the on-site effects of that emergency. The local governments within whose jurisdiction the incident occurred, however, would be responsible for the direction of emergency responses to deal with any off-site effects of the incident.

To cope with on-site effects, site management, whether contractor or government, would first implement the facility's nuclear emergency preparedness plans, employing the facility's security forces, fire fighting units, radiological monitoring teams, decontamination specialists and other emergency personnel as needed. To the degree that assistance is needed from other Federal agencies to cope with a nuclear emergency occurring within the facility, plant management would request such assistance from the appropriate Federal agency through the Federal agency owning or controlling the facility. Additionally plant management or the local Federal agency representative may make special cooperative arrangements with State and local authorities for assistance, primarily in the public safety and radiological health areas, in dealing with on-site effects of an incident and to provide alert notification of an incident.

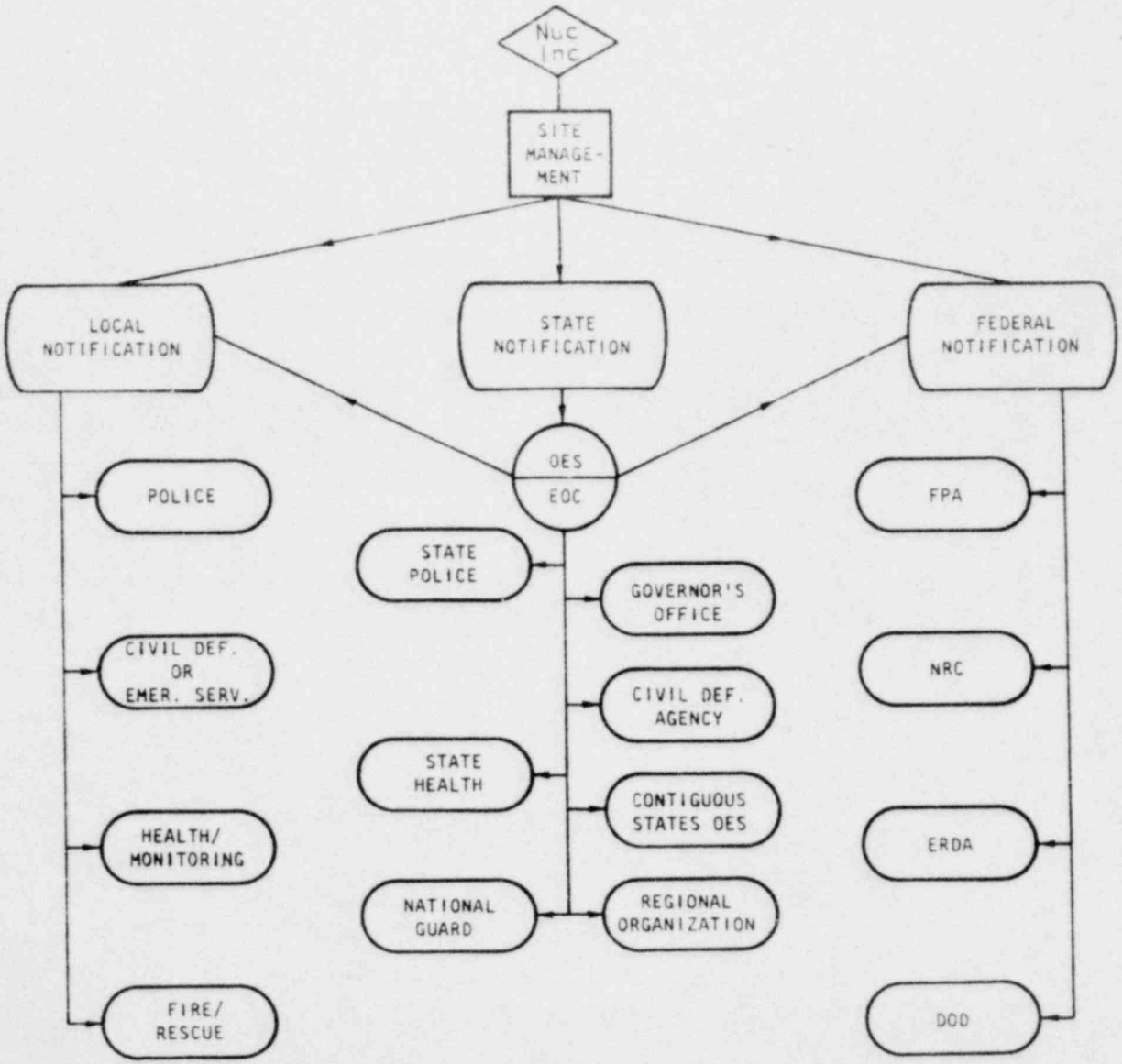

Figure IV-2. On-Site Nuclear Incident Notification

Under such arrangements notification of the nuclear emergency should be given by site mangement to the State authorities, usually the "Office of Emergency Services" (or its equivalent) and to those local officials that have been mutually agreed upon by the facility operator and the local authorities and have been designated in the facility's nuclear emergency plan. Normally, State and local authorities would then alert those agencies having nuclear emergency response capabilities in the event additional assistance is needed and requested by site management or in the event the effects of the incident impact in areas outside the facility. Should any off-site effects occur then the local government assumes direction for emergency response plans which are implemented taking such counter measures or preventative actions as the off-site situation dictates.

2. Incidents at Licensed Facilities (Figure IV-2)

Nuclear emergency planning and response actions for incidents occurring at a licensed facility are the responsiblity of the owner/operator management personnel. In the event of an incident, site management would first utilize its facility personnel, resources and equipment to implement the plant's nuclear emergency response plan to deal with on-site effects. Incident notification requirements may vary depending on whether or not the facility is located in an Agreement State (as defined in Section 274 of the Atomic Energy Act of 1954). If the facility is State licensed, the manager is required by State regulation to notify the State Radiation Control Program Office of certain incidents (the criteria will be the same as, or similar to, that contained in 10 CFR 20.403 (a) and (b)). There are no requirements applicable to a State licensee to notify NRC in such cases. Managers of Federally licensed facilities should promptly notify the State "Office of Emergency Services" (or its equivalent); the appropriate local authorities (normally the local OES, civil defense office or police) with whom prior special arrangements would have been made for assistance in the event of an emergency; and the appropriate office designated by the Nuclear Regulatory Commission (NRC) for this purpose.

The site managements notification to State and local authorities would alert the proper State and local agencies to a possible requirement for assistance at the facility site and to deal with any off-site effects

which might develop from the incident. Depending on the degrees of seriousness, this alert, at the State and local level, could involve evacuation, emergency services/civil defense units, police, fire and rescue, radiological monitoring and decontamination units and emergency medical service units. The initial responsibility, however, for assisting site management with emergency response actions to the on-site effects and for taking the proper response actions to cope with off-site effects would normally be in the local government. State agencies could become involved when local officials determine that the needed response actions exceed local capabilities and request State assistance.

