SIGNATURE SHEET

We, the undersigned, have read the Illinois Plan for Radiological Accidents. We accept the duties and responsibilities assigned to us, and acknowledge the relationships herein established. We further agree to provide all resources, both manpower and material, necessary to perform our assigned tasks.

The Illinois Plan for Radiological Accidents is now adopted for use by the State of Illinois.

Governor, State of Illinois	12/85 Date
Vice President, Nuclear Operations, Commonwealth Edison Co.	12-13-85 Date
Vice President, Illinois Power Company	December 12, 1985 Date
Director, Illinois Emergency Services and Disaster Agency	12/11/85 Date
Director, Illinois Department of Nuclear Safety	August 2, 1985 Date

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50-456/459 OL

A - Exhibit 3
3/11/86

Chapter 1

NUCLEAR REGULATORY COMMISSION

Docket No. 50-456 OL Official Exh. No. 3
In the matter of COMMONWEALTH EDISON CO

Staff		IDENTIFIED	✓
Applicant	✓	RECEIVED	✓
Intervenor		REJECTED	
Cont'g Off'r			
Contractor		DATE	3/11/86
Other		Witness	
Reporter	GLS		

INTRODUCTION

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INTRODUCTION

A. Overview

The steady growth of nuclear power since World War II demands that plans be in readiness to protect both the population and the environment from the potential harmful effects of a nuclear accident or incident.

A comprehensive, workable plan of nuclear preparedness is particularly necessary in Illinois. Illinois leads the nation in the production of nuclear power, with the largest number of nuclear power plants in any single state in the nation.

One of the greatest potential dangers posed by nuclear power today is the widespread tendency to ignore its hazards, living in the hope that nothing will happen or that should something go wrong, the incident can be easily and instantly resolved. This policy of willful ignorance and complacency is an invitation to disaster.

Although a serious nuclear emergency is improbable, and the hazards of a nuclear incident are difficult to measure or assess at present, all potential hazards must be adequately considered.

The challenge of preparing a defense against a nuclear incident is that we must be ready for anything, yet no one knows the actual, measurable effects of a nuclear release. Still, both practicality and conscience urge us to cover all the bases in nuclear planning, to be flexible enough to meet whatever might occur.

This was the lesson of Three Mile Island. The jumble of crossed communications, duplicated efforts and faulty planning that crippled recovery efforts at Three Mile Island on March 28, 1979, serves as a warning to us all. The nuclear industry must work closely with the states to ensure the safety of nuclear power plant workers and the general public. Should anything malfunction within a fixed nuclear power facility or any other facet of the nuclear industry, a detailed plan has to be ready to be put into action to protect the populace.

The Illinois Emergency Services and Disaster Agency (IESDA) is committed to safeguarding the health, safety and well-being of Illinois citizens in times of disaster, whether the disaster be a tornado, crop failure, hurricane, flood, blizzard or any other man-made or natural crisis. IESDA, in cooperation with the Illinois Department of Nuclear Safety (IDNS), has coordinated the work of Federal, State and local agencies, law enforcement groups and support agencies, like the American Red Cross and the Salvation Army, in developing the nuclear preparedness plan called the Illinois Plan for Radiological Accidents (IPRA).

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B. IPRA Purpose and Authorization

The purpose of the IPRA is to protect the citizens of Illinois in the event of a radiological incident. IPRA rests upon the following foundations:

- general planning to cover the urgency of any nuclear accident;
- site-specific planning to protect citizens living near nuclear plants;
- a concept of operations so that the plan can be effectively carried out; and
- an effective allocation of resources and personnel.

IPRA pre-assigns the duties and responsibilities that would be taken by all the respondents to a nuclear incident, thus enabling actions to be made quickly and efficiently.

IESDA and IDNS share the responsibility for developing a plan to protect the public in the event of an accident at a fixed nuclear power facility. The following documents provide this authorization:

- The Illinois Emergency Services and Disaster Agency Act of 1975 (Ill. Rev. Stat., Ch. 127, Par. 1101 et. seq.);
- Directive from Governor James R. Thompson, 5/17/79;
- The Nuclear Safety Preparedness Act (Ill. Rev. Stat., Ch. 111½, Par. 4301 et. seq.); and
- The Department of Nuclear Safety Act of 1980 (Ill Rev. Stat., Ch. 127, Par. 63b17).

The Federal government has promulgated regulations outlining the minimum requirements for nuclear power plant emergency plans. IPRA volumes are developed and maintained in accordance with these Federal regulations.

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C. Planning Bases and Structure

IPRA builds upon the precepts of the Illinois Comprehensive Disaster Response Plan (Illinois Disaster Plan). Both IPRA and the Illinois Disaster Plan are based upon the belief that a coordinated response to any emergency situation will reduce injury to persons and damage to property. While the Illinois Disaster Plan deals with the response to all types of natural and man-made disasters, IPRA deals specifically with radiological emergencies.

The IPRA planning effort focuses on an area within a 10-mile radius of each nuclear power station. This area is called the plume exposure pathway Emergency Planning Zone (EPZ). It is within this 10-mile EPZ that planning is needed to assure that prompt and effective actions can be taken to protect the public in the event of an incident at a nuclear power station. In addition, a 50-mile ingestion exposure pathway EPZ is identified as an area in which provisions must be made to control the ingestion of radiation through the food, water and milk chain.

IPRA is organized into two major elements: the State General Plan and the site-specific volumes.

IPRA-State General Plan, or Volume I, presents a general overview of IPRA. Volume I discusses the concept of operations, chain of command, communications network and the coordinated response of all participants during an incident at a nuclear power station. This volume deals specifically with the responsibilities of State agencies involved in the response to an incident.

The site-specific volumes of IPRA deal specifically with local governments within the 10-mile EPZ. State agencies which are involved through their district offices are also discussed in the site-specific volumes. The site-specific volumes apply the general considerations of Volume I to the particular concerns associated with each of the nuclear power station EPZs. These volumes provide detailed procedures for the actions to be taken during and after a nuclear accident, from initial notification and warning, through implementation of protective and parallel actions, to eventual recovery and re-entry.

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D. Abbreviation List

The following abbreviations have been used throughout the text:

A

ANI - American Nuclear Insurers
ARC - American Red Cross

B

BWR - Boiling Water Reactor

C

CAP - Civil Air Patrol
CECo - Commonwealth Edison Company
CMS - Illinois Department of Central Management Services
CPS - Clinton Power Station

D

DCO - Dosimetry Control Officer
DFC - District Field Commander
DMHDD - Illinois Department of Mental Health and Developmental Disabilities
DOH - Division of Highways

E

EBS - Emergency Broadcast System
ECCS - Emergency Core Cooling System
EHTR - Emergency Highway Traffic Regulation
EMS - Emergency Medical Services
EOC - Emergency Operations Center
EOF - Emergency Operations Facility
EPZ - Emergency Planning Zone
ERP - Emergency Restoration of Power
ESC - Emergency Services Coordinator
ESDA - Emergency Services and Disaster Agency
ESO - Emergency Support Organization

F

FEMA - Federal Emergency Management Agency
FRMAP - Federal Radiological Monitoring and Assessment Plan

G

GSEP - Generating Stations Emergency Plan

H

HSC - Headquarters Support Center
HSO - Headquarters Support Organization

I

ICC - Illinois Commerce Commission
IDA - Illinois Department of Agriculture
IDNS - Illinois Department of Nuclear Safety
IDOC - Illinois Department of Conservation
IDOT - Illinois Department of Transportation
IDPA - Illinois Department of Public Aid
IDPH - Illinois Department of Public Health
IENR - Illinois Department of Energy and Natural Resources
IEPA - Illinois Environmental Protection Agency
IESDA - Illinois Emergency Services and Disaster Agency
IIS - Illinois Information Service
INPO - Institute of Nuclear Power Operations
IPC - Illinois Power Company
IPRA - Illinois Plan for Radiological Accidents
IREACH - Illinois Radio Emergency Aid Channel
ISP - Illinois State Police
ISPERN - Illinois State Police Emergency Radio Network

J

JPIC - Joint Public Information Center

K

KI - Potassium Iodide

L

LEADS - Law Enforcement Agency Data System

M

MAELU - Mutual Atomic Energy Liability Underwriters
MCR - Main Control Room
MERCI - Medical Emergency Radio Communications of Illinois

N

NARS - Nuclear Accident Reporting System
NAWAS - National Warning System
NCRP - National Council of Radiation Protection
NOAA - National Oceanic and Atmospheric Administration
NSEA - Nuclear Safety Environmental Analysis
NUREG - Nuclear Regulation
NWS - National Weather Service

O

OSC - Operational Support Center

P

PA - Public Address
PAG - Protective Action Guideline
PIO - Public Information Officer
PWR - Pressurized Water Reactor
PVO - Plume Verification Officer

Q - NONE

R

RAFT - Radiological Assessment Field Team
RAGEMS - Radioactive Gaseous Effluent Monitoring System
REAC - Radiological Emergency Assessment Center
REP - Radiological Emergency Preparedness

S

SERO - Station Emergency Response Organization
SFP - Secondary Financial Protection
SOP - Standard Operating Procedure

T

TLD - Thermoluminescent Dosimeter
TSC - Technical Support Center

U

USDOE - United States Department of Energy
USDOT - United States Department of Transportation
USEPA - United States Environmental Protection Agency
USFDA - United States Food and Drug Administration
USHHS - United States Department of Health and Human Services
USNRC - United States Nuclear Regulatory Commission
USPHS - United States Department of Public Health Services

V - NONE

W - NONE

X - NONE

Y - NONE

Z - NONE

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CONCEPT OF OPERATIONS

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CONCEPT OF OPERATIONS

The Concept of Operations is an overview of how IPRA will be carried out during a nuclear incident. Due to the complexity of the accident assessment and the emergency responses required, the activities of Federal, State, local and private agencies must be well coordinated. The Concept of Operations represents the framework within which these activities can be organized into one unified response.

A. Accident Classification

The nature of the emergency response to a nuclear incident depends upon the incident's severity. The effects of any nuclear incident must be accurately assessed and continually updated so that the most effective actions can be implemented.

IPRA employs the accident classification scheme provided by NUREG 0654/FEMA-REP-1. Under this classification system, any nuclear incident or accident fits into one of the following categories:

- Unusual Event
- Alert
- Site Area Emergency
- General Emergency

Besides these four accident classes, IPRA includes another class, that of Transportation Accident. This classification is considered separately because, while the other accident classes deal with a fixed nuclear power facility, the Transportation Accident could occur anywhere. This class is discussed in Chapters 3, "Generating Stations Emergency Plan", and 5, "Technical Functions".

IPRA is primarily concerned with the first four accident classes. Chapter 5 contains detailed definitions of each classification and examples of initiating conditions.

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B. Operational Response Levels

The accident classification chosen by the utility and confirmed by IDNS determines the level of operational response required by all involved organizations. The following sets out the minimum operational response necessary for each classification at the State level.

Classification	Minimum Operational Response
Unusual Event	Make the appropriate notifications.
Alert	Make the appropriate notifications.
	Augment resources and bring primary operational centers and EBS to standby.
	Alert key emergency personnel to standby status.
Site Area Emergency	Make the appropriate notifications.
	Augment resources by activating primary operational centers.
	Dispatch key emergency personnel.
	Activate radiological monitoring personnel.
	Provide confirmatory off-site monitoring.
	Recommend protective actions, as necessary.
	Implement public notification, as necessary.
	Provide press briefings, as necessary.
	Provide assistance, as requested.
General Emergency	Make the appropriate notifications.
	Augment resources by activating primary operational centers.
	Dispatch key emergency personnel.
	Activate radiological monitoring personnel.
	Provide confirmatory off-site monitoring.
	Activate public notification.

Recommend protective actions, as necessary.

Provide press briefings, as necessary.

Provide assistance, as requested.

C. Basic Functions

Each response to an incident at a nuclear power station consists of a number of tasks which can be classified into one of the basic functions described below.

1. Accident Assessment

The Initial Accident Assessment is the preliminary evaluation of the incident by the utility. The information gathered through this evaluation is used to categorize the incident into one of the accident classifications. The Confirmatory Accident Assessment is the evaluation of the radiological hazards to the general public as a result of an incident. IDNS will perform this similar, but independent, assessment of the incident.

2. Initial Notification

Procedures exist for disseminating emergency information and requests for assistance through an established communications network. Primary and secondary communications systems link the fixed nuclear power facility, Federal and State agencies and local governments on a 24-hour basis.

3. Command and Coordination

Individuals have been designated at the State and local levels who will have overall responsibility for implementing IPRA. Agencies have also been identified to coordinate emergency activities for each governmental unit.

4. Protective Actions

Protective actions are specific actions taken by Federal, State and local authorities to minimize radiation exposure to the local population during an incident at a fixed nuclear power facility. Protective actions include take shelter, evacuation, traffic and access control and food, water, and milk control.

a. Take Shelter

If a take shelter protective action is recommended, the public will be advised to take shelter in their homes, stores or places of business, and to remain there until it is safe to go outside. Relocation may be recommended for special cases within the affected area (e.g., people at the beach, in parks or golf courses, etc.).

b. Evacuation

If an evacuation protective action is recommended, the public will be advised to leave their homes and go to Congregate Care Shelters where they will remain until it safe to return to their homes. Privately owned vehicles are the primary means for evacuation.

c. Traffic and Access Control

Traffic and access control procedures are utilized to control access to the nuclear power stations, to control traffic for all take shelter and evacuation situations and to control access into sheltered and evacuated areas.

d. Food, Water and Milk Control

Food, water and milk control involves the sampling, radioactivity testing and restriction of public consumption of food, water and milk, if and until such time concentrations of radioactivity have decreased to safe levels.

5. Parallel Actions

Parallel actions are those actions which are to be taken after protective actions have been initiated. Parallel actions include public information, radiation exposure control, law enforcement and crime prevention, fire and rescue, emergency medical services, social services and re-entry.

a. Public Information

Procedures exist to provide for informing the public of the nature and consequences of a nuclear incident, during and after the incident. Spokespersons for each governmental unit have been designated in each site-specific volume of IPRA. For a more complete discussion of public information, see Chapter 8, "Public Information".

b. Radiation Exposure Control

Radiation exposure control involves the evaluation of the extent and magnitude of personnel exposure, and implementation of appropriate procedures to limit the exposure and/or minimize its effects. "Personnel exposure" means external exposure due to a passing radioactive plume or internal exposure due to contamination by radioactive materials. IDNS is responsible for all

aspects of radiation exposure control. For a detailed discussion of radiation exposure control, see Chapter 5, "Technical Functions".

c. Law Enforcement and Crime Prevention

Law enforcement and crime prevention operations consist of the deployment of resources to maintain order during or after a nuclear incident.

d. Fire and Rescue

Fire and rescue activities involve the deployment of resources for firefighting and fire prevention activities and/or emergency rescue operations. An essentially local function, fire and rescue activities are supported at the local level through mutual aid agreements with neighboring fire protection districts.

e. Emergency Medical Services

Emergency medical services, such as ambulance service, will be provided at the State, county and municipal levels. IDNS and IDPH have identified the emergency medical capabilities of public and private hospitals in the event of contamination of emergency personnel (See Chapter 5).

f. Social Services

Food, clothing, shelter and routine medical services will be provided to evacuees.

g. Re-entry

IDNS will determine when evacuees may re-enter the affected area. Public notification procedures will be initiated and transportation provided to evacuees returning home, as necessary.

These basic functions can be grouped into three categories: Command and Coordination, Technical Functions and Operational Response. The first of these categories, Command and Coordination, is the direction of all agencies which are working toward a common goal. The second category of Technical Functions includes radiological accident assessment, or the accurate analysis of a nuclear incident's nature, severity and duration, as well as food, water and milk control, radiological exposure control and re-entry. The last category of Operational Response includes the series of protective actions taken to safeguard people and property within the 10-mile EPZ.

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D. Operational Centers

Various operational centers may be activated during a nuclear incident.

To coordinate the technical functions, IDNS will establish two operational centers. The Radiological Emergency Assessment Center will coordinate the overall response of IDNS and their assisting State agencies. The Radiological Assessment Field Team will coordinate the efforts of the State's field monitoring teams. These centers will be discussed in more detail in Chapter 5, "Technical Functions".

To coordinate the operational response, IESDA may activate the following centers. The State EOC will be the primary coordination point for State agencies as well as a center through which the utility and Federal agencies can interact with State and local agencies.

The State Forward Command Post will be located near or within the EPZ and is responsible for the allocation of State agency resources and personnel in support of local government actions. It will also serve as a communications center and inventory depot for supplies during the emergency. Alternate locations for the State Forward Command Post are provided for in the event of windshift to provide sustained operations near the accident site.

The appropriate IESDA Regional Office may be activated to serve as a communications relay point as well as to coordinate county-to-county mutual aid in support of evacuations or sheltering.

The county EOC will serve as the major operational center for local government response within the county's border. In certain cases, a Community Coordination Center will be utilized as the county government operational center to facilitate and coordinate operational response mutual assistance between major population centers. A detailed discussion of these operational response centers can be found in Chapter 6, "Operational Response".

The operational centers activated by the utilities are discussed in Chapter 3, "Generating Stations Emergency Plan".

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E. Notication of the Public

A primary concern during any emergency is the notification of the public. In the event of an incident at a fixed nuclear power facility, means must exist to notify the public of protective actions recommended by the State. The need for immediate public notification is so essential that several methods must be available to ensure complete coverage of the nuclear station EPZ.

An outdoor warning system is operational in each EPZ to alert the public to tune their radios to the local EBS station. The outdoor warning systems consist of electronic and/or mechanical sirens located throughout the EPZs. The mechanical sirens emit an alert blast while the electronic sirens, in addition to the alert blast, have voice capabilities. The sirens can be supplemented by public announcements made over mobile public address systems. The outdoor warning systems, along with the mobile public address systems, ensure essentially 100% coverage of the EPZ within 45 minutes.

EBS stations are designated for each nuclear station EPZ. The EBS messages to be broadcast will be provided to the stations by representatives of the State of Illinois and the affected county(ies). Sample EBS messages which would be provided to the EBS stations by either the Governor or the IESDA Director appear in Section F, "Emergency Announcements". Sample county messages are provided in each site-specific volume of IPRA.

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F. Emergency Announcements

1. Information

a. The Governor of Illinois

This is Governor NAME. I have a message of vital importance for every man, woman and child presently located IDENTIFICATION OF AREA. A radiological incident at the SITE Nuclear Power Station has been reported.

All area residents should stay tuned to this station for further information as it becomes available.

b. IESDA Director

(THIS ANNOUNCEMENT IS ONLY TO BE USED IN THE CASE THE GOVERNOR OF ILLINOIS IS UNAVAILABLE TO MAKE AN ANNOUNCEMENT.)

This is NAME, Director of the Illinois Emergency Services and Disaster Agency. I have a message of vital importance to every man, woman and child presently located IDENTIFICATION OF AREA. A radiological incident at the SITE Nuclear Power Station has been reported.

All area residents should stay tuned to this station for further information as it becomes available.

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F. 2. Take Shelter

a. The Governor of Illinois

This is Governor NAME. I have a message of vital importance to every man, woman and child presently located IDENTIFICATION OF AREA. A radiological incident of serious magnitude at the SITE Nuclear Power Station has been reported and I am now requesting that you take immediate shelter. SENTENCE ABOUT NATURE OF INCIDENT. Do not, I repeat, do not evacuate at this time. You may subject yourself to unnecessary radiation by evacuating now. If you are not inside at this time, immediately proceed to your home, your place of work or to the home or business of a friend or relative. Once inside, stay there until you receive instructions to do otherwise. Make sure that all windows and doors are tightly shut and that no air is getting inside. Turn off all heating and cooling systems that bring in air from the outside. If your shelter has a basement, go there. Do not tie up the telephone lines by making unnecessary calls to friends or relatives. Leave the lines open for emergency workers. Only use the telephone in emergency situations and limit your conversation to one minute. All school children, nursing home residents and hospital patients are being well attended to by trained personnel. There is no need to go there to pick anyone up. If you are not presently located within this take shelter area, do not attempt to enter. When it is safe to enter, you will be advised of that fact by emergency workers or this station. Stay tuned to this station for further information as it becomes available from a representative of your county.

b. IESDA Director

(THIS ANNOUNCEMENT IS ONLY TO BE USED IN THE CASE THE GOVERNOR OF ILLINOIS IS UNAVAILABLE TO MAKE AN ANNOUNCEMENT.)