At the Federal level, the advisory received by NRC would result in ERDA, DOD and other appropriate agencies being promptly alerted in the event that radiological monitoring and decontamination capabilities or other Federal assistance may be required at the facility site to support State and local efforts. If the incident appears to exceed the radiological response capabilities of the State and local governments, at the request of State authorities or the NRC, the Interagency Radiological Assistance Plan would be implemented by ERDA to bring to bear such Federal resources as may be needed to cope with the radiological aspects of the emergency.

Figure IV-3 schematically sets forth the response activities involved in fixed-site type of nuclear emergency.

3. Other Incidents

Except for illegal incidents, those in this category will normally be a consequence of a transportation accident or will occur in the course of the movement of a nuclear device or nuclear materials. Responsibility for immediately coping with such incidents rests with the Federal agency or private contractor having custody of the device or materials during movement. Response actions would promptly be taken by the responsible agency or private contractor in accordance with pre-established plans for such incidents, to minimize the danger to life and property. These plans should be coordinated with the appropriate State and local authorities. Arrangements should be developed between the Federal agency (ERDA, DOD, NRC) owning or having control of the nuclear device or material being moved and the appropriate State and local authorities which will permit advising the latter in a timely manner of any such incidents involving such movements through their

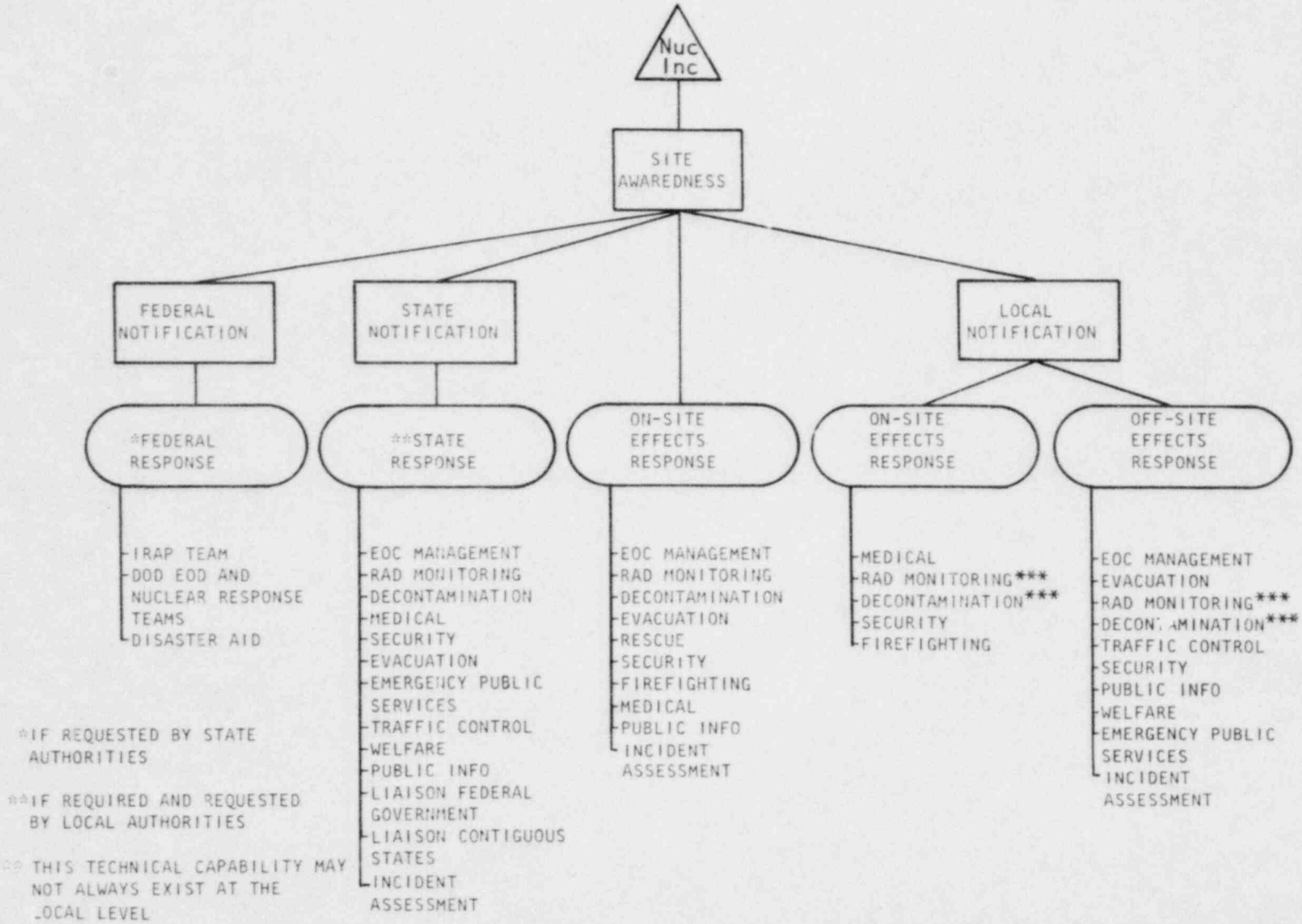

Figure IV-3. Nuclear Incident Response

jurisdictions. This would allow the State and local authorities to take promptly such precautionary or alerting measures as they might consider necessary.

Among the first actions to be taken by on-the-spot Federal agency or private contractor personnel involved in the movement of the nuclear device or materials would be to notify local law enforcement authorities of the incident in order to effect area cordoning and traffic (people and vehicles) control for safety purposes and to permit unimpeded response actions. Notification would also be promptly made by such personnel to the State "Office of Emergency Services" (or its equivalent) who would alert the proper State and local authorities, and to the appropriate office of the Federal agency involved. The alerted State and local authorities would be prepared to provide such assistance as may be needed to cope with the incident. While the immediate response actions may be taken by the on-the-spot personnel of Federal agency or private contractor to reduce the hazard to life and property, the local authorities in whose jurisdiction the incident occurs would have primary responsibility for the over-all direction and control of the response actions required.

4. Summary

In summary, for Category I incidents, except those involving Federally owned or contracted nuclear facilities, State and local governmental authorities would be responsible in the first instance for dealing with the incident and the associated problems resulting from it. Federal agencies would be prepared to assist, in accordance with their responsibilities and legal authorities, when requested by State or local officials. The State "Office of Emergency Services," Radiological Health Office or other comparable State central emergency planning authority should assure that arrangements are included in State and local operational response plans for calling upon regionally available Federal resources. Such arrangements can be accomplished directly with the ERDA Regional Coordinating Office or with the regional office of the Federal agency concerned with the nuclear facility of interest (in most cases this will probably be the NRC, ERDA or a military service command).

Federal departments and agencies with custody or jurisdiction over nuclear facilities operations, devices and materials have special responsibilities for planning for Category I incidents with respect to those operations or materials. The primary agencies concerned with nuclear materials, operations devices and facilities are NRC, ERDA and DOD all of which have accomplished considerable planning for such incidents. Other Federal agencies charged with developing operational response plans for Category I incidents are the Department of Commerce, NASA and TVA. State and local emergency planners should as a basic consideration in developing their plans consult with those Federal authorities concerning the hazards posed by those facilities, operations, devices or materials. The nature of the hazard to the public safety and health will determine the type nuclear emergency planning and response actions which will be needed at the State and at the local level.

C. CATEGORY II INCIDENTS

There has been only limited experience with Federal-State relationships in responding to Category II nuclear emergencies. Yet an incident in this category could introduce unprecedented and unusual requirements for Federal-State coordination and collaboration. It would pose different and less well defined problems and relationships than those described for Category I.

1. Nuclear Blackmail or Threat (Figure IV-4)

The few incidents in this category which have occurred in the past have involved the threat to detonate a nuclear weapon/device or to disperse radioactive materials if certain demands were not met. Emergency planning to cope with such incidents is essential if government authorities are to be able to deal effectively with such threats. All levels of government (Federal, State and local) need to address the problem of emergency planning and response actions for such incidents and to coordinate their plans and activities. The potential threat to life and property in incidents of this nature and the type of demand that is usually made will in most cases be of sufficient seriousness and consequence that it will justify the prompt involvement of appropriate public officials in dealing with the incident.

Under Federal statutes, the FBI has special investigative responsibilities with respect to illegal activities involving nuclear material,

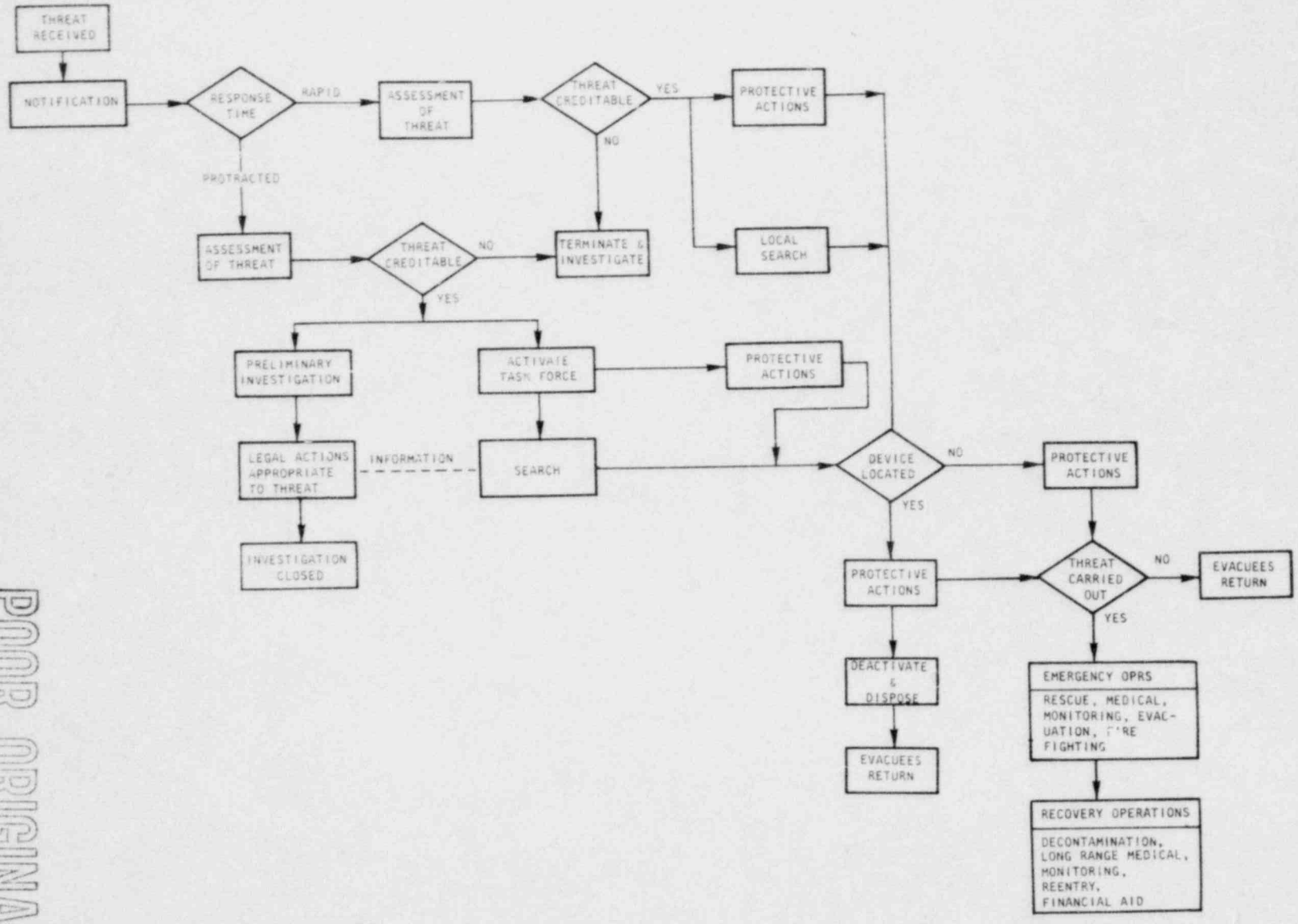

Figure IV-4. Nuclear Blackmail or Threat

devices or weapons but an incident involving nuclear blackmail or threats will also involve the State and local authorities. Any incident involving such activities which is brought to the attention of State or local law enforcement or other authorities should be promptly reported to the nearest FBI office by such authorities. Those authorities should also promptly notify the State Office of Emergency Services (or its equivalent).

a. Notification

Upon receipt of notification of the threat incident from law enforcement authorities or other official source, the OES would alert the Governor and proceed to monitor the incident. (It should also alert the Federal Preparedness Agency of the incident which would alert other Federal agencies as necessary. The FBI will also have alerted those Federal agencies which will have operational need for dealing with the incident.) Since local authorities and agencies would in the first instance, be dealing with the incident, the actual involvement of the Governor would depend on the nature of the threat, the potential danger to the community and the extent to which local authorities and agencies appear to be able to cope with the threat. At a minimum those State agencies would be alerted which could contribute to neutralizing the threat or which could take measures to limit the loss of life or damage to property should the threat be carried out. In the event of negotiations with the threat perpetrators, the Governor should be in close communications with the individuals selected as the negotiators.

b. Threat Credibility Assessment

The FBI, upon being advised of the incident, would initiate an investigation, in close cooperation with State and local officials, with the emphasis being on determining the credibility of the threat. In developing an assessment of threat credibility, other agencies and sources will participate in and contribute to the assessment process. ERDA and other technical agencies can evaluate the nuclear weapon, device or material claimed in the threat and estimate casualty and damage potential. Intelligence and law enforcement agencies can provide background data on the groups or individuals involved and their motivation. Medical agencies and personnel can provide judgments and views on the probable behavior patterns of the groups or individuals involved under various conditions and situations. The process of credibility assessment is a continuous one as additional data and intelligence becomes available during the investigative process. While the FBI may

function as the lead agency in collecting pertinent information on the threat, evaluating the data and providing advice on threat credibility, the actual determination on threat credibility and the decisions on the actions to be taken are the responsibility of the local authority (mayor or county executive) having jurisdiction or if the situation is of sufficient seriousness or consequence the State authorities, namely the Governor. In some cases, the Governor may determine that the nature of the threat and the scope of the demands exceed State capabilities and authorities and he may request the Federal government and the President to exercise Federal control.

c. Response Operations

Although the FBI would function as the lead agency because of its special investigatory responsibilities under Federal law, responsibility for coping with the threat and its perpetrators also rests with State and local authorities. Those authorities would be concerned with law and order considerations, traffic control, special emergency services, possible evacuation and other damage limiting measures. However the degree to which operational response plans would be activated would be a function of the nature of the threat, the level of credibility attributed to the threat and the types of demands made by the threat perpetrators. The responsible state or local officials would have to determine what response actions to take (e.g., do nothing, capitulate to the extortionists and meet the demand, evacuate an area, etc.) in light of their weighing those considerations.