This is NAME, Director of the Illinois Emergency Services and Disaster Agency. I have a message of vital importance to every man, woman and child presently located IDENTIFICATION OF AREA. A radiological incident of serious magnitude at the SITE Nuclear Power Station has been reported and Governor NAME has just requested that you take immediate shelter. SENTENCE ABOUT NATURE OF INCIDENT. Do not, I repeat, do not evacuate at this time. You may subject yourself to unnecessary radiation by evacuating now. If you are not inside at this time,

immediately proceed to your home, your place of work or to the home or business of a friend or relative. Once inside, stay there until you receive instructions to do otherwise. Make sure that all windows and doors are tightly shut and that no air is getting inside. Turn off all heating and cooling systems that bring in air from the outside. If your shelter has a basement, go there. Do not tie up the telephone lines by making unnecessary calls to friends or relatives. Leave the lines free for emergency workers. Only use the telephone in emergency situations and limit your conversation to one minute. All school children, nursing home residents and hospital patients are being well attended to by trained personnel. There is no need to go there to pick anyone up. If you are not presently located within this take shelter area, do not attempt to enter. When it is safe to enter, you will be advised of that fact by emergency workers or this station. Stay tuned to this station for further information from a representative of your county as it becomes available.

F. 3. Evacuate

a. The Governor of Illinois

This is Illinois Governor NAME. I have a message of vital importance to every man, woman and child presently located IDENTIFICATION OF AREA. A radiological incident of serious magnitude at the SITE Nuclear Power Station has been reported and I am now requesting that you begin evacuating the area. SENTENCE ABOUT NATURE OF INCIDENT.

If your present location has not been identified as an area to be evacuated, do not evacuate at this time. I repeat, do not evacuate at this time unless your present location has been identified as an evacuation area. Furthermore, do not try entering the evacuation area for any reason whatsoever. For those of you that were just identified as being within the evacuation area, begin packing immediately. Pack all necessary clothing, medical supplies and food for special diets that you can gather for you and your family as soon as possible. You should be ready to leave in _____ minutes. All school children, nursing home residents and hospital patients are being well attended to by trained personnel. There is no need to go there to pick anyone up. Stay tuned to this station for information from a representative of your county advising you of the direction to evacuate, what routes are available.

b. IESDA Director

(THIS ANNOUNCEMENT IS ONLY TO BE USED IN THE CASE THE GOVERNOR OF ILLINOIS IS UNAVAILABLE TO MAKE AN ANNOUNCEMENT.)

This is NAME, Director of the Illinois Emergency Services and Disaster Agency. I have a message of vital importance to every man, woman and child presently located IDENTIFICATION OF AREA. A radiological incident of a serious magnitude at the SITE Nuclear Power Station has been reported and Governor NAME has just requested that you begin evacuating the area. SENTENCE ABOUT NATURE OF INCIDENT.

If your present location has not been identified as an area to be evacuated, do not evacuate at this time. I repeat, do not evacuate at this time unless your present location has been identified as an evacuation area. Furthermore, do not try entering the evacuation area for any reason whatsoever. For those of you that were just identified as being within the evacuation area, begin packing immediately. Pack all necessary clothing, medical supplies and food for special diets that you can gather for you and your family as soon as possible. You should

be ready to leave in _____ minutes. All school children, nursing home residents and hospital patients are being well attended to by trained personnel. There is no need to go there to pick anyone up. Stay tuned to this station for information from a representative of your county advising you of what direction to evacuate and what routes are available.

GENERATING STATIONS EMERGENCY PLAN

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GENERATING STATIONS EMERGENCY PLAN

A. Introduction

This chapter will deal with the role and responsibilities of the utility during a nuclear incident. The Nuclear Regulatory Commission requires each utility to write an emergency plan for each nuclear fueled power generating station that the utility operates. The directives of this plan are given primarily in documents, NUREG 0578, NUREG 0610, USNRC Regulatory Guide 1.101 and 10 CFR 50, paragraph 50.34 and Appendix E. The document, NUREG 0654/FEMA-REP-1, contains the most recent criteria set forth for ensuring the coordinated planning of the utility and involved government agencies.

The actual writing of the emergency plans is done by the utility and is completely external to the planning contained in IPRA. However, IPRA does concentrate on coordinating the concept of operations for IPRA with that of the utility emergency plans. In this manner, a proper interface between the plans will be assured.

In Illinois, only one utility currently operates nuclear power generating stations:

Commonwealth Edison Company
P. O. Box 767
Chicago, IL 60690

CECo currently operates the following nuclear facilities:

Dresden Nuclear Power Station
R. R. 1
Morris, IL 60450

LaSalle County Nuclear Power Station
R. R. 1, Box 240
Marseilles, IL 61341

Cordova Nuclear Power Station (Quad Cities)
Box 216
Cordova, IL 61231

Zion Nuclear Power Station
101 Shiloh Boulevard
Zion, IL 60099

Byron Nuclear Power Station
P. O. Box 486
Byron, IL 61010

Future CECo plans include the facility of:

Braidwood Nuclear Power Station
R. R. 1, Box 84
Braceville, IL 60407

Illinois Power Company based in Decatur, Illinois, plans to operate the following facility in the near future:

Clinton Power Station
P. O. Box 678
Clinton, IL 61727

In accordance with USNRC regulations, IPRA has assigned to the utility, as operator of the nuclear power stations, several explicit responsibilities. Perhaps the most important of these responsibilities is to mitigate the release of radioactive materials to the environment during an incident. While it is expected that the USNRC will play a role in this task, it is not expected that the State will become involved in accident mitigation. However, IPRA does expect the utility to provide the State with updated information concerning the reactor situation as well as potential information about the actual consequences, particularly those concerning any expected radiological releases to the environment.

The utility will also be responsible for initiating IPRA at the onset of any nuclear incident. This initiation is composed of several steps. First, the utility will conduct an accident assessment, determining the actual and potential consequences upon the surrounding area and population. Based upon this assessment, the accident will be classified using criteria set forth in NUREG 0610 and the operating utilities' emergency plans. Recommended protective actions for the population, consistent with the accident assessment and classification, will be determined. Finally, the utility will notify the State and/or local governments of the situation via NARS.

During the incident, the utility will support the State and local governments in their response. This procedure primarily requires the utility to support IDNS in obtaining current information on the implications of the incident. The utility may also send a representative to the principal off-site governmental emergency operations centers. Finally, the utility will be responsible for controlling access to its nuclear facility property during an incident.

Local planning may further establish a supportive role for the utility in assisting local governments operationally during the early stages of an incident when State resources are still being assembled. The utility already has agreements with local government and private agencies for services such as fire protection and emergency medical services. The utility shall be expected to advise the appropriate local governments during an incident of requests for the above emergency services so that the local governments can best coordinate the utilities' resources with their own.

Finally, the utility will coordinate the distribution of information to the news media with the State and local governments. The State and local governments will do the same. Detailed procedures for dissemination of public information are discussed in Chapter 8, "Public Information".

The utility will periodically update the information contained in IPRA regarding their planned operation during an incident. The utility will also participate in any exercise of IPRA and will recommend improvements in their procedures based upon their performance in these exercises. Finally, the utility will be responsible for getting information concerning its role during an incident, as defined in IPRA, to the general public.

The remainder of this chapter will present an overview of the utilities' organizations during an incident and will describe the support centers to be operated by those utilities during an incident.

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B. Commonwealth Edison Company

1. Generating Stations Emergency Plan Support Groups

CECo's GSEP defines five specific groups which operate during an incident. This section contains a broad statement of responsibility as well as a basic organization chart for each group.

a. Corporate Command Center Group

During the less serious emergencies, the GSEP Corporate Command Center Group is responsible for evaluating, coordinating and directing overall CECo activities involved in coping with the emergency.

The Corporate Command Center Group functions under a Director and the Group's responsibilities include command and control, intelligence, logistics, engineering support, medical care, manpower requirements, communications, accounting, legal, health physics, environmental and news information.

The Corporate Command Center Director will direct CECo GSEP activities until such time when, and if, the Recovery Group at the EOF is activated. After the Recovery Group is activated, the Corporate Command Center Director and his staff become a support group to the Recovery Manager.

The Intelligence Director serves as the Corporate Command Center Director if the Corporate Command Center Director and the alternate are unavailable. The Intelligence Director's responsibilities include directing the informational, environmental, health physics and medical response to the emergency, making recommendations and evaluations to the Corporate Command Center Director and documenting all activities. The Medical Director consults with the Intelligence Director regarding public protection, and specifies the decontamination, first aid and medical supplies for use during an emergency.

The Information Director collects, verifies and distributes information concerning an emergency to the public through the news media as directed and approved by the Corporate Command Center Director.

The Environmental Director coordinates radiological testing and measurement with the State of Illinois, advises the Corporate Command Center Director (through the Intelligence Director) on hazardous materials, including radioactivity affecting plant personnel and the public and directs all the utility's environmental sampling activities.

The Health Physics Director is in charge of providing the station with additional on-site health physics instrumentation and personnel when needed, and recommending dose management techniques during an emergency.

The Engineering Director coordinates the engineering services necessary for plant modifications, special equipment arrangements, shielding, containers or other devices needed during the emergency.

The duties of the other Corporate Command Center Group staff are outlined in CECo's GSEP. Figure B.1.a.1, "Corporate Command Center Group", illustrates the organization of the Corporate Command Center Group.

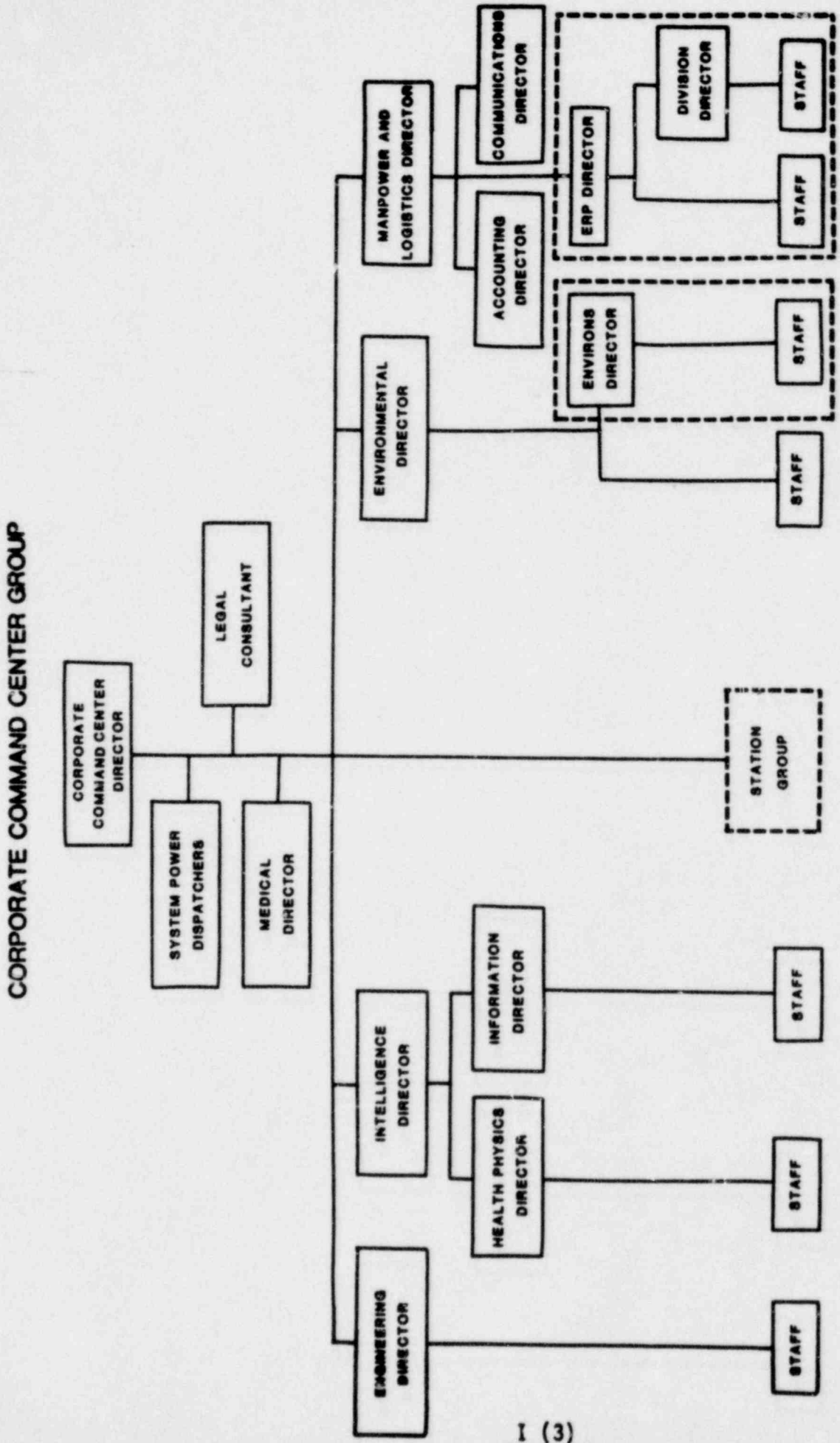
CORPORATE COMMAND CENTER GROUP
CORPORATE COMMAND CENTER DIRECTOR
SYSTEM POWER DISPATCHERS
LEGAL CONSULTANT
MEDICAL DIRECTOR
ENGINEERING DIRECTOR
STAFF
INTELLIGENCE DIRECTOR
HEALTH PHYSICS DIRECTOR
STAFF
INFORMATION DIRECTOR
STAFF
STATION GROUP
ENVIRONMENTAL DIRECTOR
STAFF
ENVIRONS DIRECTOR
STAFF
ACCOUNTING DIRECTOR
MANPOWER AND LOGISTICS DIRECTOR
COMMUNICATIONS DIRECTOR
ERP DIRECTOR
STAFF
DIVISION DIRECTOR
STAFF

FIGURE B.1.a.1

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B. 1. b. Emergency Operations Facility Group

During the more serious emergencies, the GSEP Recovery Group at the affected station's Emergency Operations Facility is responsible for evaluation, coordinating and directing overall CECo activities, both at the Corporate Command Center and the TSC. Once the Recovery Group is activated, the Corporate Command Center Group becomes a support staff.

The EOF Group consists of a Recovery Manager and his staff (Advisory Support Director, Technical Support Manager, Environmental/Emergency Coordinator, Design and Construction Support Manager, Scheduling Planning Manager, Waste Systems/ Radiation Control Manager, Administration/ Logistics Manager, Health Physics Director and Emergency News Center Director).

The Recovery Manager has authority, management ability and technical knowledge to manage the overall nuclear plant recovery operations whenever the Recovery Group is activated at the EOF Recovery Center. The primary individual designated as the Recovery Manager is the Division Vice-President and General Manager, Nuclear Stations.

The Advisory Support Director coordinates the efforts of an advisory group composed of the Nuclear Steam Supply System Suppliers, the USNRC, authoritative consultants and public information experts who have requisite authority to commit resources and resolve technical issues for their respective organizations.

The Technical Support Manager has requisite authority, nuclear experience and technical staff in support of nuclear power plant recovery operations.

The Environmental/Emergency Coordinator is specifically qualified in the coordination and management of radiological consequence assessment and is authorized to interact with supporting agencies. This individual supervises the Environmental Control Center at the EOF and will serve as the official contact with State and Federal radiological assessment personnel.

The Emergency News Center Director at the EOF, is responsible for all recovery related information intended to be conveyed from CECo to the news media.

The duties of the other EOF Group members are outlined in CECo's GSEP. Figure B.1.b.1, "Emergency Operations Facility Group", illustrates the organization of the EOF Group.

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EMERGENCY OPERATIONS FACILITY GROUP

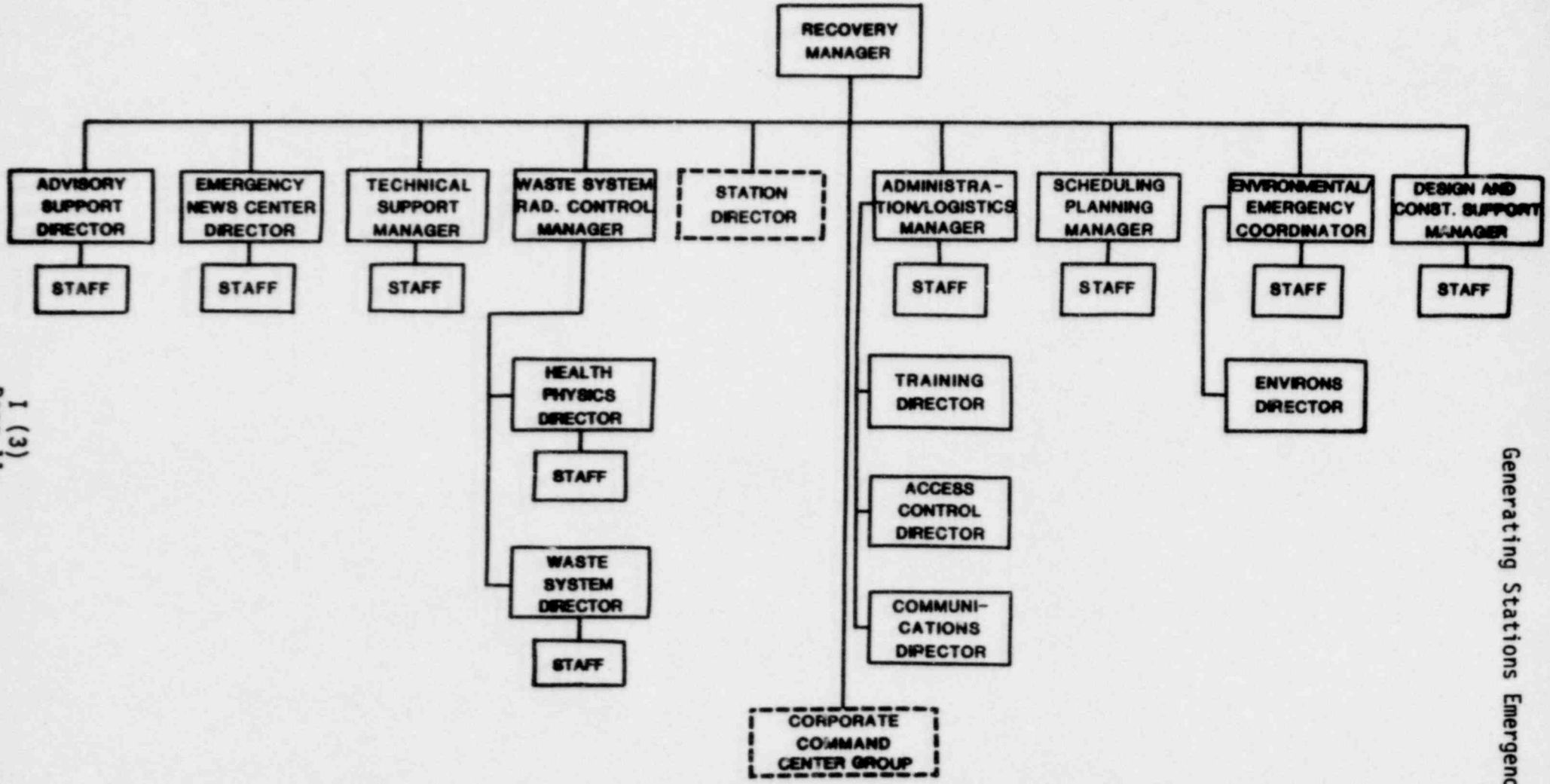

FIGURE B.1.b.1

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B. 1. c. Station Group

The Station Group is the on-site emergency organization, headed by a Station Director, responsible for organizing and coordinating the emergency efforts at and within the immediate vicinity of the station. Members of the Station Group provide for the following activities during an emergency: plant systems operations, radiological survey and monitoring, firefighting, rescue operations, first aid, decontamination, security of plant and access control, repair damage control, personnel accountability, recordkeeping and communications.

The Shift Engineer, as Station Director, is responsible for the initial assessment of and response to an emergency. The Station Director will make the initial determination of the severity of the emergency and is responsible for implementing the GSEP, the site-specific annex and the station's implementing procedures when appropriate. In the Shift Engineer's absence, the line of succession is: Shift Foreman, Station Control Room Engineer, Nuclear Station Operator (senior experience personnel). Augmentation of the on-site staff is provided for and a Technical Support Center and an Operational Support Center have been established to support Station Group personnel.

The Station Director reports to the Corporate Command Center Director or Recovery Manager on the reactor status and coordinates on-site emergency efforts. The Operations Director directs a staff responsible for determining the emergency's effects on equipment and plant facilities. The Operations Director also is in charge of personnel protection and rescue operations, taking actions to terminate the conditions causing the emergency and protecting equipment and facilities from further damage.

The Technical Director directs a staff responsible for an evaluation of plant equipment under the emergency situation and for planning emergency and restoration efforts. The Maintenance Director directs a staff responsible for emergency repair, damage control and recovery efforts of the plant itself. The Stores Director is responsible for obtaining and delivering all materials necessary to the emergency and restoration effort.

The Rad/Chem Director directs a staff which determines the nature and extent of radiological or hazardous material problems on-site and relays this information to the Station Director. The Security Director is responsible for plant security and personnel accountability associated with access to the protected area. The

Administrative Director obtains food and shelter for CECo personnel. Figure B.1.c.1, "Station Group", illustrates the organization of the Station Group.

STATION GROUP

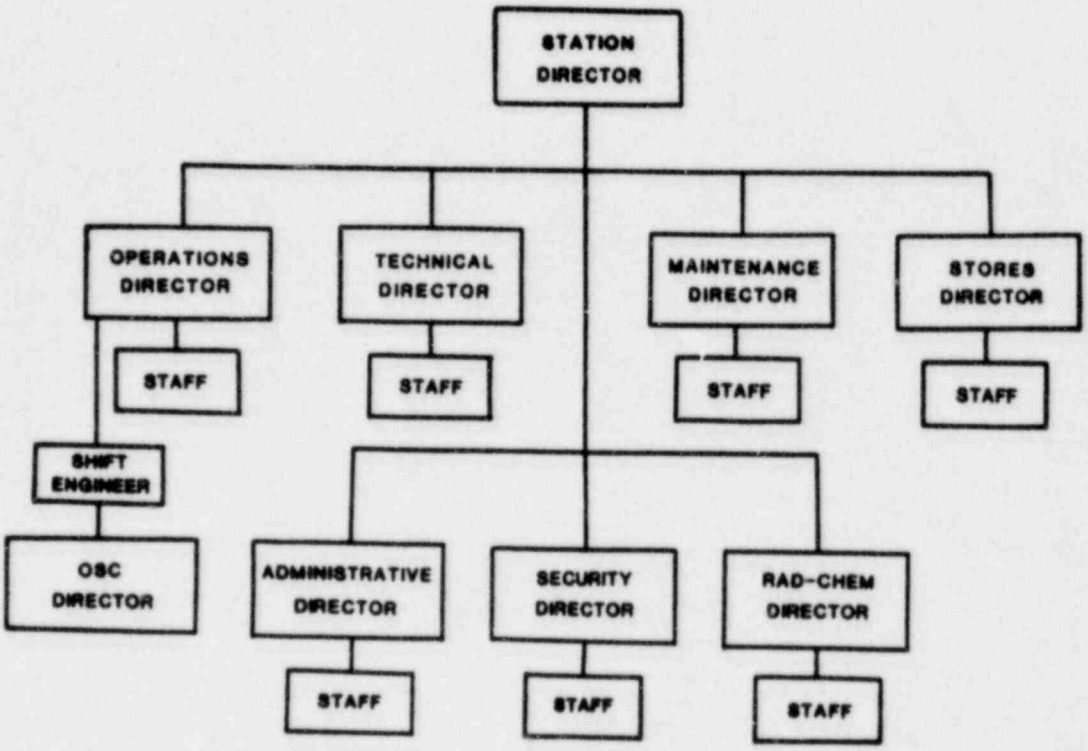

FIGURE B.1.c.1

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B. 1. d. Environs Group

The Environs Group, headed by an off-site Environs Director, conducts environs monitoring, as directed by the Environmental/Emergency Coordinator, in order to determine the extent and nature of plant releases and possible subsequent contamination and exposure of the environment. The Environs Group headquarters will be located initially at the affected station's On-site Technical Support Center and later at the EOF. Figure B.1.d.1, "Environs Group", illustrates the organization of the Environs Group.

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ENVIRONS GROUP

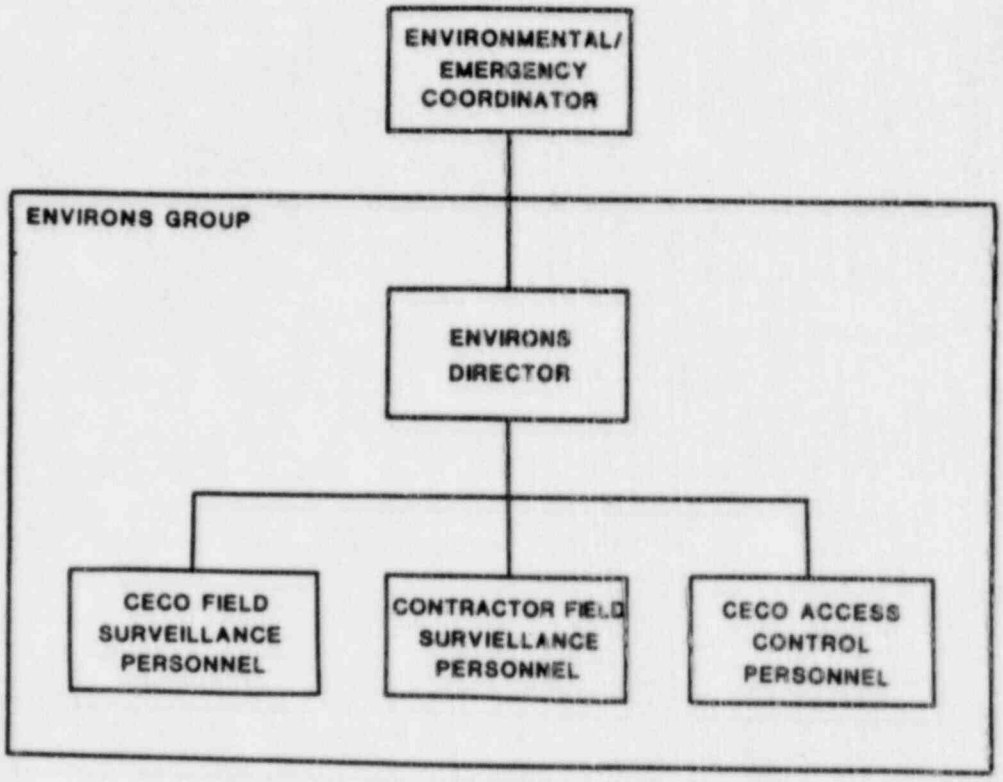

FIGURE B.1.d.1

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B. 1. e. Division Group

The Division Group is responsible for support services and is headed by a Director who will carry out the directives of the Administration/Logistics Manager. The Division Group will dispatch supplies, equipment and manpower as requested to assist emergency operations at and near the site. The Division Group may supply resources to affected local governments if those local governments and the utility plan for this interaction and sufficient Division personnel are available at the time needed. Figure B.1.e.1, "Division Group", illustrates the organization of the Division Group.

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DIVISION GROUP

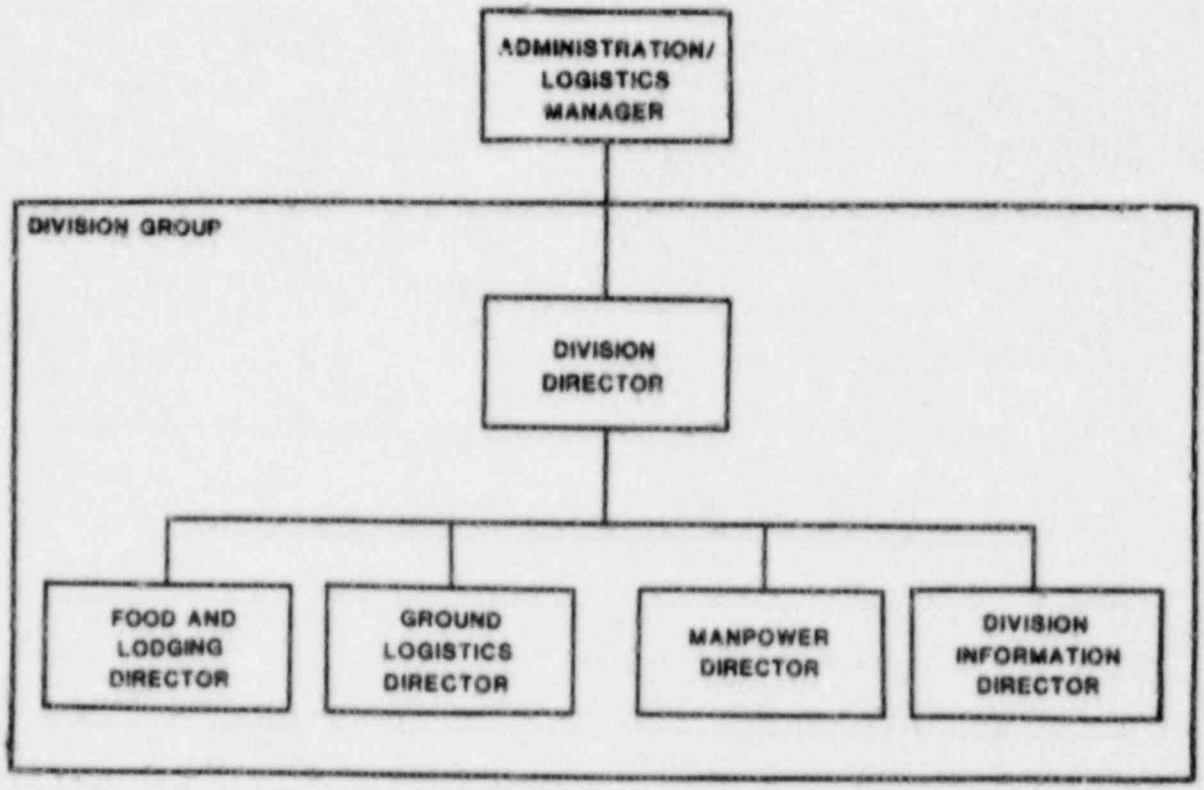

FIGURE B.1.e.1

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B. 2. Generating Stations Emergency Plan Support Centers

The following sections describe centers which may be activated during an incident.

a. Station Control Room

The Station Control Room will be the initial on-site center of emergency control. Control Room personnel must evaluate and control the initial aspects of an emergency and cope with the initial phases of an emergency until alternate support centers can be activated. These activities will include:

1. Continuous evaluation of the magnitude and potential consequences of an incident;
2. Initial corrective actions; and
3. Initial notification of off-site agencies in the event of a General Emergency.

b. On-site Technical Support Center

Each nuclear generating station has established and maintains an On-site Technical Support Center for use during emergencies by plant management and technical and engineering support personnel. Once the TSC is activated, it will serve as the center from which the Station Director and his staff will control, direct and coordinate efforts for: (1) support of the Control Room command and control function; (2) assessment of plant status and potential off-site impact; and (3) implementation of on-site and off-site emergency plans. The TSC will have the following capabilities and features:

1. The TSC has sufficient space to accommodate at least 25 people, and has the required hardware for instrumentation and communications.
2. The TSC is habitable to the same degree as the Control Room for potential accident conditions (for radiation protection purposes). The capability for radiation and environmental monitoring within the room is provided.
3. Dedicated communications is provided between the TSC, the support/control centers and these groups:

   aa. Station Control Room;
   bb. Corporate Command Center;
   cc. Emergency Operations Facility;
   dd. Nuclear Regulatory Commission; and
   ee. State and local operational centers.

4. The TSC has access to a complete set of as-built drawings and other records, including, but not limited to, general arrangement drawings, piping and instrument diagrams, piping system isometrics and electrical schematics.
5. The TSC has the capability to record and display vital plant data, in real time, to be used by experts responsible for engineering and management support of reactor operations and for implementation of emergency procedures. At a minimum, data will be available for the assessment of:

   aa. Plant Safety System Parameters for Reactor Coolant System, Secondary System (PWRs), ECCS, Feedwater and Makeup Systems and Containment.
   bb. In-Plant Radiological Parameters for Reactor Coolant System, Containment, Effluent Treatment and Release Paths.
   cc. Off-site Radiological Parameters, for Meteorology and Off-site Radiation Levels.

c. On-site Operational Support Center

Each nuclear generating station has established an On-site Operational Support Center. Operational support personnel will report to the OSC during an emergency and will be dispatched from the OSC for assignments or duties supporting emergency operations.

The OSC has the ability to communicate with the Control Room and the On-site TSC. Provisions have been made for management of and supervision over the OSC during an emergency.

d. Corporate Command Center

The Corporate Command Center Director will normally direct a staff in evaluating, coordinating and directing the overall activities involved in coping with an emergency from the Corporate Command Center (located in the Edison Building, downtown Chicago). The Corporate Command Center has communications capabilities with each nuclear station's Control Room, On-site TSC and EOF. The Corporate Command Center also has communications with IESDA, IDNS, company cars and field radios.

e. Emergency Operations Facility

An Emergency Operations Facility has been established near each nuclear generating station (Dresden

Station - Mazon EOF, LaSalle County Station-Mazon EOF, Quad Cities Station - Morrison EOF, Zion Station - Westinghouse Training Center, Byron Station - Dixon EOF, Braidwood Station - Mazon EOF). The EOF provides backup support to the generating station, a point of coordination of environs monitoring, recovery planning and the interface between the utility, Federal and State agencies.

The EOF is the primary off-site location from which the utility will plan recovery operations. The EOF is equipped with dedicated communications to the On-site TSC, the Corporate Command Center, IESDA and IDNS.

The Joint Public Information Center is located at the EOF. A technical spokesperson will be available at the JPIC to brief the press on the emergency and the activities underway to deal with the situation. Space will be allocated within each EOF to accommodate the news media.

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B. 3. Operational Response Levels

Both GSEP and IPRA have a five-fold classification scheme for accidents. Four of the five accident classifications are set forth in NUREG 0610. They are: Unusual Event, Alert, Site Area Emergency and General Emergency.

These accident classifications are usually restricted to incidents arising at a nuclear power facility. A fifth classification, Transportation Accident, covers those away-from-site accidents involving hazardous materials. If a transportation accident does occur within the jurisdictional boundaries of the State of Illinois, the concept of operations for the State's hazardous materials program will be used.

This section will outline the CECo GSEP procedures for each accident classification.

a. Transportation Accident

1. Station Director:

aa. Declare Transportation Accident condition.
bb. Notify System Power Dispatcher.
cc. Activate GSEP Station Group as deemed necessary.
dd. Dispatch personnel for evaluation, if deemed necessary.
ee. Notify the USNRC Operations Center.
ff. Notify USDOT.
gg. Notify the State and local emergency agencies nearest to the scene of the accident.
hh. Notify IESDA and IDNS (if accident occurred within the State of Illinois).
ii. Notify the Iowa Office of Disaster Services (if the accident occurred within the State of Iowa).

2. System Power Dispatcher:

aa. Immediately notify the Nuclear Duty Officer.

3. Corporate Command Center Director/Nuclear Duty Officer:

aa. Activate the off-site GSEP organization as deemed necessary.
bb. Notify ANI.
cc. Notify the USDOT.
dd. Notify the State and local emergency agencies nearest to the scene of the accident.
ee. Notify IESDA and IDNS (if the accident occurred within the State of Illinois).

ff. Notify the Iowa Office of Disaster Services (if the accident occurred within the State of Iowa).
gg. If deemed necessary, have the Environs Group activated or seek the aid of other emergency response organizations to assist in the field.
hh. Notify INPO regarding the Voluntary Assistance Program.

4. Overall GSEP response:

aa. Assess situation and respond.
bb. Initiate recovery measures.

b. Unusual Event

1. Station Director:

aa. Declare an Unusual Event.
bb. Notify System Power Dispatcher.
cc. Activate GSEP Station Group as deemed appropriate.
dd. Notify the USNRC Operations Center.

2. System Power Dispatcher:

aa. Immediately notify the Nuclear Duty Officer.

3. Corporate Command Center Director/Nuclear Duty Officer:

aa. Promptly notify the following agencies of the emergency:

1. IESDA and IDNS.
2. Iowa Office of Disaster Services (for Quad Cities Station Only).
3. Scott and Clinton Counties (for Quad Cities Station only).
4. Wisconsin Division of Emergency Government (for Zion Station only).
5. Kenosha County (for Zion Station only).

bb. Activate the off-site GSEP organization as deemed appropriate.
cc. Close out with a verbal summary to USNRC, IESDA and contiguous state authorities as appropriate, or escalate to a more severe class.

4. Overall GSEP response:

aa. Assess situation and respond.
bb. Augment on-shift resources as deemed appropriate.

cc. Recommend protective action to IESDA, IDNS and contiguous state authorities.

c. Alert

1. Station Director:

aa. Declare an Alert condition.
bb. Notify System Power Dispatcher.
cc. Activate those parts of the GSEP Station Group needed to meet the emergency.
dd. Activate the On-site TSC and OSC.
ee. Notify the USNRC Operations Center.

2. System Power Dispatcher:

aa. Immediately notify the Nuclear Duty Officer.
bb. If the Nuclear Duty Officer cannot be reached within five minutes, immediately notify the following agencies of the emergency:

1. IESDA and IDNS.
2. Iowa Office of Disaster Services (for Quad Cities Station only).
3. Scott and Clinton Counties (for Quad Cities Station only)
4. Wisconsin Division of Emergency Government (for Zion Station only).
5. Kenosha County (for Zion Station only).
6. INPO.

cc. Resume efforts to contact the Nuclear Duty Officer.

3. Corporate Command Center Director/Nuclear Duty Officer:

aa. Notify the following:

1. IESDA and IDNS.
2. Iowa Office of Disaster Services (for Quad Cities Station only).
3. Scott and Clinton Counties (for Quad Cities Station only).
4. Wisconsin Division of Emergency Government (for Zion Station only).
5. Kenosha County (for Zion Station only).
6. INPO.

bb. Activate the parts of the off-site GSEP organization needed to meet the needs of the emergency.
cc. Notify ANI.

dd. Provide plant status reports to IESDA, IDNS and contiguous state authorities as conditions change.
ee. Close out or recommend reduction in emergency class by briefing USNRC, the State of Illinois and contiguous state authorities, or escalate to a more severe class.

4. Overall GSEP response:

aa. Assess situation and respond.
bb. Augment on-shift resources as deemed necessary.
cc. Activate the Corporate Command Center, the On-site TSC and OSC.
dd. Provide periodic plant status updates and meteorological information to IESDA, IDNS and contiguous state authorities. If any release is occurring, provide dose estimates for actual releases.
ee. Recommend protective actions to IESDA, IDNS and contiguous state authorities.

d. Site Area Emergency

1. Station Director:

aa. Declare a Site Area Emergency.
bb. Notify the System Power Dispatcher.
cc. Notify the USNRC Operations Center.
d Activate the Station Group (within 60 min.).
ee. Activate the On-site TSC and OSC (within 60 min.).
ff. Dispatch personnel for environs monitoring if required (within 60 min.).
gg. Call in additional personnel as necessary (within 60 min.).
hh. Notification for Zion Station only: Kenosha County Warning Center, Wisconsin Division of Emergency Government and Waukesha Office.
ii. Initiate assembly and accountability of site personnel within the protected area.
jj. Consider evacuation of nonessential personnel within the protected area.

2. System Power Dispatcher:

aa. Immediately notify the Nuclear Duty Officer.
bb. If the Nuclear Duty Officer cannot be reached within five minutes, immediately notify the following agencies of the emergency:

1. IESDA and IDNS.
2. Iowa Office of Disaster Services (for Quad Cities Station only.)

3. Scott and Clinton Counties (for Quad Cities Station only).
4. Wisconsin Division of Emergency Government (for Zion Station only).
5. Kenosha County (for Zion Station only).
6. INPO.

cc. Resume efforts to contact the Nuclear Duty Officer.