A critical element in the response operations phase are the activities to search for and locate the device or materials involved in the threat. Once responsible officials assess the threat and conclude that sufficient credibility exists, the FBI working with local, State and Federal agencies would initiate measures to search for and locate the device or materials. The specialized equipments of ERDA and the US military forces may be employed for these purposes at the request of the FBI or State authorities.

To assure effective coordination of all response activities concerned with the incident, the potential danger to the community contained

in most threats warrants having the OES activate the State Emergency Operation Center. The Center would be concerned not just with operational response coordination but related considerations such as how credibility assessments should affect proposed response actions, who should communicate with the terrorists and how, where should public information releases be coordinated, who should determine whether federal assistance would be required and how should liaison be maintained with Federal authorities concerned with the incident.

2. Nuclear Theft and Sabotage

Under the Atomic Energy Act of 1954 and since Federal property will often be involved in incidents of this type, the FBI will be the principal agency concerned with the investigation of these crimes. The FBI would rely on its established working relationships for appropriate coordination with State and local law enforcement authorities in the conduct of its investigation.

3. Accidental or Unauthorized Launch of Nuclear Weapons

The Department of Defense has responsibility for warning of an accidental or unauthorized launch of a nuclear weapon and would carry out this responsibility through its notification and warning systems. Rapid notification to the proper State authorities, and warning of the populace if time permits through civil defense procedures, should permit State and local authorities to implement civil defense and emergency preparedness plans in order to minimize the loss of life, community disruption and property damage.

4. Potentially Serious Nuclear Incident

The third group of Category II incidents concerns those accidents or events at nuclear facilities or in the transportation of nuclear weapons/materials which would create a potential for widespread hazards or damage to people and property. The need with respect to this group of i dents is to identify the types of serious nuclear emergencies that could occur and to plan, prior to the more serious event taking place, for the interfaces that would be required between Federal and State agencies. The State Office of Emergency Services would normally be responsible for providing the leadership and guidance to State and local agencies for such planning.

In the case of incidents involving federally owned or controlled facilities, materials or weapons, the critical requirement would be to have in place the means and processes for advising the proper State and local agencies of the seriousness of the incident. In most cases the agency primarily concerned would be the State Office of Emergency Services (or its equivalent) or the Radiological Health Office. The State agency would then alert the Governor to the incident and depending upon the nature of the potential danger, the State emergency or crisis management structure would be activated and the appropriate State and local operational response agencies alerted.

Where the accident or event creating the potential for a serious nuclear emergency does not involve federally owned facilities or materials, the licensee would promptly inform State and local authorities of the potential danger. Those authorities would immediately advise the Office of Emergency Services (or its equivalent) to enable that organization to take the necessary actions in accordance with its plans and procedures. Simultaneous with notification of the State and local authorities, the licensee would also promptly inform the NRC and other Federal agencies of the potential danger. The notification to the State OES would enable that agency to initiate the process of implementing the operational response plans of State and local agencies as justified by the potential danger to the community.

5. Summary

Federal-State relationships in the event of a Category II emergency pose unusual problems, and jurisdictional roles are less clearly defined than for Category I incidents . The initial governmental responsibility for coping with such emergencies, however, rests with the State and local authorities. As a practical matter, the nature and scope of the emergency will determine whether the State endeavors to deal with the emergency or whether the Governor requests the President to have Federal authorities undertake the necessary response actions. The development of emergency plans, both at the State and the Federal level, to deal with nuclear emergencies in this category should be considered a high priority requirement.

This is particularly the case for incidents of nuclear blackmail or threat.

Federal policy related to Category II emergencies strongly emphasizes preparedness for managing the nuclear emergency crisis. Federal departments and agencies are prepared to assist State and local governments in preventing, controlling or containing potential or threatened nuclear incidents. The departments and agencies which have major planning tasks designed to reduce the hazards inherent in Category II incidents are: the FBI, DOD, ERDA, NRC and FPA.

D. CATEGORY III INCIDENTS

While there has been no actual experience in the United States with incidents of nuclear detonation or widespread radioactive contamination affecting the general public directly, the possibility of an incident of major magnitude is real and everpresent. The basic responsibility for coping with the disaster aspects of such emergencies and directing the overall response operation would rest with the State authorities. (It can be expected that the Governor would take charge and personally direct activities through State and local agencies). Nevertheless, it should be anticipated that the Federal government would play a prominent role because of the extensive resources which would probably have to be employed and the likelihood that national interest considerations could become involved, particularly if the danger threatened more than one State.

In Category III nuclear emergencies, prompt notification would be given by the State Office of Emergency Services to State and local agencies to implement emergency response plans. The Governor through any special crisis management structure he may have, e.g. the disaster emergency structure which may exist in his Office of Emergency Services, would initiate the operational response actions, one of the most immediate being an assessment of the accident/incident. Depending on that assessment and the nature of the event and its aftermath, the appropriate State and local agencies would implement operational response plans. In most instances, these plans

will be agency plans for coping with major natural or man-made disasters. It would be necessary in implementing those plans to take into account the presence of radioactivity. Thus radiological and decontamination activities, emergency medical services, public safety and rescue operations would be immediate requirements. To the extent that State response planning provides for cooperative arrangements with local Federal agencies, the operational response plans of the latter to support State efforts would also be implemented.

Based on initial incident assessments and reports and the recommendations received from the Governor (or the State Office of Emergency Services), the President could declare a "major disaster" or "emergency" which would commit Federal resources to supplement State operations. Most probably the President would dispatch a Personal Representative to be his man-on-the-spot and Federal Coordinaton Officer to direct and coordinate Federal agency responses, to maintain liaison and coordinate activities with the Governor and the appropriate State agencies and to report back to the President in order to keep him fully informed on the situation.

The principal Federal agencies which would be initially involved in these activities would be DHUD, ERDA, DOD, HEW, Agriculture, DCPA and FPA. Their operations would be generally focused on performing emergency work and services essential to save lives, to protect and preserve property, and to provide for public health and safety. They would include but not be limited to:

(1) Radiological monitoring and decontamination activities.
(2) Emergency medical care.
(3) Emergency evacuation and shelter.
(4) Provision of food, water, medicine and other needs, including movement of supplies and persons.
(5) Clearance of roads and construction of temporary bridges necessary to the performance of emergency tasks and essential community services.
(6) Search and rescue.
(7) Demolition of unsafe structures.