3. Corporate Command Center Director/Nuclear Duty Officer/Recovery Manager:

aa. Notify the following:

1. IESDA and IDNS.
2. Iowa Office of Disaster Services (for Quad Cities Station only).
3. Scott and Clinton Counties (for Quad Cities Station only).
4. Wisconsin Division of Emergency Government (for Zion Station only).
5. Kenosha County (for Zion Station only).
6. INPO.
7. ANI.

bb. Activate the off-site GSEP organizations, including the EOF Group.
cc. Provide plant status reports to IESDA, IDNS and contiguous state authorities as conditions change. Recommend protective actions.
dd. Ensure activation of the Environs Group and the appropriate Division Group.
ee. Close out or recommend reduction in emergency class by briefing USNRC, the State of Illinois and contiguous state authorities as appropriate, or escalate to a General Emergency.

4. Overall GSEP response:

aa. Assess situation and respond.
bb. Augment resources through activation of the Corporate Command Center, On-site TSC and OSC and the EOF.
cc. Dispatch environmental monitoring teams if required. (At first these teams are under the direction of the Station Group; as soon as possible, direction will be transferred to a designated Environs Group Director.)
dd. Provide periodic plant status updates and meteorological information to IESDA, IDNS and contiguous state authorities. If any release is occurring, provide dose equivalent estimates for actual releases.

ee. Recommend protective actions to IESDA, IDNS and contiguous state authorities.
ff. Provide periodic plant and off-site status updates to AMI.

e. General Emergency

1. Station Director:

aa. Declare a General Emergency.
bb. Notify the System Power Dispatcher.
cc. Notify IESDA, IDNS and the appropriate local authorities of the emergency situation and make appropriate recommendations. Also, notify Iowa Office of Disaster Services and Wisconsin Division of Emergency Government in the cases of Quad Cities and Zion respectively.
dd. Notify the USNRC Operations Center.
ee. Activate the Station Group (within 60 min.).
ff. Activate the On-site TSC and OSC (within 60 min.).
gg. Dispatch personnel for environs monitoring if required (within 60 min.).
hh. Call in additional personnel as necessary (within 60 min.).
ii. Provide plant status updates to the State and local authorities (until this function can be performed by the Corporate Command Center Director).
jj. Assemble and evacuate non-essential personnel within the protected areas if not already done.

2. System Power Dispatcher:

aa. Immediately notify the Nuclear Duty Officer.

3. Corporate Command Center Director/Nuclear Duty Officer/Recovery Manager:

aa. Perform Steps 3.e.1.aa through 3.e.1.ff above, if in command of the situation.
bb. Ensure that INPO has been informed of the appropriate classification.
cc. Activate off-site organizations including the EOF Group.
dd. Provide plant status reports to IESDA, IDNS and contiguous state authorities as conditions change.
ee. Ensure activation of the Environs Group and appropriate Division Group.
ff. Close out or recommend reduction of emergency class by briefing of the USNRC, State of Illinois and contiguous state authorities as appropriate.

4. Overall GSEP response:

   aa. Assess situation and respond.
   bb. Augment resources through activation of the corporate Command Center, the On-site TSC, OSC and the EOF.
   cc. Dispatch environmental monitoring teams if required. (At first these teams are under the direction of the Station Group; as soon as possible direction will be transferred to a designated Environs Group Director.)
   dd. Provide periodic plant status updates and meteorological information to IESDA, IDNS and contiguous state authorities. If any release is occurring, provide dose equivalent estimates for actual releases.
   ee. Recommend protective actions to IESDA, IDNS and contiguous state authorities.
   ff. Provide periodic plant and off-site status updates to ANI.

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C. Illinois Power Company

1. Emergency Plan Support Organizations

The Clinton Power Station Emergency Plan describes an emergency organization which consists of four components. These components are Interim Station Emergency Response Organization; Station Emergency Response Organization; Emergency Support Organization; and Headquarters Support Organization.

This section contains a broad statement of the responsibilities as well as a basic organizational chart for each component.

a. Interim Station Emergency Response Organization

The interim Station Emergency Response Organization operates from the Main Control Room and from other in-station areas, as appropriate. This organization is staffed to be self-reliant for a sufficient period of time to allow for mobilization of supplementary personnel and resources.

The primary responsibilities of the interim SERO are initial assessment, classification and declaration of emergencies, initial on-site emergency response, notification of and communications with off-site authorities, initial protective action recommendations, activation of other support organizations and requesting local off-site support.

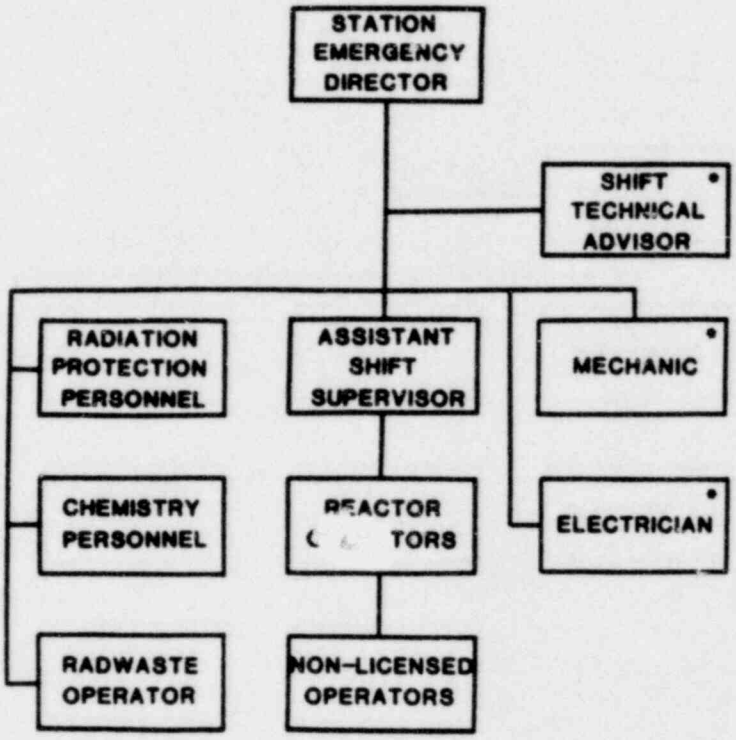
The interim Station Emergency Director assumes the initial overall emergency management responsibilities until such time when, and if, the Station Emergency Response Organization is activated. The interim Station Emergency Director will classify the emergency and ensure that the appropriate procedures are implemented. He shall also ensure that the appropriate notifications are made and that mitigating activities are performed by assigning cognizant shift personnel to emergency response functions in order to return the station to a pre-emergency or safe shutdown condition.

The Shift Technical Advisor serves as the advisor to the interim Station Emergency Director on matters of safety, and, if qualified, acts as an on-shift nuclear engineer.

The Radiation Protection Personnel will be responsible for conducting radiological surveys and for maintaining normal and emergency radiological controls. The Chemistry Personnel will be responsible for monitoring water chemistry, including reactor coolant and liquid effluents.

The duties of other interim SERO staff are outlined in the CPS Emergency Plan. Figure C.1.a.1, "Interim Station Emergency Response Organization", illustrates the organizational structure of the interim SERO.

INTERIM STATION EMERGENCY RESPONSE ORGANIZATION



* MAY BE PROVIDED BY SHIFT PERSONNEL ASSIGNED OTHER FUNCTIONS.

FIGURE C.1.a.1

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C. 1. b. Station Emergency Response Organization

During more serious emergencies, the Station Emergency Response Organization will be activated. The SERO operates primarily from the Main Control Room, the TSC and the OSC.

The key responsibilities of the SERO are the reclassification of emergencies, call-out of IPC Emergency Response Organization personnel, off-site dose projections, protective action recommendations, subsequent notifications of and communications with off-site authorities and the direction of on-site emergency response activities.

The Station Emergency Director is responsible for directing the response efforts of the SERO from the TSC. He is responsible for assessing the magnitude of the emergency and re-classifying as necessary. He is further responsible for recommending protective actions for the public, authorizing radiation doses to emergency workers, requesting off-site support and activating emergency response facilities as required. The Station Emergency Director shall have the same responsibility and authority as the Emergency Manager, until relieved by the Emergency Manager.

The TSC Administrative Supervisor is responsible for ensuring the continuity of personnel and material resources for SERO operations. He also ensures that technical documents are available and that security measures are provided.

The Technical Assessment Supervisor is responsible for coordinating technical matters such as nuclear, electrical and mechanical engineering. The Technical Assessment Supervisor is also responsible for determining the overall conditions of the core, safety related systems and the fission product barriers.

The Emergency Operations Supervisor is responsible for supervising the operations of personnel in the Main Control Room. He will coordinate MCR and TSC activities and functions. The Emergency Maintenance Supervisor will supervise emergency maintenance activities which may include planning and directing emergency repair teams, expediting material deliveries and assisting in the preparation of activities in support of recovery operations.

The Radiation Protection Supervisor is responsible for monitoring station radiation levels, surveying radiological conditions and initial field monitoring.

The OSC Supervisor will supervise emergency team formation and dispatch. Located in the OSC, he ensures that emergency teams are adequately equipped and briefed.

The duties of these and other SERO staff are described in more detail in the CPS Emergency Plan. Figure C.1.b.1, "Station Emergency Response Organization", illustrates the organizational structure of the SERO.

STATION EMERGENCY RESPONSE ORGANIZATION

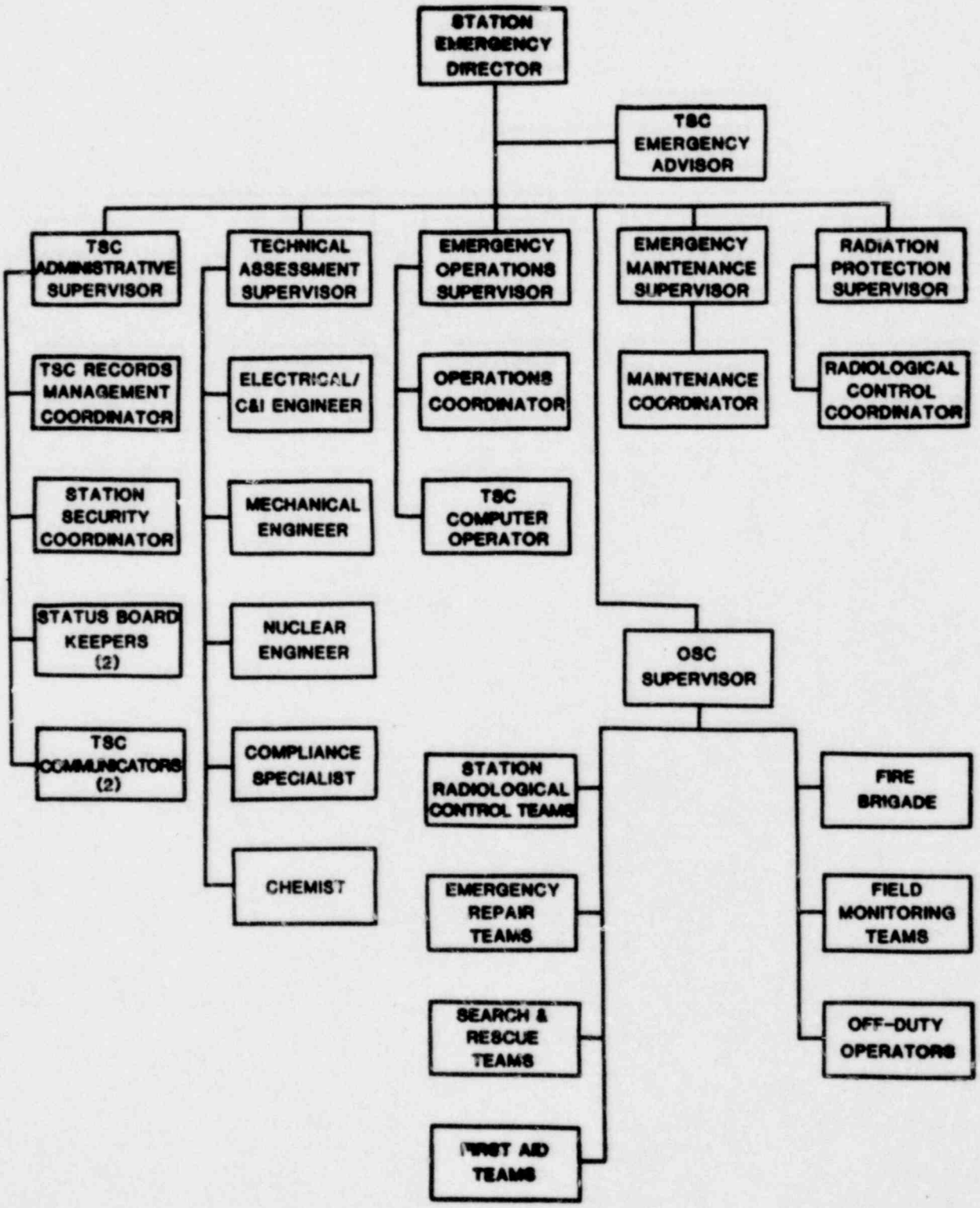

FIGURE C.1b.1

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C. 1. c. Emergency Support Organization

The Emergency Support Organization operates from the EOF. The primary responsibilities of the ESO are providing the lead interface with off-site agencies, the public and the media, providing support to the SERO by assuming and directing field monitoring activities, providing administrative, logistical and resource continuity support to the SERO, requesting off-site support and making protective action recommendations to off-site authorities.

The Emergency Manager is the senior IPC emergency response organization representative at the site and shall assume overall command and control of the entire IPC Emergency Response Organization. The Emergency Manager's responsibilities include requesting off-site support, recommending protective actions to off-site agencies and approving news releases prior to their release from the EOF to the JPIC.

The EOF Director is responsible for directing the efforts of the EOF staff.

The Licensing Advisor will advise the EOF Director on any impact that response activities or Station conditions may have on license matters. He will also assist the USNRC staff in the EOF with administrative matters.

The Dose Assessment Supervisor's responsibilities include assuming and directing off-site radiological activities when the EOF becomes operational. The Dose Assessment Supervisor will provide input regarding protective action recommendations to off-site authorities.

The EOF Administrative Supervisor is responsible for providing resources for the ESO, including staff continuity and materials. He will ensure that technical documents are available and that the appropriate security measures are provided.

The Public Information Liaison will develop public news releases for review and approval by the Emergency Manager. The Public Information Liaison serves as liaison between site response management and the JPIC.

Additional ESO personnel are described in the CPS Emergency Plan. Figure C.1.c.1, "Emergency Support Organization", illustrates the organizational structure of the ESO.

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EMERGENCY SUPPORT ORGANIZATION

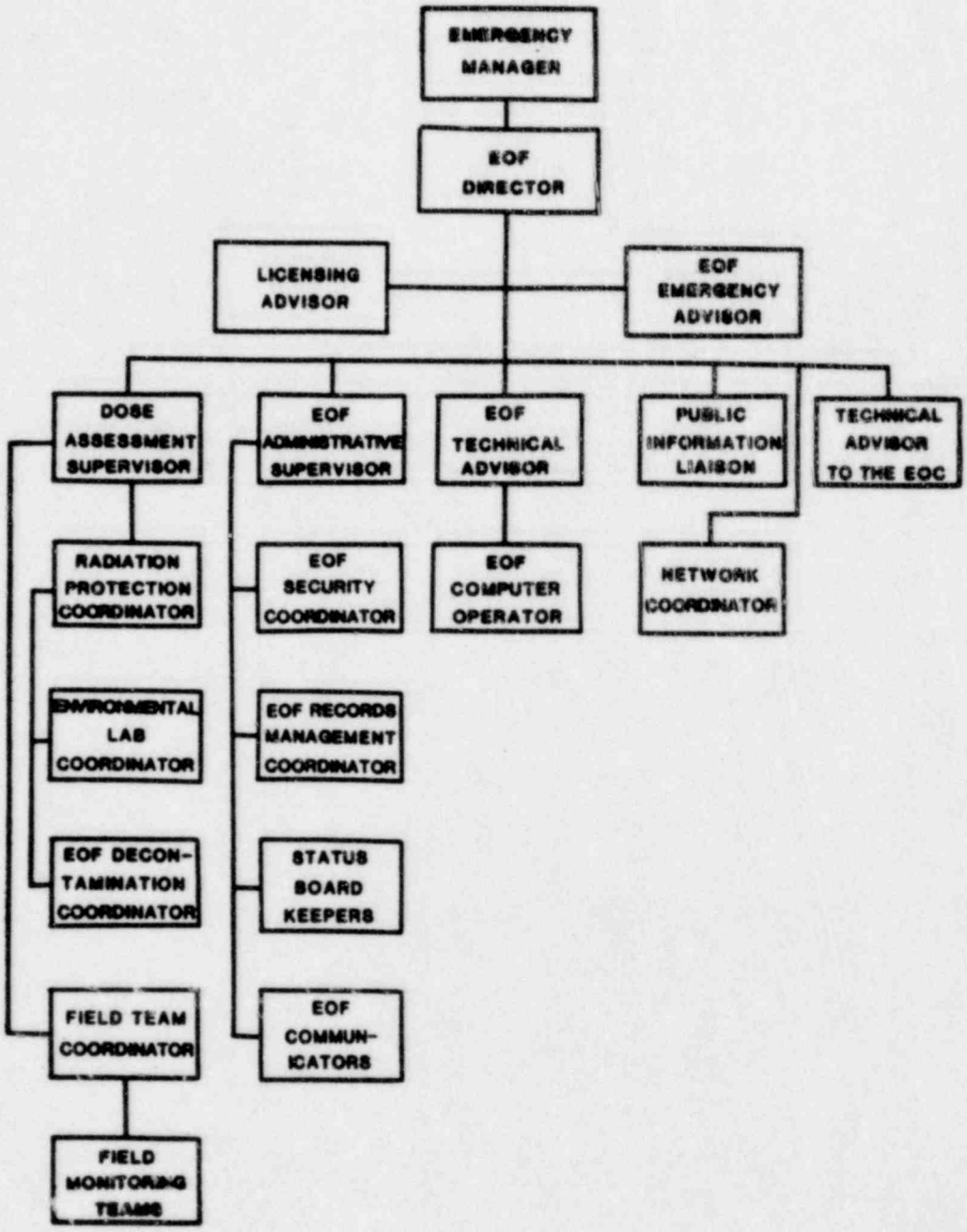

FIGURE C.1.c.1

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C. 1. d. Headquarters Support Organization

The Headquarters Support Organization provides support to the ESO by coordinating IPC Headquarters support activities. The HSO is divided into two basic functional groups: the technical and logistical group and the liaison group. Each group is comprised of personnel from various departments within IPC which offer specific support services.

The HSO operates from the Headquarters Support Center under the supervision of the Headquarters Emergency Director. The Headquarters Emergency Director provides support to the SERO and the ESO by coordinating General Office support through the HSO.

The Executive Vice-President serves as liaison between the senior IPC officers and the Emergency Manager to ensure that senior IPC officers are kept informed of emergency response activities.

The HSC Technical/Logistical Supervisor is responsible for coordinating the technical and logistical activities in the HSO. The HSC Liaison Supervisor is responsible for coordinating liaison activities including governmental affairs, insurance, legal affairs, personnel relations and security. The HSC Liaison Supervisor is responsible for the overall coordination of Headquarters communications with governmental and non-governmental organizations from the HSC.

HSO personnel are discussed in further detail in the CPS Emergency Plan. Figure C.1.d.1, "Headquarters Support Organization", illustrates the organizational structure of the HSO.

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HEADQUARTERS SUPPORT ORGANIZATION

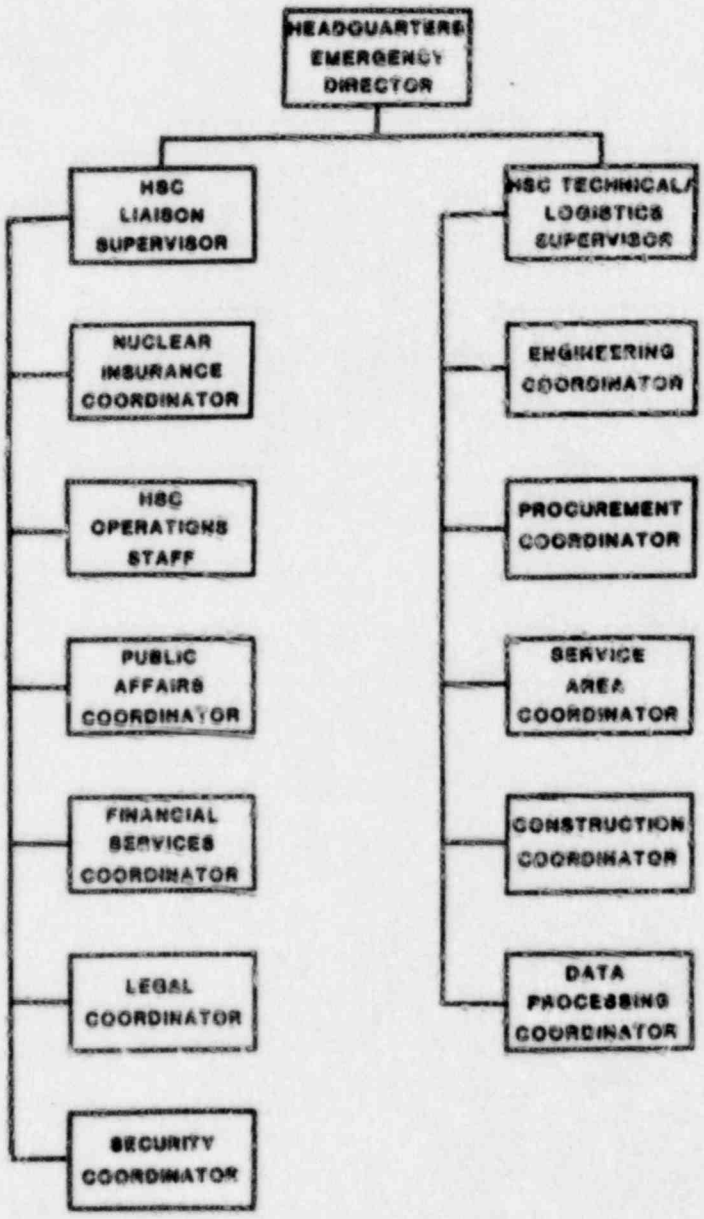

FIGURE C.1.d.1

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C. 2. Emergency Plan Support Centers

The following sections describe centers which may be activated by IPC during an incident:

a. Main Control Room

The Main Control Room will be the initial on-site center of emergency control. MCR personnel must assess the initial aspects of an emergency and deal with the situation until additional support centers can be activated. The MCR is equipped with instrumentation, controls and displays for the nuclear system, reactor coolant system, steam systems, electric systems, safety system and accident monitoring system.

b. Technical Support Center

The purpose of the Technical Support Center is to provide a centralized and dedicated work area for management and technical support to Station operations personnel during emergency conditions, to provide relief to the MCR operators of peripheral duties and communications not directly related to reactor systems manipulations and to serve as the primary station communications center during an incident. The TSC is the emergency operations work area for the Station Emergency Director, designated technical, engineering and senior licensee officials.

The TSC will have communication links with other station locations, facilities, centers and off-site authorities. Backup communications systems exist in the event the primary means becomes overloaded or unavailable.

The TSC will have the capability to display the Station data needed to analyze Station status. The TSC will have video displays for the assessment of various plant parameters. The primary means of data display will be through the station computer systems.

c. Operational Support Center

The Operational Support Center provides a location where station logistic support can be coordinated during an emergency and a location where technical personnel can assemble to support the TSC and MCR during an emergency.

The OSC will have communications capability with other station locations through the Emergency Automatic Ringdown circuit, radio and the station public address system. The OSC will also be able to communicate with other on-site and off-site locations.

d. Emergency Operations Facility

The Emergency Operations Facility is the center for the management of overall IPC emergency response activities. These activities include the assessment of the actual or potential effects of radioactive releases, the determination of protective action recommendations and the coordination of IPC activities with the emergency response activities of Federal, State and local agencies. A backup EOF has been established in the event the EOF is not available.

e. Headquarters Support Center

The Headquarters Support Center provides a centralized work area for the Headquarters Support Organization activities in support of the overall emergency response effort.

f. Joint Public Information Center

The Joint Public Information Center is staffed by the JPIC Director, members of the IPC Public Affairs Department and other support personnel. The purpose of the JPIC is to serve as a point of coordination where IPC, Federal, State and local agencies can exchange information and develop news releases for public information. Telephones will be made available to members of the press present at the JPIC.

C. 3. Operational Response Levels

The CPS Emergency Plan utilizes the four accident classifications set forth in NUREG 0610 to classify an incident at CPS. These classes are Unusual Event, Alert, Site Area Emergency and General Emergency.

Prior to the operation of CPS, IPC will develop specific operational response procedures for each classification which will comply with the minimum response levels prescribed by NUREG 0654/FEMA-REP-1. These procedures will outline such activities as the notification of on-site and off-site authorities and the activation of the IPC Emergency Response Organization.

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COMMAND AND COORDINATION

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COMMAND AND COORDINATION

A. Overview

The assignment of the command and coordination responsibilities is vitally important in the formation of any disaster response plan. Command and coordination become even more important when discussing the State and local responses necessary for an incident at a nuclear power plant due to the complexity of the situation. Not only does the evaluation of the incident require a great deal of technical expertise, but any decisions made as a result of such evaluations will affect a multitude of local jurisdictions as well as one or more states.

For this reason, much care was taken in the delineation of these responsibilities. As chief executive for the State of Illinois, the Governor has the ultimate authority for safeguarding the health and welfare of Illinois citizens and therefore, is vested with the overall command and coordination of IPRA. A detailed description of the Governor's responsibilities can be found in the following section.

Under the direction of the Governor are IDNS and IESDA. In consideration of their fields of expertise, IDNS was given command and coordination over the technical functions required by IPRA, and IESDA was given command and coordination over the operational response functions. A more detailed description of these roles can be found in Chapter 5, "Technical Functions", and Chapter 6, "Operational Response", respectively.

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B. Office of the Governor

The Governor's general duties and powers in times of disaster are described in the Illinois Emergency Services and Disaster Agency Act of 1975. IPRA expands these duties and specifies four functions which the Governor will perform in the event of an incident at a nuclear power plant. The Governor will:

- Assume overall command and coordination of the response to the incident;
- Recommend various protective actions for the affected populace;
- Commit State personnel and resources to assist local governments in implementing these protective actions; and
- Release information to the public through the various media to ensure that the public is informed of the implications of the incident and of the actions being undertaken to mitigate the consequences of the incident.

The Governor has been charged with these functions in recognition of the need for one State authority to be responsible for both the recommendation of those actions which must be taken and for the command and coordination of the overall response which implements those actions. As the chief executive of the State of Illinois, the Governor can direct the commitment of the State's resources to deal with the complexities of a nuclear incident. This command and coordination will be exercised through REAC for technical functions and through the State EOC for operational functions.

It should be recognized, however, that the local governments in the State of Illinois have considerable autonomy. Under this system, the Governor cannot legally direct local governments to implement protective actions, although he can recommend such actions. Nevertheless, in the event of a nuclear incident, there is a compelling need for a unified response among all entities involved in the incident. To this end, IESDA and IDNS, in cooperation with other State agencies and the affected local governments, have developed IPRA. IPRA has been designed to achieve the following goals:

- To effectively utilize the resources of the State of Illinois to supplement the resources of local governments at the time of an incident;
- To provide a channel through which the external resources of other parties, including the Federal government and private organizations, can be effectively utilized;
- To ensure that all parties are coordinated in their actions so that there is a unified response to an incident; and

- To establish an effective chain of command to allow for the implementation of the necessary response.

Through their involvement in IPRA, local governments have accepted the extension of the Governor's authority to include themselves. In return, the State of Illinois, under the direction of the Governor, will require State agencies to supply all resources and personnel necessary to support the local governments in their implementation of the recommended protective actions. The Governor also has the power to declare a state of disaster emergency and can seek Federal and private assistance during and after the incident.

The Governor will immediately be notified by IESDA of all incidents which are classified as either Site Area Emergency or General Emergency. Office space will be made available for the Governor if he chooses to work out of the State EOC, although it is probable that he will remain in the Capitol Building.

Decisions made by the Governor concerning protective action recommendations are to be based upon two factors: protective action recommendations determined by IDNS as a result of their accident assessment and operational response considerations. The protective action recommendation provided by IDNS to the Governor will be weighed with operational response considerations supplied by IESDA, and a recommendation for protective actions will be made by the Governor. This recommendation is then transmitted to all concerned State agencies, and to all local governments via NARS.

The Office of the Governor will bear the sole responsibility for the release of information to the public media for the State of Illinois. It is recognized, however, that this will be but one source of information going to the media; others include the utility, Federal agencies, local governments, private agencies, etc. The issue of public information is an important aspect of the State's emergency response plan. A more detailed discussion of the State's role with respect to the public information function is discussed in Chapter 8, "Public Information".

Given the importance of the role of the Governor and his office under IPRA, it is clear that an arrangement must be made to provide for decision making should these circumstances arise in the Governor's absence. As the executive agency in charge of emergency response, IESDA will be responsible for the assumption of the overall coordination role for the implementation of protective actions, basing these decisions upon the recommendation of IDNS. These two agencies will coordinate with each other and affected local and State agencies until the Governor can resume his duties.

C. Chain of Command

IPRA can only be carried out smoothly and successfully if the responsibilities of all participants and the priorities of responses are firmly established in a chain of command. Figure C.1, "IPRA Command and Coordination", is an organizational chart which outlines the IPRA chain of command.

As the chart indicates, the Governor of the State of Illinois, as the chief executive officer of the State, has the ultimate authority for command and coordination of IPRA.

IDNS has command and coordination authority over the technical functions in any nuclear incident. This authority, further discussed in Chapter 5, "Technical Functions", will be exercised primarily from REAC, and extends to four additional State agencies: IEPA, IENR, IDA and IDPH.

IESDA has command and coordination authority over the operational response functions. Operational response functions will be coordinated primarily through the State EOC. State agencies which are under IESDA's command and coordination include: ISP, IDOT, IDOC, the Illinois National Guard, the ICC, IDPH, CMS, the Department of Corrections, the Department of Insurance, the Department of Employment Security, DMHDD and IDPA.

Figure C.2, "Operational Response Responsibility Matrix", and Figure C.3, "Technical Functions Responsibility Matrix", indicate the State agencies responsible for carrying out operational and technical functions, and how these agencies are involved in the response.

In support of local government responses, each of these State agencies has developed a plan outlining:

- the agency's command authority;
- the agency's capabilities;
- procedures for initiating the agency's response; and
- directives to district offices on procedures for assisting local governments.

Some State agency responses will involve the use of their district/regional offices. The coordination of these agencies' responses at the site will be handled through the State Forward Command Post. The IESDA Chief of Field Services will coordinate their response efforts at the State Forward Command Post while additional direction will be provided from their State offices, usually located in Springfield. Chapter 5, "Technical Functions", and Chapter 6, "Operational Response", describe the role of each State agency during an incident and details the coordination of

their efforts through the State operational centers. Chapter 1, "General Information", of the site-specific volumes describes the roles of district offices.

A number of Federal and private agencies will also provide assistance during an incident at a nuclear power facility. Depending upon the nature of their resources and personnel, their support will be coordinated either through REAC or the State EOC. The Federal agencies providing assistance may include FEMA, the National Weather Service, the USNRC, the Army Corps of Engineers, the Coast Guard, USDOE and the Civil Air Patrol. The private organizations may include ANI, the American Red Cross and the Salvation Army. The specific roles of these organizations can be found in Chapter 9, "External Organizations".

In addition, State and local governments will utilize various private services, such as hospitals and ambulance companies.

These State, Federal and private organizations will work together to support local governments, which are the first to respond to any incident. With State assistance, local governments have developed specific procedures for implementing protective and parallel actions so that they know exactly what to do and how to do it, thereby keeping all delays to a minimum.

The primary center of coordination for local government operational responses will be the county EOC. The county Board Chairman has command authority over the agencies represented at the county EOC, with the county ESDA Coordinator acting as the operational coordinator. The county EOC is responsible for coordinating with the municipal EOCs. These municipal EOCs have been established by each municipality to coordinate local agency activities. The roles of these local governments and their agencies are described in the site-specific volumes of IPRA.

As the center for coordinating the overall county response, the county EOC will coordinate its operations with the State EOC and the State Forward Command Post. The county EOC will be in direct contact with the State EOC via NARS, and will be informed as to the protective actions which must be implemented. These recommendations will then be disseminated to the municipal governments within the county's jurisdiction. The county EOC will also coordinate all municipal requests for operational support, relaying those requests for assistance to the State Forward Command Post.

In certain cases, the role of the county EOC may be expanded into a center called the Community Coordination Center. The utilization of the Community Coordination Center concept is perhaps most beneficial at sites where there are several large municipalities within the EPZ. The Community Coordination Center will serve as a coordination point for the overall response and mutual aid among local governments. However, the responsibility for coordinating specific operational responses within the county's jurisdiction will remain with the county officials.

IPRA COMMAND AND COORDINATION

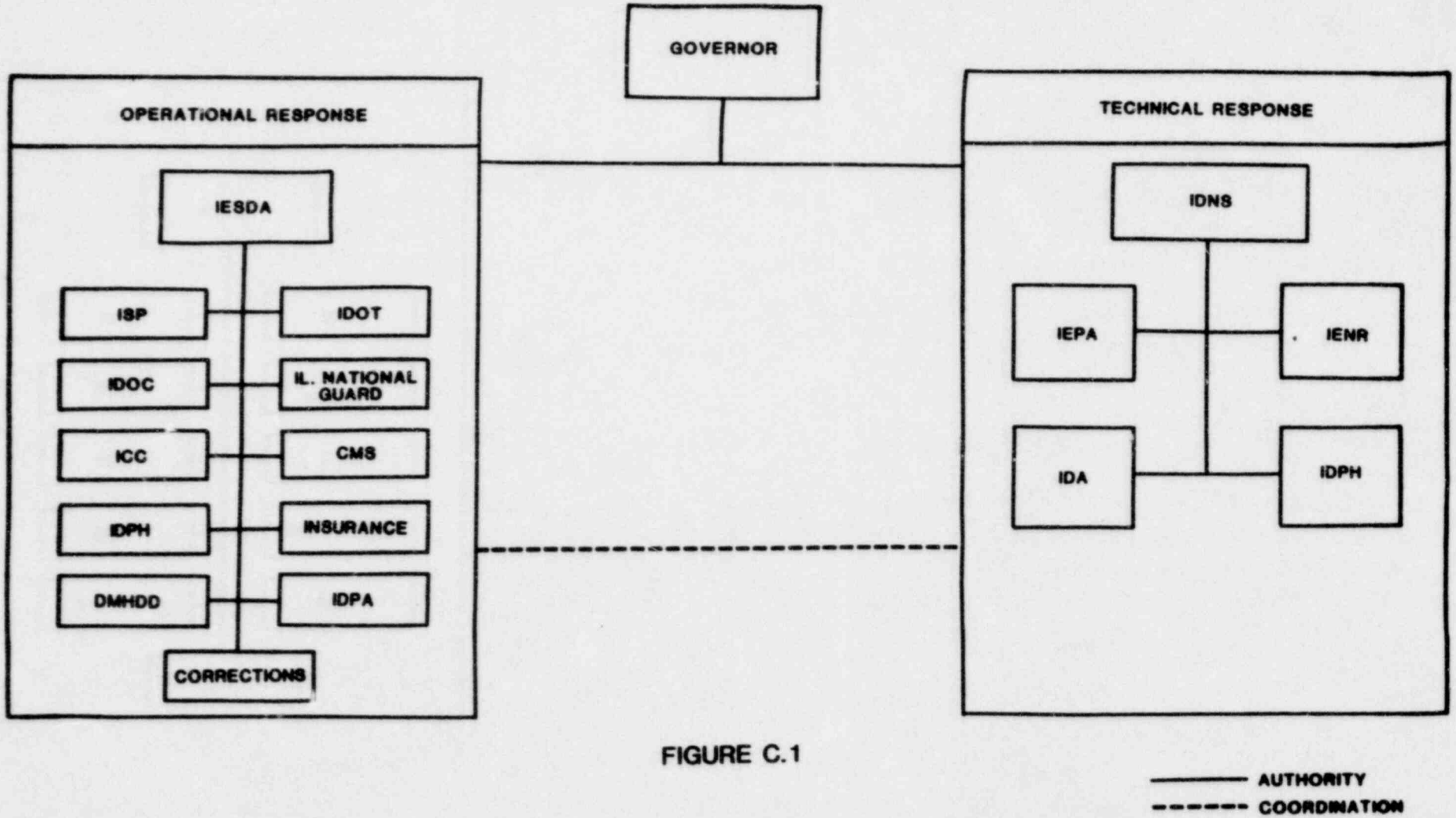

FIGURE C.1

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OPERATIONAL RESPONSE RESPONSIBILITY MATRIX

AGENCY NAME	ACCIDENT ASSESSMENT	PROTECTIVE ACTIONS: EVACUATION	TAKE SHELTER	TRAFFIC/ACCESS CONTROL	FOOD, WATER MILK CONTROL	PARALLEL ACTIONS: PUBLIC INFORMATION	RADIATION EXPOSURE CONTROL	LAW ENFORCEMENT AND CRIME PREVENTION	FIRE RESCUE	EMERGENCY MEDICAL SERVICES	SOCIAL SERVICES	RE-ENTRY
OFFICE OF THE GOVERNOR		Cmd., 1	Cmd., 1	Cmd.	Cmd.	Cmd.	Cmd.	Cmd.	Cmd.	Cmd.	Cmd., 1	Cmd., 1
IEMA		Coord., 1	Coord., 1	Coord.		Coord.	S, 5B, 6	Coord.	Coord.	Coord.	Coord., P, 1	Coord., 1
IDP	1	P, 2	P, 2	P			S, 5B, 6	P				P
IDOT/DOH				S			S, 5B, 6					S
IDOT/ AERONAUTICS	S	S		S	S, 3		S, 5B, 6	S		S, 3		
IDOC		S, 2	S, 2	S			S, 5B, 6	S				S
IDC		S		S			S, 5B, 6					S
ILLINOIS NATIONAL GUARD		S		S			S, 5B, 6	S		S, 3		S
IDPH		S, 3					S, 5B, 6			S, 3		
CMS		S, 3	S, 3	S			S, 5B, 6	S				S, S
DEPT. OF CORRECTIONS		S	S	S			S, 5B, 6					
DHHS		S	S	S			S, 5B, 6				S	
DEPT. OF INSURANCE											S	
DEPT. OF EMPLOYMENT SECURITY		S									S	
IDPA		S									S	

CMD - OVERALL COMMAND
COORD - OVERALL COORDINATION
P - PRIMARY AGENCY
S - SUPPORTS PRIMARY AGENCY
1 - PUBLIC NOTIFICATION VIA EBS
2 - PUBLIC NOTIFICATION VIA PROMPT NOTIFICATION SYSTEM
3 - PROVIDE TRANSPORTATION
4 - PROVIDE SAMPLING
5A - MONITOR PUBLIC EXPOSURE
5B - MONITOR EMERGENCY WORKER EXPOSURE
6 - RECORD KEEPING
7 - DECONTAMINATION OF EVACUEES
8 - DECONTAMINATION OF EMERGENCY WORKERS
9 - DECONTAMINATION OF EQUIPMENT AND MATERIALS
10 - DECONTAMINATION ASSISTANCE

FIGURE C.2

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TECHNICAL FUNCTIONS RESPONSIBILITY MATRIX

AGENCY NAME	ACCIDENT ASSESSMENT	PROTECTIVE ACTIONS: EVACUATION	TAKE SHELTER	TRAFFIC/ACCESS CONTROL	FOOD, WATER MILK CONTROL	PARALLEL ACTIONS: PUBLIC INFORMATION	RADIATION EXPOSURE CONTROL	LAW ENFORCEMENT AND CRIME PREVENTION	FIRE RESCUE	EMERGENCY MEDICAL SERVICES	SOCIAL SERVICES	RE-ENTRY
OFFICE OF THE GOVERNOR	Cmd.	Cmd., 1	Cmd., 1	Cmd.	Cmd.	Cmd.	Cmd.	Cmd.	Cmd.	Cmd.	Cmd., 1	Cmd., 1
IDNS	Coord., P, 4, 5A, 5B, 6, 7, 8, 9, 11				P, 4		Coord., P, 5A, 5B, 6, 7, 8, 9					Coord., 8, 10
IDA	8, 4				8, 4		8, 5B, 6					8
IEPA	8, 4, 10				8, 4		8, 5B, 6					8
IENR	8, 10				8, 4							
IDPH	6	8			8, 4		8, 5B, 6			P, 7, 8	8	

CMD. - OVERALL COMMAND
COORD. - OVERALL COORDINATION
P - PRIMARY AGENCY
8 - SUPPORTS PRIMARY AGENCY
1 - PUBLIC NOTIFICATION VIA EBS
2 - PUBLIC NOTIFICATION VIA PROMPT NOTIFICATION SYSTEM
3 - PROVIDE TRANSPORTATION
4 - PROVIDE SAMPLING
5A - MONITOR PUBLIC EXPOSURE
5B - MONITOR EMERGENCY WORKER EXPOSURE
6 - RECORD KEEPING
7 - DECONTAMINATION OF EVACUEES
8 - DECONTAMINATION OF EMERGENCY WORKERS
9 - DECONTAMINATION OF EQUIPMENT AND MATERIALS
10 - DECONTAMINATION ASSISTANCE

FIGURE C.3

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TECHNICAL FUNCTIONS

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TECHNICAL FUNCTIONS

A solid technical basis for assessing the radiological implications is essential in responding effectively to incidents involving radioactive materials or radiation producing machines. Methods for quantifying a nuclear materials release to the environment are mandatory for decision making regarding the protection of the citizens of Illinois. This chapter describes the technical basis for the evaluation, decision making and implementation of the technical aspects of the Illinois Plan for Radiological Accidents, as they pertain to the radiological nature of such an incident.