(8) Warning of further risks and hazards.

(9) Other measures to reduce immediate threats to life, property and public health and safety.

In summary, it is expected that the State Governor would retain basic responsibility for coping with the disaster and directing the overall response operations. Depending upon the nature of the emergency and the extent of devastation, the Governor could be expected to initiate a prompt request to the President for Federal assistance. It can be anticipated that the President would act promptly on a State request for assistance, particularly in light of the unprecedented nature and severity of the catastrophe. The full range of assistance provided by Federal agencies would require close contact between those agencies and the State agencies. While the scope of the emergency assistance task might pose grave resource questions, it should not present any serious organizational difficulties.

E. CATEGORY IV INCIDENTS

There has of course been no experience with a Category IV nuclear emergency in the United States. However, it is reasonable to suppose that the Congress, at the President's request, would enact special recovery legislation authorizing the specific types of long-range programs required as a result of any Category IV nuclear emergency that might have occurred.

F. CONCLUSIONS

The fundamental elements which should guide Federal-State relationships in dealing with peacetime nuclear emergencies include the following:

(1) The States have the authority and responsibility for initial response in most nuclear emergencies. The Federal government would have the responsibility for dealing with those emergencies that occur on Federal territory or are of such scope and magnitude that the national interest or international obligations of the U.S. are affected.

(2) The States' resources and capabilities for responding to nuclear emergencies vary widely, but, without Federal aid, most are likely to be inadequate for dealing with some Category II incidents, and all Category III and IV situations.

(3) The Federal government has the capability to provide massive and diversified assistance, including technically specialized assistance in the radiological area.

(4) Federal assistance would be made available on State request, and is in principle supplemental to State and local resources.

(5) The Federal government should be prepared to provide information to State officials on what types of assistance it can make available and to establish the procedures and mechanisms whereby States can obtain such assistance.

(6) The State governments, if they request Federal assistance, should expect to follow applicable Federal procedures and guidance. On the other hand, the Federal government has an obligation to inform the States of the process for requesting, using, and accounting for such Federal assistance as may be made available to the State.

CHAPTER V

EXAMPLE STATE RESPONSE PLAN FOR PEACETIME NUCLEAR EMERGENCIES

A. INTRODUCTION

To assist the States in the preparation of their response plans for peacetime nuclear emergencies, a suggested approach to this problem is set forth schematically in Figure V-1 and an example response plan is provided in the following Section B solely for illustrative purposes. The example plan is intended to provide the concepts and considerations which should be taken into account by the States in the preparation of their nuclear emergency responses and only secondarily to furnish a common format for use in developing the State response plans. The plan is the vehicle for setting forth in an orderly manner a description of who is responsible for what and the rationale explaining what is done when and why. It is recognized that some States are in the process of developing Radiological Emergency Response Planning (RERP) documents with the assistance of NRC and other Federal agencies. RERP is an important element of planning but does not encompass the total spectrum of peacetime nuclear emergencies. A State's response plan for peacetime nuclear emergencies is intended to provide such a structure in which existing State planning efforts, such as RERP, can be incorporated along with needed planning for the full range of response needed in dealing with peacetime nuclear emergencies.

It is anticipated that the individual States will adapt and modify the example plan to reflect their own legislative requirements, vulnerabilities to nuclear emergencies, existing emergency preparedness and response plans and mechanisms, and interstate or Federal-State arrangements for disaster or other emergency response activities. The example plan contained in this chapter is not intended to suggest establishing or changing any organizational arrangements to deal with nuclear emergency planning or response. It is fully recognized that the format, structure and substance of a State plan for coping with nuclear emergencies is a matter for each State to determine in light of its own situation and requirements.

TITLE OF SECTION	NATURE OR PURPOSE OF SECTION	CONTENTS OF SECTION
(THE HEADING TO BE USED FOR THE TOPIC)	(THE BASIC QUESTION BEING ANSWERED UNDER THIS HEADING)	(THE ELEMENTS TO BE COVERED UNDER THIS HEADING)
THE PROBLEM	1. WHAT IS THE PLAN DESIGNED TO DEAL WITH? (DEFINITION OF PROBLEM)	DESCRIBE WHAT PNE'S ARE. DISCUSS VULNERABILITY TO PNE'S, DESCRIBE CATEGORIES OF PNE'S.
PURPOSE (OR OBJECTIVE, OR MISSION)	2. WHAT IS THE PLAN INTENDED TO ACCOMPLISH?	INDICATE WHAT AIMS THE PLAN IS DESIGNED TO ACHIEVE - WHAT UTILITY IT IS EXPECTED TO HAVE.
AUTHORITIES	3. WHAT LEGISLATIVE OR OTHER LEGAL BASIS EXISTS FOR THE PLAN?	CITE LEGISLATION, EXECUTIVE ORDERS, AGREEMENTS, ETC., THAT SERVE AS THE SOURCE OF AUTHORITY FOR PERFORMANCE OF FUNCTIONS OR TASKS PRESCRIBED IN THE PLAN.
CONCEPT OF OPERATIONS	4. WHAT IS THE STATE'S OVERALL APPROACH TO THE PROBLEM?	DESCRIBE IN GENERAL TERMS RESPONSIBILITIES OF FEDERAL, STATE AND LOCAL AGENCIES, ROLE OF GOVERNOR AND HIS STAFF IN OVERALL DIRECTION, PRIORITY OF EFFORT. INCLUDE OTHER GENERAL POLICY GUIDELINES (SUCH AS RELATIONSHIP TO OTHER EMERGENCY PLANS) AND ASSUMPTIONS.
STATE ORGANIZATION	5. WHAT KIND OF STATE ORGANIZATIONAL PATTERN IS NEEDED?	DESCRIBE WHAT OFFICES, DEPARTMENTS, AGENCIES, ETC., EXIST AT STATE LEVEL WITH RELEVANT CAPABILITIES.
TASK ASSIGNMENTS	6. WHO IS RESPONSIBLE FOR WHAT ACTIONS?	ASSIGN RESPONSIBILITY FOR FUNCTIONS OR TASKS TO APPROPRIATE ELEMENTS OF STATE GOVERNMENT.
FEDERAL ASSISTANCE	7. WHAT FEDERAL HELP IS AVAILABLE AND HOW CAN IT BE OBTAINED?	DESCRIBE SCOPE AND NATURE OF FEDERAL ASSISTANCE AND SUPPORT THAT MAY BECOME AVAILABLE, TOGETHER WITH PROCEDURES FOR OBTAINING SUCH ASSISTANCE OR SUPPORT.
LOCAL GOVERNMENT ROLE	8. WHAT CAPABILITIES OF LOCAL GOVERNMENT ARE AVAILABLE AND HOW SHOULD THEY BE COORDINATED WITH STATE EFFORTS?	DESCRIBE SCOPE AND NATURE OF LOCAL (COUNTY, CITY, ETC.) GOVERNMENT CAPABILITIES AND RESPONSIBILITIES RELEVANT TO PNE RESPONSE AND DESCRIBE STATE - LOCAL COORDINATION ARRANGEMENTS.
INTERSTATE COOPERATION	9. WHAT COOPERATIVE ARRANGEMENTS WITH ADJACENT STATE OR REGIONAL ORGANIZATIONS EXIST OR SHOULD BE ESTABLISHED?	DESCRIBE (OR ASSIGN) RESPONSIBILITY FOR ESTABLISHING COOPERATIVE ARRANGEMENTS WITH CONTIGUOUS STATE AND/OR REGIONAL ORGANIZATIONS (AND ADJACENT FOREIGN PROVINCES OR STATES WHERE APPLICABLE) FOR RESPONDING TO PNE'S WHOSE EFFECTS CROSS THE STATE'S BOUNDARIES.
REVIEW AND TESTING OF PLAN	10. WHAT ARRANGEMENTS SHOULD BE ESTABLISHED FOR KEEPING THE PLAN CURRENT AND EFFECTIVE?	PRESCRIBE ARRANGEMENTS FOR PERIODIC REVIEW, TESTING, EXERCISING AND UPDATING OF THE RESPONSE PLAN.
PROMULGATION OF THE PLAN	11. HOW SHOULD THE PLAN BE MADE OPERATIONAL?	DESCRIBE THE LEGAL OR OTHER ARRANGEMENTS FOR THE ISSUANCE OF THE PLAN.