The Illinois Department of Nuclear Safety was established on April 1, 1980, by executive order from Governor James R. Thompson. The prime purpose for creating this new agency was to consolidate the regulatory endeavors of the State that pertain to the control of both the nuclear fuel cycle and other sources of ionizing radiation into a single entity.

The IDNS role in IPRA is to coordinate the total radiological assessment of, and response to, radiological accidents.

A. Concept of Operations

IDNS utilizes two functional sub-groups in its response to a nuclear-related accident or incident. They consist of the Radiological Emergency Assessment Center located in Springfield, Illinois, and the Radiological Assessment Field Team which is dispatched to the accident location for off-site assessment.

1. Radiological Emergency Assessment Center

REAC has been established at the Springfield headquarters of IDNS. It serves as the Emergency Operations Center (Command Center) for all radiological functions associated with response to a nuclear accident affecting the State of Illinois.

The Manager of the Office of Nuclear Facility Safety, or his authorized designee, is in command of REAC (REAC Commander) during a nuclear fuel cycle facility accident. The Managers of the Office of Radiation Safety and the Office of Waste Transportation assume the REAC Commander responsibilities for medical and industrial accidents and waste and transportation accidents, respectively. The REAC Commander is responsible for directing the implementation of all tasks associated with the radiological aspects of a radiological accident.

The REAC staff includes several positions necessary to fully assess and effectively direct all activities associated with the IDNS response to a radiological accident.

The following is a narrative of all REAC positions:

a. REAC Commander: The REAC Commander provides overall command and coordination of the decisions made by REAC and RAFT regarding radiological response actions, and ensures that those actions are properly initiated. He provides protective action recommendations to the Governor through the IDNS Director or his designee. In addition, he provides guidance and coordination with all participating governmental and private organizations and is authorized to request Federal assistance, if needed.

b. REAC Nuclear Analyst: The REAC Nuclear Analyst performs an assessment of the major nuclear station systems and parameters, determines the probability for events involving off-site agencies and reports the results to the REAC Commander.

c. REAC Environmental Analyst: The REAC Environmental Analyst determines the radiation dose commitment to the general public and emergency workers from a release of radioactive materials, actual or projected, from a nuclear station. He provides recommended protective actions to reduce or mitigate the radiation dose to the REAC Commander.

d. Public Information Officer: The Public Information Officer is responsible for disseminating information concerning IDNS activities to the general public and mass media representatives during a radiological emergency (Information regarding REAC activities will be released through the Office of the Governor). The PIO will coordinate with the Office of the Governor and REAC in enabling a timely exchange of necessary information and will ensure that conflicting press releases are not being made. He will also provide an interface between RAFT and the news media, so that other RAFT members can better accomplish their required functions without hindrance from the press or concerned citizens. His principal point of contact will be the EOF Liaison and he may serve as the technical consultant to the JPIC. He will operate under the direction of the REAC Commander.

e. EOF Liaison: The Liaison to the Emergency Operations Facility is responsible for monitoring the emergency actions taken by the utility during a radiological emergency. The EOF Liaison obtains and relays data to REAC concerning status of plant systems, dose assessment and off-site environmental monitoring by the utility. In coordination with the RAFT PIO, he may be called upon to serve as the technical consultant to the Joint Public Information Center. He will operate under the direction of the REAC Nuclear Analyst.

f. TSC Liaison: The Liaison to the On-site Technical Support Center is responsible for monitoring the emergency actions taken by the utility during an accident. The TSC Liaison obtains and relays data to REAC concerning status of plant systems and emergency actions taken by the utility. He will operate under the direction of the REAC Nuclear Analyst.

g. State EOC Liaison: The State Emergency Operations Center Liaison is responsible for monitoring the emergency actions taken by affected State agencies during a radiological emergency. He will coordinate the flow of information with REAC to ensure accurate and timely communication is maintained. He will serve as technical consultant to the State EOC. He will operate under the direction of the REAC Commander.

h. EOC Liaisons: The Emergency Operations Center Liaisons are responsible for monitoring the activities of county and municipal governments during a radiological emergency. They will coordinate the flow of information with REAC to ensure accurate and timely communication is maintained. They will serve as the technical consultant to the EOC and operate under the direction of the REAC Commander.

i. RAFT Liaison: The RAFT Liaison in REAC is responsible for establishing and maintaining communication between REAC and RAFT. He will ensure that necessary information is relayed between REAC and RAFT in an accurate and timely manner. The RAFT Liaison will operate under the direction of the REAC Commander.

j. Communications Officer: The REAC Communications Officer is responsible for the accurate dissemination of information and requests from the REAC Commander to various State and Federal agencies. The REAC Communications Officer will ensure that necessary information is relayed in a timely manner. The REAC Communications Officer will assist and operate under the direction of the REAC Commander.

k. REAC Recorder: The REAC Recorder is responsible for maintaining accurate documentation of the chronology of events associated with a REAC activation. Duties include typing memorandums, transcribing telephone communications and assisting in the completion of SOPs. The REAC Recorder will operate under the direction of the REAC Commander.

REAC is equipped with emergency electrical generating capability, isolated environmental controls and dedicated communication links, radio and telephone, to essential agen-

cies, facilities and mobile IDNS units. The dedicated telephone lines ensure communications between REAC and key locations at each nuclear power facility, the State EOC, county EOCs and the Office of the Governor. To prevent overloading commercial lines coming into REAC, several unlisted lines have been installed. If required, additional telephone lines will be installed on a priority basis between REAC and Federal or contiguous state agencies. Radio communications provide a redundant communications link (See Chapter 7, "Communications").

REAC is also equipped with a Remote Monitoring System that connects it to instrumentation installed at and around all Illinois nuclear power plants.

In the completed system, IDNS computers installed at each nuclear power plant will continuously receive the following information:

- Meteorological data, effluent release rates, in-plant radiation measurements and status signals from essential safety systems.

- Ambient radiation measurements from up to 16 remote monitoring devices (pressurized in chambers) outside and surrounding the plant's perimeter.

- Detailed isotopic analyses of plant effluents and continuous gross gamma measurements from an on-line stack monitor installed in the plant. This portion of the system is presently incomplete. The current installation schedule is as follows:

  LaSalle - Complete

  Zion - 1985

  Dresden - 1986

  Quad Cities - 1987

  Byron - 1988

  Clinton - 1989

  Braidwood - 1990

Each local plant computer will send its site-specific data to the central computer facility in Springfield via high-speed data links using dedicated telephone lines.

Once received in Springfield, the meteorological and stack data from remote computers are checked for indications of possible alarm conditions and are used to continuously update the predictions of the atmospheric dispersion and dose assessment model.

REAC maintains a communications dispatcher service and during an incident, trained personnel are available to provide a 24-hour operation for a protracted period. The REAC Commander is responsible for assuring continuity of all necessary resources.

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A. 2. Radiological Assessment Field Team

The Radiological Assessment Field Team performs the field radiological function of confirmatory accident assessment.

RAFT consists of a Mobile Command Center, a Mobile Nuclear Laboratory, support vehicles and the necessary radiological monitoring/sampling equipment and staff. The RAFT personnel provide for the completion of all necessary off-site radiological tasks associated with any nuclear accident. The extent of staffing is contingent upon the nature of the accident and can be modified at the discretion of the REAC or RAFT Commander. Staff requirements and equipment resources are delineated in the appropriate IDNS SOPs. RAFT communications, radio and telephone, are detailed in Chapter 7, "Communications".

The following is a narrative of all RAFT positions:

a. RAFT Commander: The RAFT Commander is responsible for the overall response actions taken off-site by the State of Illinois in a radiological emergency. He maintains continued contact with the REAC Commander and ensures that REAC recommendations are properly implemented. In addition, the RAFT Commander interfaces with other agency field response groups to coordinate the overall response effort. Assistance is provided by additional staff as needed. He will operate under the direction of the REAC Commander.

b. Plume Verification Officer: The RAFT Plume Verification Officer is responsible for tracking gaseous radioactive release (plume) pathways. The Plume Verification Officer directs environs teams in pinpointing the actual plume location and in the collection of environmental samples. The PVO is responsible for monitoring the radiation exposure of environs team members working under his direction. The PVO performs his duties in close coordination with the other RAFT officers and the REAC Environmental Analyst. Assistance is provided by additional staff, as needed. He will operate under the direction of the RAFT Commander.

c. Contamination Control Officer: The RAFT Contamination Control Officer is responsible for the control of radioactive contamination. A primary responsibility of the Contamination Control Officer is to ensure that evacuation of individuals (emergency workers and the general public) from designated areas will not compound the radiological hazards by spreading radioactive contamination. He will direct the monitoring of personnel, vehicles and equipment, and coordinate decontamination activities, if required. In addition, he is responsible for performing those tasks associated with protecting the

general public from the ingestion of radioactive materials through the food and water chains. The Contamination Control Officer performs his duties in close coordination with the other RAFT officers and the REAC environmental analyst. Assistance is provided by additional staff, as needed. He will operate under the direction of the RAFT Commander.

d. Exposure Control Officer: The RAFT Exposure Control Officer is responsible for protecting individuals (emergency workers and the general public) from excessive radiation exposure. He closely monitors the activities of emergency workers in order to minimize their radiation exposure. Maintaining accurate exposure control of evacuees is a primary responsibility. The Exposure Control Officer performs his duties in close coordination with the other RAFT officers. Assistance is provided by additional staff, as needed. He will operate under the direction of the RAFT Commander.

e. RAFT Nuclear Chemist: The RAFT Nuclear Chemist is responsible for performing isotopic laboratory analysis of samples collected during a RAFT activation. He will ensure that analysis is performed in an accurate and timely manner. He will work in close cooperation with the RAFT Exposure Control Officer and the RAFT Contamination Control Officer. Support will be provided by additional staff, as needed. He will report the results to and operate under the direction of the RAFT Commander.

f. Field Team Coordinator: The RAFT Field Team Coordinator is responsible for establishing and maintaining communications among the various RAFT groups, between RAFT and support agencies, and between RAFT and REAC. He is responsible for coordinating the activities of the environs teams while in the field and ensures that essential information is relayed to environs team members in a timely manner. He will operate under the direction of the RAFT Commander.

g. Sample Runner: The RAFT Sample Runner is responsible for the transfer of supplies and environmental samples between environs teams in the field and RAFT. He is responsible to see that all samples collected in the field for return to RAFT are properly packaged and labeled. He will operate under the direction of the RAFT PVO.

h. Communications/Recorder: The RAFT Communications/Recorder is responsible for establishing and maintaining communications between RAFT and REAC. The Communications/Recorder is responsible for completion of updated Nuclear Accident Reporting System forms and maintaining an accurate and permanent record of RAFT activities. The RAFT Communications/Recorder will ensure that necessary information is relayed between RAFT and REAC in a timely manner. The RAFT Communications/Recorder will assist and operate under the direction of the RAFT Commander.

i. Decontamination Officer: The RAFT Decontamination Officer is responsible for coordination of radiation monitoring of personnel, vehicles and equipment for possible radioactive contamination. He will ensure that procedures will be followed to avoid further spread of contamination and restrict the flow of traffic in segregated areas. He will coordinate decontamination activities with other support agencies. Assistance is provided by additional staff, as needed. He will operate under the direction of the RAFT Contamination Control Officer.

j. Decontamination Team: The RAFT Decontamination Team is responsible for radiation monitoring of personnel, vehicles and equipment for possible radioactive contamination. The team will ensure that procedures are followed to avoid further spread of contamination and operates under the direction of the RAFT Decontamination Officer.

k. Environs Teams: The RAFT Environs Teams are responsible for performing field radiological surveys and collecting environmental samples. Assistance is provided by additional staff, as needed. They will operate under the direction of the RAFT Field Team Coordinator.

l. Sample Recorder: The RAFT Sample Recorder is responsible for inventory and processing of environmental samples collected by the environs teams. The Sample Recorder will ensure that all environmental samples are properly packaged and labeled, and will operate under the direction of the RAFT Contamination Control Officer.

m. RAFT Vehicle Drivers: RAFT Vehicle Drivers are responsible for transport of the Mobile Command Center and Mobile Nuclear Laboratory to a designated staging area during a radiological emergency. Drivers will ensure that proper hookups, electrical and telecommunications, are made upon arrival. Drivers shall possess a valid Illinois Class B drivers license. Drivers operate under the direction of the RAFT Commander.

n. Equipment Logistics Team: The RAFT Equipment Logistics team is responsible for procuring, maintaining and distributing necessary equipment and supplies used in a RAFT activation. The team will maintain an accurate inventory of equipment and supplies and will operate under the direction of the RAFT Commander.

In addition, RAFT contains all appropriate maps, materials and supplies needed to effectively coordinate all field-related functions.

The RAFT Mobile Nuclear Lab is equipped with a multi-channel gamma spectroscopy system with a Ge(Li) detector and all support equipment and supplies necessary to perform field laboratory analysis. The communications capability in the Mobile Nuclear Lab is similar to that of RAFT.

IDNS will conduct periodic testing of its communications systems. All primary response emergency equipment/instruments will be inspected, inventoried and operationally checked at least once each calendar quarter and after each use in accordance with IDNS SOPs. Calibration of equipment will be performed on an annual basis. Necessary facilities to perform these functions and qualified personnel are available in Springfield, Illinois. There are sufficient reserves of instruments and equipment to replace those which are removed from emergency kits for calibration or repair.

B. Accident Notification

Notification of a nuclear power station accident or incident is initiated by the affected fixed nuclear facility. To facilitate this initial notification and provide a follow-up voice communication, linking key State and local agencies involved in the operational aspects of the response, the Nuclear Accident Reporting System has been established. The overall operational aspect of NARS is described in Chapter 7, "Communications". Initial notification for other types of accidents generally is received via commercial telephone by IDNS or the 24-hour IESDA or ISP Dispatcher.

IDNS will receive initial accident notification via NARS at the same time as other affected agencies. Preliminary information will be obtained at that time, with follow-up radiological information obtained over a separate dedicated telephone link to the utility.

Accident notification and verification of necessary information will be recorded and documented utilizing existing SOPs. The IDNS NARS phone is located within REAC and is monitored on a 24-hour basis.

When the REAC Dispatcher receives the initial notification, he immediately records all essential and available information, verifies the authenticity of the report, if required, and initiates an intra-departmental notification call sequence commensurate with the severity of the accident. Methods for initial notification of REAC/RAFT are outlined in IDNS SOPs. Notification of all required IDNS staff will be complete within approximately 15 minutes after initial notification from the utility. RAFT personnel should be in transit within 60 minutes. Travel time to the site will range between three and five hours, depending upon accident location, severity and travel conditions.

Depending upon the accident classification, various other State and Federal agencies charged with the responsibility of assisting IDNS in its role will also be notified by direction of the REAC Commander.

The agency responsible for the radiological aspects of a nuclear accident in affected contiguous states will be notified by REAC for all radiological accidents, except Transportation Accidents and Unusual Events.

Federal agencies, such as the USDOE Radiological Assistance Team and the Interagency Radiological Assistance Team, will be notified by REAC whenever an accident more severe than an Alert is reported. This notification will alert these agencies of the accident and request specific assistance if needed. Federal notification will also include specific accident information transmitted by the nuclear facility during the initial notification. It is anticipated that the immediate needs of IDNS

during a severe accident will be for additional radiological field resources, additional TLD readers, mobile radiological laboratories and airborne radiological surveillance capability.

Assistance from nuclear and other facilities, organizations or individuals which can be relied upon in an emergency to provide assistance is described in Chapter 9, "External Organizations".

C. Accident Classification

For nuclear power station accidents, a preliminary accident assessment is performed by the utility to categorize the accident into one of four accident classifications. The following four accident classifications have been established by the USNRC (NUREG-0654/FEMA-REP-1, Revision 1), and replace those classes previously established in USNRC Regulatory Guide 1.101:

- Unusual Event
- Alert
- Site Area Emergency
- General Emergency

An additional accident classification (i.e., Transportation Accident) has been added by the State of Illinois.

The rationale for the Unusual Event and Alert classes is to provide early and prompt notification of minor events which could lead to more serious consequences given operator error or equipment failure, or which might be indicative of more serious conditions which are not yet fully realized. A gradation is provided to assure fuller response preparations for more serious indicators.

The Site Area Emergency class reflects conditions where some significant releases are likely, or are occurring, but where a core melt situation is not indicated based on current information. In this situation, full mobilization of emergency personnel in the near-site environs is indicated; as well as the dispatch of RAFT.

The General Emergency class involves actual or imminent substantial core degradation or melting with the potential for loss of containment. The immediate action for this class is sheltering (staying inside), rather than evacuation, unless an assessment can be made that indicates evacuation is preferred due to its superior dose reduction factor.

Accident classification is essential in responding to a nuclear incident, because specific conditions at the facility warrant specific emergency responses. Such classifying of incidents provides response personnel with an idea of the potential consequences of the incident, and allows for adequate preparation.

Each accident classification, along with some examples of possible initiating plant conditions (Emergency Action Levels) is described below. The initiating conditions form the basis for classification by the utility of the specific plant conditions.

1. Transportation Accident

A Transportation Accident includes an accident involving the transportation of radioactive materials to, or from, a nuclear generating station. Such an accident may or may not

require off-site assistance to evaluate and return to pre-accident status, since there is a wide range of possible releases (i.e., the accident could be of varying severity) depending upon the type of accident and the materials involved.

Initiating conditions for a Transportation Accident are as follows:

a. A vehicle transporting radioactive materials to, or from, a nuclear generating station is involved in a situation in which:

   1. Fire, breakage or suspected radioactive contamination occurs involving a shipment of radioactive materials; or

   2. As a direct result of radioactive materials, a person is exposed to radiation, contaminated or killed.

b. Any other condition of equivalent magnitude to the criteria used to define this category, as determined by the utility Station Director or Corporate Command Center Director.

2. Unusual Event

An Unusual Event involves events which indicate a potential degradation of the level of safety at a nuclear station. The situation may or may not have caused damage to the plant, and if there is damage, it does not necessarily require an immediate change in plant operating status. No releases of radioactive material requiring off-site response or monitoring are expected unless further degradation of safety systems occurs.

Initiating conditions for an Unusual Event are as follows:

a. An aircraft crash or other missile impacting on-site from whatever source.

b. Earthquake being experienced at less than or equal to Operating Basis Earthquake levels.

c. Explosion causing damage on-site but not affecting plant operation.

d. Fire requiring off-site assistance but not affecting plant operation.

e. Flood being experienced (e.g., rupture of cooling pond dike affecting off-site property).

f. Tornado nearby that could potentially strike the facility.

g. Toxic gas incident observed near or on-site.

h. Security threat (event) which also poses a radiological threat, or has the potential for substantial degradation of the level of physical security at the station.

i. Loss of required systems to the extent that a reactor unit shutdown is required due to a Technical Specifications "ACTION" statement (such as for ECCS, fire protection systems, etc.).

j. Loss of primary coolant indicated (or probable) due to:

   1. An unplanned initiation of ECCS resulting in injection of coolant;
   2. Failure of a primary system safety valve to close; or
   3. Exceeding either primary-to-secondary leakage Technical Specification limit, or primary system leakage rate Technical Specification limit.

k. Rapid depressurization of PWR secondary side.

l. A gaseous effluent release greater than one, but less than ten times the Technical Specification instantaneous release limits .

m. A liquid effluent release at levels indicated in Figure C.6, "Emergency Action Levels for Radioactivity in Liquid Effluents".

n. Transportation of a radioactive contaminated and/or injured person to an off-site medical facility.

o. An incident in which, as a direct result of hazardous materials, a person is killed or hospitalized, or estimated property damage exceeds $50,000.

p. Any other condition of equivalent magnitude to the criteria used to define this category, as determined by the utility Station Director or the Corporate Command Center Director.

3. <u>Alert</u>

An Alert includes events which involve actual, or potential, substantial degradation of the level of safety at a nuclear station. An Alert situation may be brought on by either a man-made or natural phenomena and can reasonably be expected to occur during the life of the plant.

An Alert condition initiates a rapid transition to a state of readiness by plant personnel, and possibly by off-site emergency support organizations and the possible cessation of certain routine functions or activities within the plant that are not immediately essential. Protective evacuations or isolations of certain plant areas may be necessary.

Initiating conditions for an Alert are as follows:

a. Aircraft crash or other missile impacting on-site and affecting plant operation (e.g., requiring a unit shutdown due to an "ACTION" statement of the Technical Specifications).

b. Earthquake being experienced at levels greater than Operating Basis Earthquake levels.

c. Explosion causing damage to facility and affecting plant operation (e.g., requiring a reactor unit shutdown due to an "ACTION" statement of the Technical Specifications).

d. Fire requiring off-site assistance and affecting plant operation (e.g., requiring a unit shutdown due to an "ACTION" statement of the Technical Specifications).

e. Flood near or equal to design levels.

f. Tornado striking facility or sustained winds near or equal to design levels.

g. Toxic gas entry into the facility at life-threatening levels but not affecting vital areas.

h. Evacuation of Control Room anticipated or required with control of shutdown systems established from local stations within 15 minutes.

i. An ongoing security threat (event) of increasing severity, <u>or</u> a different threat, which involves actual or potential substantial degradation of the level of safety of the station from either the radiological or physical security point of view.

j. Loss of off-site power to the on-site electrical distribution systems <u>or</u> all diesel generators inoperable.

k. Loss of vital DC power for less than or equal to 15 minutes.

l. Loss of plant shutdown systems including:

   1. Loss of all systems capable of maintaining cold shutdown; or
   2. Failure of the Reactor Protection System to initiate and complete a reactor "trip" which brings the reactor subcritical.

m. Loss of required systems addressed in the Technical Specifications to the extent that an immediate reactor shutdown is required.

n. Loss of one of the following three fission product barriers:

   1. Cladding;
   2. Reactor Coolant System; or
   3. Primary Containment.

o. Loss of primary coolant indicated by a reactor coolant system leakage increase greater than 50 gpm.

p. Significant primary-to-secondary leakage for a PWR due to a failure of steam generator tubes.

q. Fuel damage accident with release of radioactivity to containment or fuel handling building.

r. A gaseous effluent release greater than ten times the Technical Specification instantaneous release limits.

s. A liquid effluent release at levels indicated in Figure C.6.

t. An activity in the containment which, if released under worst case meteorological conditions, would result in an off-site dose greater than 50% of, but less than or equal to, the lower USEPA Protective Action Guides (i.e., 1.0 Rem whole body or 5.0 Rems thyroid).

u. Any other condition of equivalent magnitude to the criteria used to define this category, as determined by the utility Station Director or Corporate Command Center Director.

4. <u>Site Area Emergency</u>

A Site Area Emergency includes events which are in progress, or have occurred, involving actual, or likely, major failure of plant functions needed for the protection of the public. Situations falling into this class include those accidents analyzed in the station's Final Safety Analysis Report that result in releases of radioactive materials to

the environment. These releases would be of sufficient magnitude to warrant consideration of protective measures (actions) off-site to minimize potential health hazards due to resulting abnormal levels of airborne or deposited radioactive materials.

Initiating conditions for a Site Area Emergency are as follows:

a. Aircraft crash or other missile impacting on-site, affecting vital structures and requiring an immediate reactor unit shutdown.

b. Earthquake being experienced at levels greater than Safe Shutdown Earthquake levels with a reactor unit <u>not</u> in cold shutdown or refueling.

c. Explosion causing severe damage and requiring immediate reactor unit shutdown.

d. Fire requiring off-site assistance and requiring immediate reactor unit shutdown.

e. Flood exceeding design levels.

f. Sustained winds exceeding design levels.

g. Toxic gas entry into vital areas at life-threatening levels.

h. Evacuation of Control Room and control of shutdown systems <u>not</u> established from local stations within 15 minutes.

i. Security threat involving an imminent loss of physical control of the facility.

j. Loss of off-site power to the on-site electrical distribution systems <u>and</u> all diesel generators inoperable.

k. Loss of vital DC power for more than 15 minutes.

l. Loss of all systems capable of maintaining hot shutdown.

m. Loss of two of the following three fission product barriers:

   1. Cladding;
   2. Reactor Coolant System; or
   3. Primary Containment.

n. Loss of primary coolant indicated by:

1. (BWR) reactor coolant system leakage increase greater than 500 gpm;
2. (BWR) main stream line break outside containment without isolation;
3. (PWR) reactor coolant system leakage increase greater than make-up capacity; or
4. (PWR) steam line break with greater than 50 gpm primary-to-secondary leakage <u>and</u> indication of fuel damage.

o. Severe primary-to-secondary leakage (PWR) due to a failure of steam generator tubes.

p. Major damage to spent fuel in containment or fuel handling building.

q. Effluent monitors detect levels corresponding to greater than 50 mR/hr for ½ hour <u>or</u> greater than 500 mR/hr for two minutes at the site boundary.

r. A liquid effluent release at levels indicated in Figure C.6.

s. An activity in the containment, if released under worst case meteorological conditions, would result in an off-site dose greater than the lower USEPA Protective Action Guides (i.e., 1.0 Rem whole body or 5.0 Rems thyroid) but less than or equal to the upper USEPA Protective Action Guides (i.e., 5.0 Rems whole body or 25 Rems thyroid).

t. Any other condition of equivalent magnitude to the criteria used to define this category, as determined by the utility Station Director or Corporate Command Center Director.

5. <u>General Emergency</u>

A General Emergency includes events that are in progress, or have occurred, which involve actual or imminent substantial reactor core degradation or melting with the likelihood of a related release of appreciable quantities of fission products to the environment. This classification is characterized by off-site consequences requiring protective measures (actions) as a matter of prudence or necessity. Evacuation of the site may also be necessary under extreme circumstances.

Initiating conditions for a General Emergency are as follows:

a. Security threat involving a loss of physical control of the facility.

b. Loss of two of the following three fission product barriers with an imminent loss of the third fission product barrier:

   1. Cladding;
   2. Reactor Coolant System; or
   3. Primary Containment.

c. Effluent monitors detect levels corresponding to greater than one Rem/hr whole body at the site boundary under actual meteorological conditions.

d. A liquid effluent release at levels indicated in Figure C. 6.

e. An activity in the containment, if released under worst case meteorological conditions, would result in an off-site dose greater than the upper USEPA Protective Action Guides (i.e., 5.0 Rems whole body or 25 Rems thyroid).

f. Any condition of equivalent magnitude to the criteria used to define this category, as determined by the utility Station Director or Corporate Command Center Director.

EMERGENCY ACTION LEVELS
FOR RADIOACTIVITY IN LIQUID EFFLUENTS

CLASSIFICATION	BASIS	EMERGENCY ACTION LEVEL[n] GROSS BETA/GAMMA	TRITIUM (PWR)
UNUSUAL EVENT	Parallel logic to the USNRC EAL for airborne release: T.S. limit < Release < 10 x T.S. limit	$1 \times 10^{-7} < C(uCi/ml) \leq 10^{-6}$	$3 \times 10^{-3} < C(uCi/ml) \leq 3$
ALERT	Lower limit based of USEPA's suggested 10 mrem whole body limit for drinking water alert level[b] Upper limit based on USFDA's preventive level of 500 mrem whole body	$40 < A(Ci) \leq 2000$[c] OR	$500 < A(Ci) \leq 20,000$ OR
	OR		
	Release 10 x T.S. >limit	$C(uCi)/ml) > 10^{-6}$	$C(uCi/ml) > 3 \times 10^{-2}$
SITE AREA EMERGENCY	Lower limit based on USFDA's preventive level Upper level based on USFDA's emergency level of 5000 mrem whole body	$2000 < A(Ci) \leq 20,000$	$2 \times 10^{4} < A(Ci) \leq 2 \times 10^{5}$
GENERAL EMERGENCY	In excess of USFDA's emergency level	$A(Ci) > 2 \times 10^{4}$	$A(Ci) > 2 \times 10^{5}$

EALs are measured or estimated to be in discharge water flow.
Unofficial USEPA guidance.
Assumptions:
- Water dilution of 10^{10} liters (typical for any station).
- Weighted concentration limit of 0.2 uCi/l for USFDAs preventive level (assumes a mixture of 1% each I-131, Sr-90; 10% Sr-89; 44% each Cs-134, Cs-137).
- Dose from Cs-134 is twice that from Cs-137 per unit of activity consumed.

Figure C.6

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D. Confirmatory Accident Assessment

Confirmatory accident assessment is the evaluation of the total radiological hazards to the general public (both plume and ingestion) resulting from an accidental release of radioactive materials.

Radiological assessment during a nuclear power station accident is the responsibility of the fixed nuclear facility and IDNS. The affected station will perform a preliminary accident assessment in accordance with the utility's emergency plan. IDNS will then perform a similar, yet independent assessment of the accident (i.e., confirmatory accident assessment).

The assessment of a nuclear accident involves the determination of the source term (i.e., the total quantity of radioactive materials released, the release rate and the isotopic content), the projection of the atmospheric dispersion of the release (atmospheric dispersion will be replaced by stream dilution for a liquid release), the deposition of radioactive contaminants if appropriate and calculation and verification of projected off-site radiation doses (exposures) for both airborne and deposited radioactive materials.

The preliminary source term provided by the nuclear station will be based upon the latest available grab-sample from the effluent stream (gaseous or liquid). This grab-sample will be used to approximate the isotopic content of the release. Gross radiation detectors monitoring effluent pathways will indicate an estimated total quantity and release rate of radioactive material escaping to the environment. If a grab-sample of the release material cannot be obtained, the nuclear station will provide the results of the latest isotopic analysis of the gas or liquid being released.

REAC will require various meteorological data, such as wind direction, wind speed and atmospheric stability class. IDNS will obtain this meteorological data from the nuclear station meteorological tower. Additional meteorological data will be obtained from other sources such as IEPA and the National Weather Service. After such data has been obtained, REAC will be capable of performing the initial off-site dose projection portion of its confirmatory accident assessment.

Except for the source term obtained from IDNS RAGEMS and the meteorological data provided by the nuclear station, the dose projections performed by REAC use independent computer modeling, hence, it is a confirmatory check on the facility's preliminary off-site dose projections.

In addition to the REAC computer modeling capability, several redundant, more manual methods can be utilized, such as for plume exposures, atmospheric dispersion (X/Q) overlays may be used. These transparent overlays exist for a 10-mile radius and represent

a family of seven wind stability classes and approximately fifteen wind speeds. The overlay corresponding to the proper wind speed and stability class at the time of the release is placed over the site map of the 10-mile EPZ, and positioned in the appropriate wind direction. This procedure reveals X/Q throughout the 10-mile plume EPZ at any desired location in the downwind sector and in the two adjacent sectors.

REAC also has the capability to perform dose projections using a Texas Instrument (TI-59) programmable calculator. Nuclear Safety Environmental Analysis is a program developed by IDNS to be run on the TI-59, which calculates X/Q values and estimates noble gas and iodine dose rates. X/Q values are based on the methods of USNRC Regulatory Guide 1.145. Diffusion standard deviations are calculated using the method of Table VI.A-1 of WASH-1500. NSEA provides a listing of all data used and can quickly determine both noble gas and iodine dose projections at selected distances from the affected reactor site.

IDNS has also developed the capability of duplicating several of CECo's Environmental Director's Procedures including computer programs ED-5 and ED-9. IDNS 4-SOP-2, "Determination of Evacuation Versus Sheltering from Initial Dose Projections", has also been computerized so that the recommended protective action is displayed as well as the projected dose with and without implementation of sheltering and/or evacuation.

Utilizing the computer modeling or the above information, and following the methods of dose projection in the appropriate SOP, an initial REAC dose projection for the affected populations should be available within approximately 15 minutes. From this, a recommendation as to the appropriate protective actions (i.e., sheltering and/or evacuation) will be made to the Governor. This recommendation is based upon USEPA PAGs which are detailed later in this chapter.

The total confirmatory accident assessment consists of two parts. Part 1 consists of the above described initial confirmatory dose projection performed by REAC, while Part 2 verifies these results through field monitoring and sampling. Both evaluations are to confirm, or refine, the preliminary accident assessment performed by the nuclear station.

If the initial accident classification is determined inappropriate at any time, or conditions at the affected facility change, either the utility or IDNS can recommend a change in accident classification. This decision will normally be discussed between the utility and the REAC Commander prior to a change, however, such discussion is not required. The mechanism for notification of the change will be the same as for the initial notification. Existing communications and organizational structures are such that the change will be effectively implemented in a timely manner, and all response organizations informed of the change.

IDNS will deploy RAFT, if required, in order to assess and mitigate the consequences of any radiological accident which could affect the citizens of this State. Provisions have been made for the dispatch of RAFT utilizing transportation modes appropriate to the type of accident and environmental conditions. These include personal auto, ISP cruiser, fixed-wing aircraft, helicopter, RAFT Mobile Command Center, Mobile Nuclear Lab and IDNS Response Team vehicles. Activation of REAC and dispatching of RAFT to the scene of the accident should be completed within approximately 60 minutes of the initial call to the State of Illinois.

The Mobile Command Center and Mobile Nuclear Lab will be deployed to one or more of several pre-established locations in the vicinity of the affected station. These locations will have appropriate electrical power and telephone connections. The determination of the RAFT Command Center location will be made by REAC, and will be based primarily on wind direction, current and projected. This will allow the RAFT Command Center to be positioned approximately upwind from the station, thereby preventing unnecessary exposure and contamination of RAFT personnel.

Since both the RAFT Mobile Command Center and the Mobile Nuclear Lab have AC electrical generating capability and radio communications, RAFT has the capability of operating independently of these pre-established locations in the event they are not accessible, or if it is determined that other locations are more appropriate. All equipment and functions of RAFT are operable while in transit to the accident scene.

Off-site radiological measurements consist of radiation surveys and air sampling for plume exposure rate verification, and the sampling and analysis of food, water and milk for ingestion exposure verification. Off-site radiological measurements are performed by RAFT using radiological assistance teams from Springfield and/or the regional offices of IDNS. If requested by IDNS, radiological assistance teams may also be provided by USDOE and other State and Federal agencies. Plume exposure measurements will be made using suitable radiation detection instrumentation, e.g., portable ion chambers, in the downwind portions of the 10-mile EPZ. Determination of the radioiodine-to-noble gas ratio will be performed utilizing air samplers equipped with iodine cartridges and particulate filters. Both silver-zeolite and activated charcoal cartridges are available for use in determining the iodine-to-noble gas ratio. These samples will be analyzed in the Mobile Nuclear Lab and/or in the field using appropriate equipment. Utilizing the gamma spectroscopy system in the Mobile Nuclear Laboratory, RAFT will have a capability to detect and measure radioiodine concentrations in the air at less than 10^{-7} uCi/cc (micro-curies per cubic centimeter) under field conditions in any kind of weather. Interference from the presence of noble gas and background radiation will not alter this capability. Those laboratory facilities available to support the radiological assessment during a nuclear accident are listed in Figure D.1, "Laboratory Facilities Available During a Radiological Accident".

Samples of milk, water and food will be obtained throughout the 50-mile ingestion EPZ and beyond, as warranted. These samples will be analyzed at the Mobile Nuclear Lab and/or the Nuclear Chemistry Laboratory in Springfield, Illinois. IDNS will augment its resources as necessary utilizing additional laboratories, including those of USDOE.

In order to ensure that radiological assessment functions can be performed by RAFT during all weather conditions, provisions have been made for appropriate protective apparel to be used during times of inclement weather. In addition, each team member is provided with anti-contamination protective clothing and appropriate personal monitoring devices.

To ensure that RAFT personnel are capable of being transported to the scene of the accident, several response vehicles are equipped with four-wheel drive.

For plume exposure rate verification and plume pattern definition, measurements are made of radiation fields and the ratio of radioiodines-to-noble gas. These measurements, along with other pertinent data, are then recorded on transparent map overlays at REAC and RAFT Command Centers. The overlays are periodically changed to provide a time-cycled record of field data and radiation levels. Radiation measurements will be made with portable radiation detection equipment and thermoluminescent dosimeters. The TLDs will give a good measurement of the time-integrated dose, in support of population dose projections.

As part of the confirmatory accident assessment, IDNS will obtain and preserve the record of estimated radiation exposures to the environment. To perform this, IDNS maintains an environmental surveillance system around each fixed nuclear facility, consisting of a systematic deployment of TLDs. During an accident, this system will be augmented with additional TLDs, if necessary, to ensure adequate coverage. Upon termination of the accident, or as warranted, these TLDs will be collected, analyzed and recorded.

Population dose projections are done by estimating the time-integrated dose, thyroid and whole body, for each segment of the population receiving a significant dose from the accident. The area surrounding a nuclear station is divided into small geographical segments so that each person in a given segment receives approximately an equal dose. The total population dose (total man-Rems) is then obtained through the appropriate summation of the individual doses for each segment. The time-integrated dose at the end of the accident can be evaluated at every location that had a TLD posted throughout the accident.

In addition to the TLD network, IDNS has an on-line real-time Remote Monitoring System which includes a ring of pressurized ion chambers located every 22½ degrees at a radius of 1.5 to 2.5 miles around the plant. These monitors continuously monitor ambient radiation levels and transmit these readings to REAC. The REAC

computer has the necessary mass-storage devices capable of recording each specific reading and its associated location. The data reported from the TLD network will be incorporated with the data from the remote monitoring network; thereby providing the best estimate of overall environmental exposure and impact.

Two-man radiological assessment teams will be deployed throughout the off-site environs to provide a timely assessment of the plume exposure rate and its pattern of dispersion. Each team will consist of a person qualified in the operation of survey and sampling equipment, and a person who is familiar with the local roads, including alternate routes, leading to the survey/sample locations. Each of these teams will be equipped with a radiological assessment kit which includes radiation instrumentation capable of measuring gamma radiation from background (0.2 mR/hr), to 1,000 R/hr. Each team will also have air sampling equipment with appropriate filters which preferentially remove particulates and halogens from the inert noble gases. In addition, each team has specially designed containers for collecting gas samples. Such equipment enables RAFT to determine the concentrations of both radioactive halogens and particulates in the air. Gamma-ray exposure rates and air concentrations of radioactive iodines and particulates will be measured at those locations determined by REAC.