Figure V-1. An Approach to Preparing a State Response Plan for Peacetime Nuclear Emergencies

B. AN EXAMPLE STATE RESPONSE PLAN

1. Peacetime Nuclear Emergencies

a. Definition of Nuclear Emergency

(Comment: The purpose of this section is to provide a common definition of peacetime nuclear emergencies for plan users. An illustrative definition which could be used is as follows: "A peacetime nuclear emergency includes situations ranging from uncontrolled release of a small quantity of radioactive material with minimum or no casualties or damage, through incidents that pose a threat of a detonation and/or widespread contamination, to incidents where there is widespread dissemination of radioactive materials or the detonation of a nuclear device or weapon which could result in heavy casualties and extensive property damage and destruction, and which could require long-range recovery measures.")

b. Vulnerability to Nuclear Emergencies

(Comment: The extent to which the State is vulnerable to peacetime nuclear emergencies should be reflected in this Section. If a vulnerability or hazard assessment has been made, its results should be included. The locations of nuclear facilities in the State should be identified; major routes or transportation centers for nuclear materials movement should be spelled out; geographic faults or other risk factors in relation to nuclear facilities or storage points should be highlighted; and risks presented to the State in the event of a nuclear emergency in a contiguous State.)

c. Categories of Peacetime Nuclear Emergencies

(Comment: For planning purposes, the Federal Preparedness Agency has defined four categories of nuclear emergencies which could usefully be adopted by planners at the State level. The four categories are:

(1) Category I - a nuclear incident limited in scope and manageable under existing peacetime arrangements with the local, State, and Federal resources readily available, and without recourse to extraordinary measures.

(2) Category II - a nuclear incident which, without adequate response measures, could produce a detonation and/or widespread radioactive contamination.

(3) Category III - a situation where despite all preventive and controlling efforts, a nuclear detonation and/or widespread radioactive contamination has occurred.

(4) Category IV - the post-Category III environment requiring long-range recovery and rehabilitation of the impacted area(s).

2. The Plan Objective

a. Purpose

(Comment: In this Section, the specific aims of the plan should be established. These would, among other things, establish the concepts and policies for all State and local government agencies and for those private and semi-private emergency organizations which can be expected to respond to nuclear emergencies; provide for the continuity of government; define the responsibilities of State and local government and pertinent private and semi-private emergency organizations; provide a basis to enable State and local planners to prepare agency response plans; and such other purposes as may be considered appropriate for the State in light of its existing statutes and policies.)

b. Scope

(Comment: This Section should outline what areas of activity the Plan and its Annexes will address. Illustratively these could include such activities as:

(1) Informing and warning the public of impending nuclear emergency and of the readiness actions to be taken to enhance survival and reduce loss of property

(2) Protection of the population by the use of best available shelters or relocation of specified elements of the population

(3) Care of disaster victims and their subsequent rehabilitation or reconstruction of affected property

(4) Implementation of procedures to reduce loss of life and hazards to health caused by contamination of drinking water and agricultural foodstuffs.)

3. Authorities

a. Authorities

(Comment: This Section should cite those State laws and Executive Orders pertaining to the use of State agencies and resources in emergency and disaster situations. It should also set forth Federal statutes, Executive Orders, Proclamations or Federal Register Notices which relate to the handling of nuclear emergencies. It may be desirable to provide the verbatim texts of key laws and Executive Orders in an Annex to the Plan.)

b. References

(Comment: This Section should identify State documents and publications which could affect planning for nuclear emergencies. Similarly, it should also include citations of those Federal publications issued by Federal agencies which would be of interest or concern to State and local planners, e.g., "Federal Response Plan for Peacetime Nuclear Emergencies" issued by FPA in 1976; "Guide and Checklist for the Development and Evaluation of State and Local Radiological Emergency Response Plans in Support of Fixed Nuclear Facilities" (NUREG 75/111) issued by NRC in 1975.)

c. Rescissions

(Comment: Any State plans, executive orders or other administrative directives which the Plan and its Annexes overtake or make obsolete.)

d. Definitions

(Comment: Specific key terms which are used in the Plan that should be defined by the Plan developer to assure common understandings by the users. Illustrative of such terms are "national emergency," "nuclear facility," "Federal Coordinating Officer," and "Radiological Response Team.")

4. Concept of Operations

a. Planning Assumptions

(Comment: To provide a common point of departure for all planners and to assure that users understand the basis upon which the Plan

is constructed so that they can better carry out an effective response, the planning assumptions should be explicitly stated. Plan developers should establish those assumptions that are keyed to their special State situations as well as those which would be generally applicable.) Examples of planning assumptions are:

(1) State and local governments have primary responsibility for responding to a nuclear emergency and will provide the initial response to the emergency.

(2) The Federal government will provide assistance upon request by the Governor during a peactime nuclear emergency.

(3) The warning time before a nuclear emergency may vary from none to hours or days. However, for most emergencies, there will be very little warning.

(4) A detonation or widespread contamination may occur at or near the seat of government, impairing or disabling government operations.

(5) Emergencies could threaten or take place simultaneously in the State and adjacent States requiring coordinated interstate response.

(6) Areas could become contaminated or threatened by fallout, requiring the population to seek protection in fallout shelters or to be evacuated.

b. Responsibilities

(Comment: This Section should set out the specific roles for the several governmental levels within the State and what is expected of them. Thus, for example, it should be established that emergency preparedness and response activities are the responsibility of the Governor and that he will exercise those responsibilities through the "Office of Emergency Services" (or comparable central emergency preparedness planning agency). It should indicate that State agencies having emergency responsibilities should prepare intraagency emergency plans, operating procedures, and checklists detailing the use and disposition of agency resources in the event of a nuclear emergency; that local political subdivisions are responsible in the first instance in coping with incidents within their jurisdiction until

it becomes evident that the event exceeds local capabilities; that plans and procedures are to be developed to provide for coordination with Federal and local government counterparts or corresponding agencies; that private sector facilities are to be identified and designated if their resources can be applied under the agency's emergency responsibilities; and that agreements should be signed by representatives of State agencies and private sector facilities when State agencies include private sector support in available resources and capabilities.)

(For the local level, this Section would note that each local jurisdiction will have a current emergency plan compatible with the State Plan providing for:

(1) Employment of all pertinent available local resources
(2) Dispatch of maximum mutual aid to stricken neighboring communities
(3) Receipt and effective application of mutual aid
(4) Means of communicating with the State "Office of Emergency Services"
(5) Providing estimates of the severity and extent of damage resulting, or potentially resulting, from the nuclear emergency).

c. Operational Phases

(Comment: This Section would provide guidance for State and local planners by identifying the several phases through which a nuclear emergency might evolve and the general character of the response actions to be associated with a particular phase. Criteria and standards defining hazards to health and property should be established for guidance to State and local planners. In many instances Federal agencies provide guidelines or such criteria, particularly for nuclear safety and radiological effects which can be useful to State and local planners but the determination of specific criteria and standards are the responsibility of State and local officials.) For example, the following phases could be established:

(1) Phase I: These are conditions which could result in a nuclear emergency, e.g., an unconfirmed threat to use illegal nuclear weapon/device, an accident in a nuclear installation which could lead to a Category I (or higher) situation, a report of a missing nuclear weapons equipped aircraft, etc. In this phase all involved

jurisdictions and agencies would review their nuclear emergency plans and activate appropriate elements of it. This could include alerting key personnel, assuring readiness of essential resources, and preparing to deploy resources to the threatened area if required, keeping the potentially affected population informed of current conditions and issuing appropriate preparatory instructions.

(2) Phase II: This stage of readiness could result from the determination that a threat of the use of an illegal nuclear weapon/device is credible and probably valid, notification that a nuclear explosion has registered on seismographic instruments in the region, advice that a runaway nuclear reactor has reached the core "meltdown" point, or a report that a severe earthquake has occurred in the vicinity of a nuclear storage or production site. State and local authorities would immediately put nuclear emergency response plans into full operation. They would alert threatened elements of the populace and initiate evacuation if necessary and bring all needed resources into action and deployment.

(3) Phase III: These are conditions occurring as a result of a nuclear emergency requiring resources and capabilities beyond those available to State and local authorities and major Federal assistance will be required to effectively cope with the emergency. This would involve the appropriate gubernatorial action requesting the President to provide Federal resources and it may or may not include a request for Federal authorities to assume charge of the operational response to the nuclear emergency.)

5. State Organization

(Comment: This Section should provide the description of the State's organization of emergency preparedness activities. It should identify the agencies involved, establish their organizational relationships and clearly define lines of authority and responsibility.)

a. Central Emergency Planning/Response Agency

(Comment: This Section describes the functions, responsibilities, and organization of the State's central agency for nuclear emergency preparedness planning and response activities. It should define that agency's relationships to the Governor, to other State agencies which would be involved in nuclear emergency activities and to the local authorities.)

b. Other State Agencies

(Comment: In this Section, the State agencies which would become operationally involved in preventing or responding to a nuclear emergency should be specifically identified. Their functions, responsibilities, authorities and relationships with other State agencies and governmental levels should be described.)

6. Task Assignments

(Comment: Since the State organization for nuclear emergency operations would, in most instances, be based on the normal governmental structure and existing channels of communications, specific task assignments should follow that principle. Task assignments should ensure that essential functions are performed by the appropriate agency or level of government and they should be made in accordance with the pertinent provision of laws. In making such assignments, however, certain basic criteria and considerations should be observed to assure completeness, efficiency and economy of operation, to avoid uncertainty in responsibility:

(1) Each basic task should be assigned primarily to one functional unit.

(2) All foreseeable emergency tasks should be assigned.

(3) Emergency tasks should be compatible with the agency's regular functions, in so far as is feasible.

(4) Certain types of tasks can usefully be assigned to several agencies, i.e., situation reporting, damage assessment, radiological monitoring, etc. One agency, however, should be designated as the "lead" agency to coordinate the task.

(5) The relative priority of tasks may change according to the situation.

(6) Each agency should be responsible for performing the necessary planning, organizing, training, stocking, etc., to enable it to carry out assigned tasks.

Key categories of tasks which should be assigned are (see Figure (IV-1):

(1) Emergency Planning and Preparedness

(2) Coordination of Preparedness Activities

(3) Investigation and Intelligence

(4) Public Safety

(a) Law enforcement

(b) Traffic control

(c) Evacuation

(5) Public Health

(a) Emergency medical services

(b) Radiological/monitoring teams

(c) Decontamination/toxic waste disposal

(6) Public welfare

(7) Essential public services

(8) Economic Stabilization

(9) Long-Range Recovery

The foregoing are designed to be illustrative of the tasks which may need to be assigned and planners should determine the specific tasks to be undertaken based on the type of emergency which may occur in their jurisdiction and their response capabilities.)

7. Federal Assistance

a. Types of Available Federal Assistance

(Comment: The general nature and types of assistance which are available from Federal agencies in the event of a nuclear emergency should be identified. The description should also locate where such assistance can be found within the State or in nearby areas. For example, the

DOD technical capabilities on disarming nuclear weapons/devices; ERDA radiologic monitoring and detection equipment; Department of Housing and Urban Development resources for disaster relief; etc.)

b. Procedures for Securing Federal Assistance

(Comment: The conditions and policies and procedures under which State and local authorities can request Federal assistance should be clearly set forth. This Section should indicate specifically who the request originators may be and who the final approving authority would be on any request submitted to the Federal authorities for and in the event of a nuclear emergency. It should also identify the Federal agency and its location for the various types of assistance which can be requested.)

8. Local Government Role

(Comment: This Section should indicate the extent to which State authorities will look to city/county/township authorities and agencies to deal with particular aspects of a nuclear emergency that might occur in their jurisdiction. This may be simply that the responsible elected senior official will assure that local preparedness plans are developed, that locally available resources, public and private, will be fully committed to coping with the nuclear emergency, and that such official follows certain procedures in requesting assistance from the State or Federal government agencies if such is necessary.)

9. Interstate Cooperation

(Comment: In this Section there should be an up-to-date listing of all agreements or compacts under which the State could request help from other States in the event of a nuclear emergency. The nature of such assistance and the policies and procedures for securing it should be specified. This Section should also set forth the responsibilities of State and local authorities to render assistance in the event of an incident in another State with which a cooperation arrangement exists.)

10. Plan Review Training and Testing

(Comment: This Section should provide the principles and guidelines for reviewing the Plan and those of State agencies and local authorities in support of the Plan. It should also provide the procedure and process

for updating the Plan and any subordinate support Plans of those agencies and local authorities. This Section should establish the basis for periodic testing and evaluation of the State Plan or that of any subordinate component and provide for a training program to be conducted periodically to assure the proficiency of emergency preparedness personnel.)

II. Promulgation of the Plan

(Comment: This Section should describe the legal and administrative process whereby the plan will become effective; establishes the procedures for amending the Plan; and sets forth the means for the Plan to become operational.)

APPENDIX A

ILLUSTRATIVE AUTHORITIES RELEVANT TO PEACETIME NUCLEAR EMERGENCY PREPAREDNESS PLANNING BY STATE AND LOCAL GOVERNMENT AUTHORITIES

1. RESPONSIBLITIES AND AUTHORITIES

   A. Definition of Governor's responsibilities and powers
   B. Authority for declaration of emergency
   C. Establishment or description of a central planning and coordinating agency for peacetime nuclear emergencies defining its responsibilities and powers for planning, coordination and response operations.
   D. Responsibilities and powers of State agencies in the event of peacetime nuclear emergencies
   E. Responsibilities and powers of local political subdivisions in the event of a peacetime nuclear emergency

2. INTERSTATE COMPACTS FOR MUTUAL AID

3. AGREEMENTS WITH FEDERAL AGENCIES FOR ASSISTANCE

4. RADIOACTIVE AND NUCLEAR MATERIALS CONTROL

   A. Registration and/or licensing of facilities or sources of radiation
   B. Transportation of radioactive materials (i.e., nuclear materials)
   C. Contamination of the environment
   D. Radiation control standards
   E. Protective measures and standards for public health and safety

5. EMERGENCY SERVICES

To respond effectively to the various types of nuclear incidents which may occur in peacetime, statutory authority should exist to enable State or local authority officials to promptly engage in the following activities as they may be required.

A. Public Safety Measures
   1. Maintenance of Law and Order
   2. Search and Rescue
   3. Firefighting
   4. Vital Installation Security
   5. Traffic Control
   6. Area Isolation and/or Quarantine
   7. Evacuation
   8. Control of Reentry

B. Public Health Measures
   1. Emergency Medical Services
   2. Radiological Monitoring (including weather information)
   3. Decontamination
   4. Protective Measures for Food and Water Supplies
   5. Identification of Dead, and Mortuary Services
   6. Toxic Waste Disposal

C. Public Welfare Measures
   1. Emergency Registration
   2. Emergency Feeding
   3. Emergency Shelter
   4. Temporary Housing

D. Other Essential Public Services
   1. Water Supply
   2. Debris Clearance
   3. Emergency Restoration of Utilities
   4. Emergency Transportation

5. Emergency Telecommunications
6. Emergency Manpower Coordination

E. Investigative and Intelligence Measures
1. Investigation of Nuclear Threats and Thefts
2. Detection, Neutralization and Recovery of Nuclear Devices or Materials

F. Standby Activities
1. Maintaining Emergency Operations Centers
2. Maintaining Emergency Communications Facilities
3. Maintaining Radiological Monitoring Capabilities
4. Testing and Exercising Plans and Facilities

6. FINANCIAL MATTERS

A. Nuclear Emergency Preparedness Planning and Response Operations Funding
B. Volunteer Compensation and Benefits
C. Liability; Public and Private

APPENDIX B

FEDERAL AUTHORITIES RELEVANT TO PEACETIME NUCLEAR EMERGENCY PREPAREDNESS PLANNING AND RESPONSE ACTIVITIES

1. THE CONSTITUTION OF THE UNITED STATES

2. FEDERAL STATUTES

The National Security Act of 1947, as Amended
The Atomic Energy Act of 1954, as Amended
The Energy Reorganization Act of 1974 (PL93-438)
The Disaster Relief Act of 1974 (PL93-288)
The Civil Defense Act of 1950, as Amended
The Defense Production Act of 1950, as Amended
The Interstate Commerce Act, as Amended
The Explosives and Combustibles Act of 1948
The Public Health Service Act (42USC241)
The Clean Air Act of 1970, as Amended (42USC1857)
The Federal Hazardous Substance Act (15USC2161)
The Federal Water Pollution Control Act, as Amended (33USC466)
The Air Pollution Research and Technical Assistance Act (42USC1857)
The Federal Food, Drug and Cosmetic Act (21USC301)
The Meat Inspection Act (21USC601)
The Poultry Products Inspection Act (21USC451)
The Egg Products Inspection Act (21USC1031)

3. EXECUTIVE ORDERS

E010014, Nov 3, 1948 (Pollution of Surface and Ground Waters)
E010173, Oct 18, 1950 (Safeguarding Harbors, Ports and Waterfront)

E10529, April 22, 1954 (Local Civil Defense Preemergency Training)
E010779, August 20, 1958 (Pollution of the Atmosphere)
E010952, July 20, 1961 (Civil Defense Responsibilities)
E011051, Sept 27, 1962 (Office of Emergency Planning)
E011490, Oct 28, 1969 (Emergency Preparedness Functions)
E011725, June 27, 1973 (Reassigns Preparedness Functions)
E011795, May 22, 1974 (Delegates Disaster Relief Authorities)
E011921, June 15, 1976 (Adjusts Preparedness Assignments and Functional Changes).

4. US CODE

18USC3052; Criminal Investigative Authority
28USC533; Criminal Investigative Authority
18USC231, 241, 641, 832, 875, 1361, 1362, 2383 and 2384; — Criminal Provisions Which May be Involved in Nuclear Extortion or Terrorism
10USC331-336; Use of Military Forces to Suppress Criminal Violence

5. CODES OF FEDERAL REGULATIONS

Title 10 - Atomic Energy
Title 14 - Coast Guard
Title 18 - Crimes and Criminal Procedure
Title 21 - Food and Drugs
Title 32 - Navigation and Navigable Waters
Title 42 - The Public Health and Welfare
Title 49 - Transportation
Title 50 - War and National Defense

APPENDIX C

OPERATIONAL RESPONSE PLANNING RESPONSIBILITIES AT THE FEDERAL LEVEL

The Federal agencies enumerated below have operational response planning responsibilities for the category of incident shown (other Federal agencies have support planning responsibilities).

CATEGORY I

1. Nuclear Regulatory Commission
2. Energy Research and Development Administration
3. Department of Defense
4. Department of Commerce
5. National Aeronautics and Space Administration
6. Tennessee Valley Administration

CATEGORY II

1. Department of Justice/Federal Bureau of Investigation
2. Department of Defense
3. Energy Research and Development Administration
4. Nuclear Regulatory Commission

CATEGORY III

1. Department of Housing and Urban Development
2. Department of Defense
3. Energy Research and Development Administration
4. Nuclear Regulatory Commission

CATEGORY IV

1. Federal Preparedness Agency, GSA