The radiologically trained individual on each two-man team may be from IDNS, USDOE, the utility or other agency; depending upon the severity of the accident. Enough teams will be made available to provide 100 percent replacement of personnel at intervals of about twelve hours. In order to provide for a smooth turnover, an overlap of approximately one hour may be necessary.

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LABORATORY FACILITIES AVAILABLE DURING A RADIOLOGICAL ACCIDENT

FACILITY	ANALYSIS	CAPACITY*	TRANSIT/TURN AROUND TIME
IDNS	All Environmental Media:		
Mobile Nuclear Laboratory	Gamma spectroscopy	1-10/hr	1-4 hours/Immediate
Statewide	TLD Readout	45/hr	
	Data Processing	-------	
IDPH	All Environmental Media:		
Division of Laboratory Services	Gamma Spectroscopy	1-10/hr	1-8 hours/12-24 hours
Nuclear Chemistry Section	Liquid Scintillation (^3H)	15-30/hr	
Springfield, Illinois	Gross Alpha, Beta	10-26/hr	
	Data Processing		
USHHS, USPHS, USFDA	Food/Potable Waters:		
Winchester Engineering and Analytical Center	Gamma Spectroscopy	60/day	12-24 hours/24hours
Winchester, Massachusetts			
Contact: USFDA, Region V			
USDOE	All Environmental Media:		
Various Laboratory Facilities	Gamma Spectroscopy	50/day	1-24 hours/24 hours
Contact: Argonne Nat. Laboratory	Alpha Spectroscopy	10/day	
	Liquid Scintillation	25/day	
	Gross/Specific Alpha, Beta	5-25/day	
USEPA	All Environmental Media:		
Various Laboratory Facilities	Gamma Spectroscopy	50/day	12-24 hours/24 hours
Contact: USEPA Region V	Liquid Scintillation	25/day	
	Gross/Specific Alpha, Beta	5-25/day	

* Capacities and times are highly dependent upon the number of facilities dedicated to an incident, as well as sensitivities required. The numbers listed reflect the minimal response capabilities of each agency. Detailed specifics for Federal Agency Response appear in IRAP-60.

Figure D.1

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E. Contiguous States

For incidents involving contiguous states, the methods for performing radiological assessment will differ between states. The State of Illinois will be entirely responsible for its own accident assessment and will not depend on assistance from contiguous states. Mutual assistance between contiguous states, such as additional mobile labs, personnel and equipment, will be provided at the time of request, if available.

The USEPA Manual of Protective Action Guides is utilized by both Illinois and all contiguous states as a basis for decision making concerning sheltering, evacuation and field responses. Protective and parallel actions may vary between states, as each state must consider factors that may not apply to the other.

A direct communication link between IDNS, REAC and RAFT counterparts in the affected contiguous state will be provided in all cases. Whenever possible, coordination and consistency will be maintained to an extent commensurate with the nature and magnitude of an incident.

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F. Protective Actions

A protective action is an action taken to avoid or mitigate the projected dose to the general public as the result of a radiological release. A total of seven specific protective actions have been defined by the USEPA for use during a nuclear accident. These protective actions have been previously identified and discussed in Chapter 2, "Concept of Operations".

The recommendation for protective actions during the preliminary phase of a fixed nuclear facility accident will, of necessity, be based upon the preliminary accident assessment made by the facility. Such a recommendation will be made utilizing the nuclear station's appropriate Emergency Plan Implementing Procedures; as such procedures correspond to the Protective Action Guidelines promulgated by the USEPA.

After the initial confirmatory accident assessment by REAC, the recommendation for protective actions, if appropriate, will be made by IDNS simultaneously to the Governor and IESDA. Such recommendation will be based upon the projected population dose, as determined through the confirmatory accident assessment and/or the potential for such exposure, as determined by station status during the accident.

The projected dose to the general public will be based upon either field measurements obtained by radiological assessment teams or by mathematical computer modeling (or both), utilizing the source term and appropriate atmospheric dispersion characteristics. In either case, the protective actions recommended will be based upon the latest PAGs promulgated and published by the USEPA.

Since the implementation of certain protective actions must take into consideration existing constraints at the time of the accident, the Director of IESDA and the Governor may determine the necessity to discuss alternate protective actions with the Director of IDNS.

Following the determination of appropriate protective actions by the Governor or his authorized designee, the dissemination of this information will be made to all affected governmental units and appropriate private organizations. This dissemination is intended to facilitate implementation of these protective actions as soon as possible. The State and Federal agencies involved with the radiological aspects of these protective actions and their implementation are illustrated in Figure F.1, "Radiological Aspects of Protective Actions".

USEPA PAGs are projected personnel radiation exposure values at which certain protective actions should be implemented. Projected dose is that radiation dose that would be received by the general public if no protective actions were taken. For these

PAGs, the projected dose does not include any dose that may have been received prior to the time of initiating the protective action. Protective actions must therefore be instituted before the onset of exposure to the plume, or from ingestion, to ensure the desired results. PAGs are considered mandatory values for purposes of planning. Under accident conditions, however, the values are guidance, subject to unanticipated conditions and constraints that may require considerable judgment in their application.

Plume exposure PAGs are taken from the USEPA Manual of Protective Action Guides. Methods shown therein will also be employed for estimating integrated doses from dose rates and comparing these estimates with the appropriate PAGs. These values are a projected dose of one Rem to the whole body and five Rems to the thyroid. The PAGs for emergency personnel are 25 Rems whole body and 125 Rems thyroid; except for lifesaving missions. Under such circumstances, a permissible whole body dose of 75 Rems is considered acceptable, if authorized. There is no lifesaving PAG for the thyroid, since, under extreme conditions, total loss of thyroid function will be allowed. Authorization for emergency workers to incur radiation exposures in excess of USEPA General Public Protective Action Guides shall come from the REAC Commander, or his authorized designee. The RAFT Commander, operating under the direct guidance of the REAC Commander, may also authorize these radiation exposure limits in his function of maintaining authority and control in the field under diverse and changing conditions.

Using the appropriate SOP, thyroid and whole body dose conversions are tabulated on worksheets for each significant radionuclide. Using these worksheets, thyroid and whole body dose rates are calculated, then converted to dose using a conservative, but simple, time-integration technique. The resultant doses, whether obtained through calculation in this manner or calculated directly from the worksheets for a "puff" release, are then compared with the appropriate PAGs to determine if protective actions should be considered and/or implemented.

Preventative PAGs for the ingestion of food, water and milk, as promulgated by the United States Food and Drug Administration, are 0.5 Rem projected dose to the whole body (bone marrow) or other organ, and 1.5 Rems projected dose to the thyroid.

Emergency PAGs for the ingestion of food, water and milk have also been established. These levels are five Rems projected dose to the whole body and 15 Rems projected dose to the thyroid. For the Emergency PAGs the infant values are used for the general public, while the adult values apply to emergency personnel.

Present guidance for relating contamination levels of crops, or foodstuffs, to either dose rates or integrated doses has not, as yet, been developed. Chapter 3 of the USEPA Manual of Protective Action Guides (December, 1976) does, however, present methods for relating pasture and milk contamination levels to integrated doses.

This draft of the USEPA manual will be used to establish means for relating measured activity levels on pasture and in milk to radiation doses, until further guidance is provided. The dose conversion factors utilized consider biological uptake, breathing rate, ingestion rates and physical characteristics of the applicable isotopes and their expected modes of ingestion.

Food, water and milk samples will be obtained and analyzed at either the IDNS Nuclear Chemistry Laboratory in Springfield, Illinois, at the RAFT Mobile Nuclear Lab, other laboratories as identified in Figure D.1, and/or, in the case of milk, at appropriate milk processing plants. As directed by IDNS, food and vegetation samples may be collected by IDPH and IDA, while water samples may be collected by IEPA.

The administering of stable (non-radioactive) iodine, in the form of 130 mg tablets of potassium iodide (KI), will be used to substantially reduce the uptake of radioactive iodine in the thyroid gland of emergency personnel. The basis for its use is depicted in Figure F.2, "Potassium Iodide Thyroid Blocking Effectiveness", which shows the effectiveness of radioiodine blocking versus time of administration. The PAG for use of KI, as listed in NCRP-55, "Protection of the Thyroid Gland in the Event of Releases of Radiation", is a projected dose of ten Rems to an emergency worker's thyroid gland.

Pre-placement of KI ensures that the first day dosage is available to all potential emergency workers responding to a nuclear accident. Instructions for its use will come from IDNS.

Facilities, within the 10-mile EPZ, housing individuals that are incapable of a timely evacuation (i.e., immobile population) will also be supplied with an initial (two day) supply of KI for all individuals. Instructions for its use will similarly come from IDNS.

KI tablets will not, however, be provided for the entire general public due to various factors such as cost effectiveness, increased incidence of adverse side-effects and difficulties in pre-positioning and distribution.

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RADIOLOGICAL ASPECTS OF PROTECTIVE ACTIONS

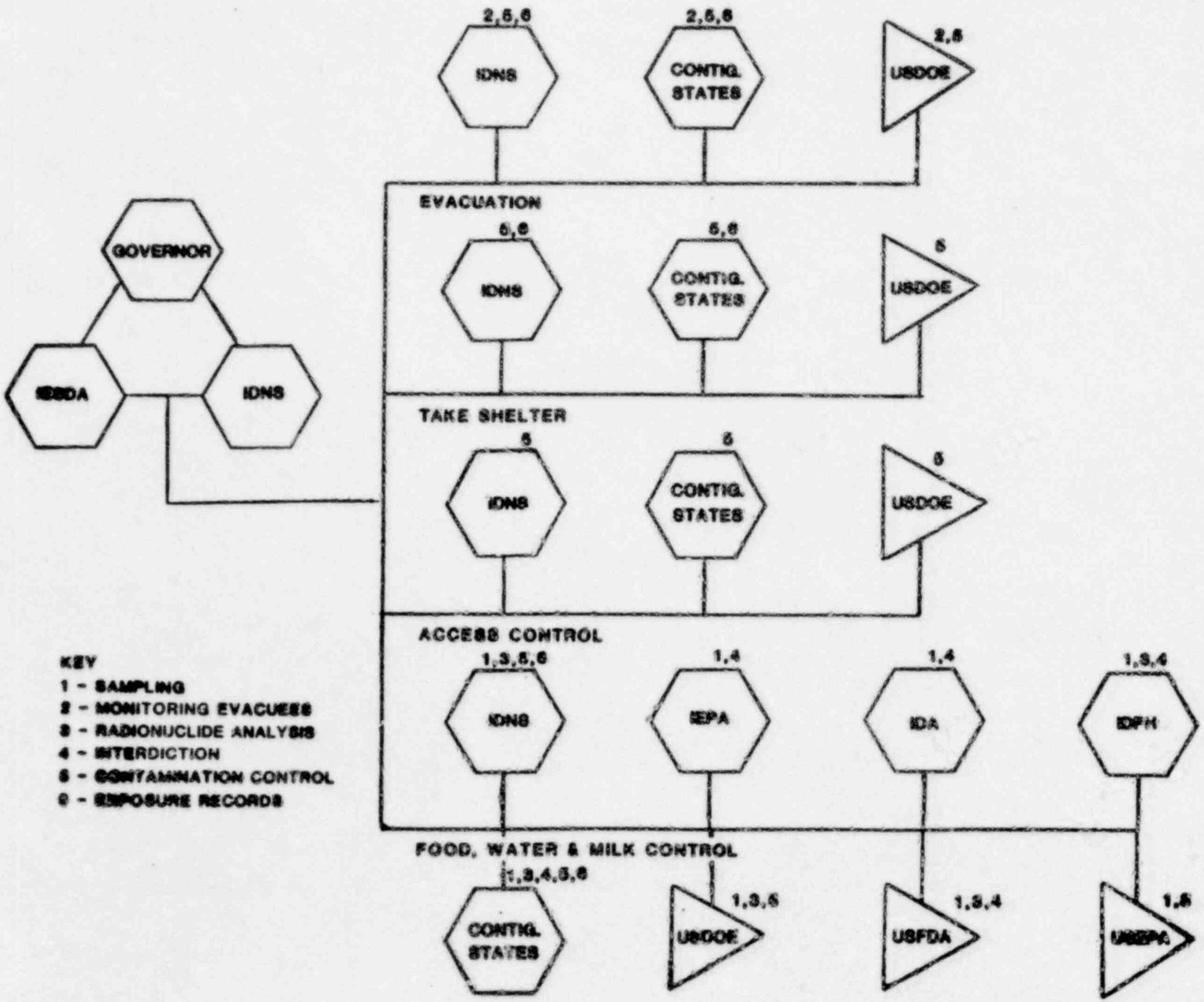

FIGURE F.1

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POTASSIUM IODIDE THYROID BLOCKING EFFECTIVENESS

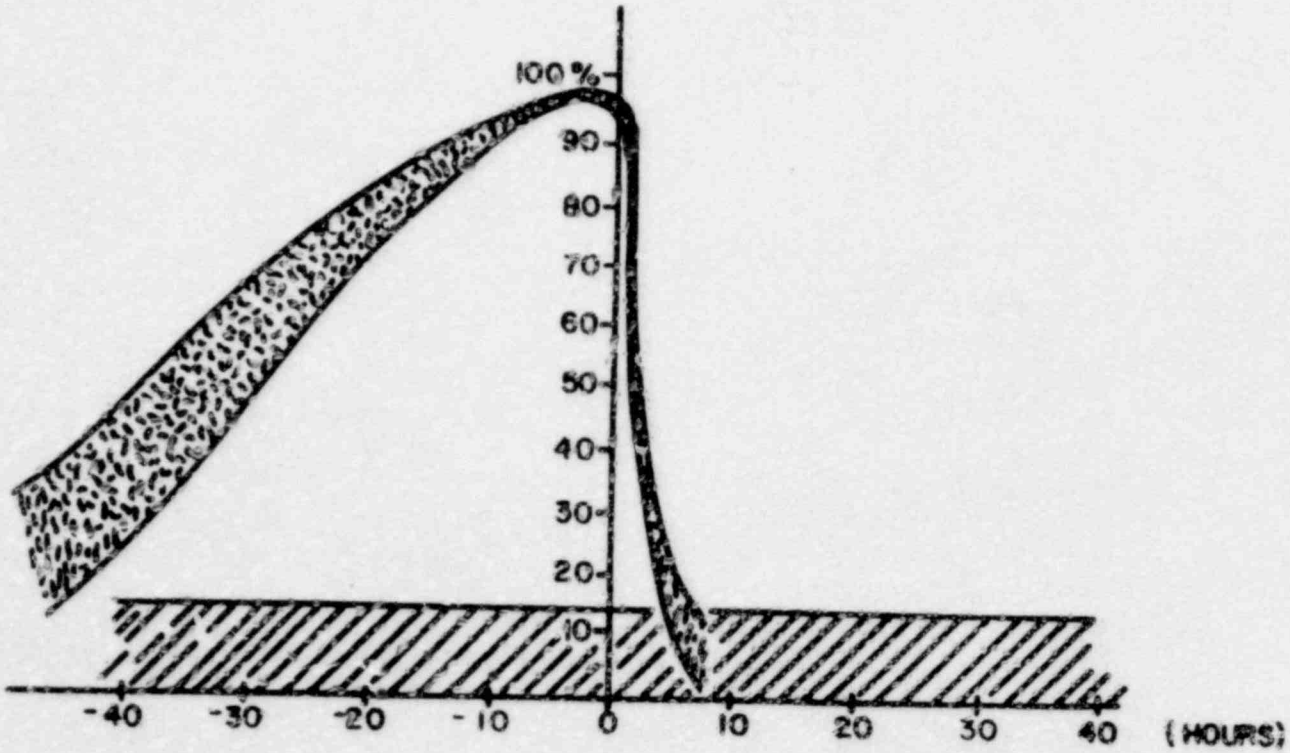

Figure: Percent of thyroid blocking as a function of time (in hours) before or after a slug intake of radioiodine.

Figure F.2

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G. Parallel Actions

Parallel actions are performed after, or in conjunction with, protective actions. Parallel actions consist of (1) law enforcement and crime prevention, (2) social services, (3) emergency medical services, (4) public information, (5) fire and rescue, (6) radiation exposure control and (7) re-entry (See Chapter 2, "Concept of Operations", for a more detailed discussion of parallel actions). IDNS has the primary responsibility for implementing radiation exposure control and re-entry. Assistance by State and Federal agencies for implementing the radiological aspects of parallel actions is shown in Figure G.1, "Radiological Aspects of Parallel Actions".

Radiation exposure control consists of controlling personnel activities to reduce or prevent unnecessary radiation exposure or contamination and to keep records of the exposures incurred by evacuees and emergency personnel. Evacuees will be monitored for radioactive contamination at "staging areas" next to evacuation centers, and will be decontaminated, as necessary. If further medical treatment is required, they will be sent to medical facilities that have appropriate resources and have agreed to treat contaminated patients. These medical facilities are listed in the appropriate SOP. These facilities will also determine an individual's thyroid uptake of radioiodine.

In addition to the above measures provided for the general public, provisions exist for the evaluation of personnel through the use of dosimetry, bioassays and body-burden determination, as warranted, for those individuals actively assisting in the accident response (e.g., fire protection and law enforcement personnel). Exposure control methods are designed to minimize radiation exposure to emergency personnel and the general public. The guiding premise is to limit the exposure to a level that is "as low as is reasonably achievable" (ALARA).

The primary radiation exposures of concern are whole body external exposure to gamma radiation from airborne material and materials deposited upon the ground, and from internal thyroid exposure due to inhalation and ingestion of radioiodines.

Whenever emergency personnel are planning to undertake an operation, it is essential that the best estimate of the radiological situation be known by those directly involved. All sources of information, including projected exposure rate patterns, will be considered, and a best estimate made of the radiation dose likely to be received during a specific mission. The mission must be planned by taking into consideration the most likely situation, as well as the most potentially hazardous situation to be encountered. Items to be considered include entry and exit routes, changes in meteorological conditions, areas or roads to be avoided, equipment and vehicle failure, etc.

Radiation surveys of the exposure levels at certain work locations may also be necessary in order to determine the amount of

time available to emergency personnel for carrying out their assignments. Two types of measurements are of importance: gamma radiation exposure rates and radioiodine concentrations.

For gamma radiation exposure level measurements, portable radiation survey meters will be used which cover the levels (ranges) of radiation expected (e.g., 0.2 mR/hr to 1000 R/hr).

Airborne radioiodine concentrations will be measured and used to estimate thyroid dose commitment. An air sampler, with an iodine absorber or silver zeolite cartridge and an appropriate detection instrument, will be used for this measurement. The method for making this measurement is outlined in the appropriate SOP.

The issuance of personal protective equipment and dosimetry will be in accordance with the appropriate SOP.

Radiological recovery prior to re-entry is the second parallel action for which IDNS is responsible.

Before it is acceptable for evacuees to return, it may be necessary to reduce the surrounding radiation levels. Such a reduction will normally be achieved through decontamination of the area. The methods available for decontamination are varied, and no one method is applicable in all instances. The factors which limit and/or affect the methods chosen for decontamination are as follows:

- The weather;
- Nature and extent of the contamination;
- Decay rates of the contaminants;
- Physical characteristics of the surface or object to be decontaminated;
- Hazard to the operators;
- Economic considerations; and
- Environmental consequences.

Environmental consequences play a major role in electing whether or not to decontaminate an area. If the appropriate methods of decontamination will render irreparable ecological damage to the area, causing it to be uninhabitable or unproductive in its previous capacity, decontamination as a protective action may not be advisable. Decisions regarding decontamination will be made by IDNS in conjunction with IEPA, IDPH, IESDA and several Federal agencies, after fully assessing the situation and assuring that all alternatives have been considered. Radiological decontamination of supplies, instruments and equipment, including waste disposal, will also be carried out as appropriate.

The radiological aspects of re-entry involve the establishment of guidelines for radiation dose rates and contamination levels; below which the evacuees are permitted to return to their homes. Local governmental entities will provide the notification and assistance for the safe return of the evacuees. Authorization for re-entry, either "restricted" or "unrestricted", will be made only after full consideration of projected radiation exposure and the necessity for re-entry at the particular time in question.

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RADIOLOGICAL ASPECTS OF PARALLEL ACTIONS

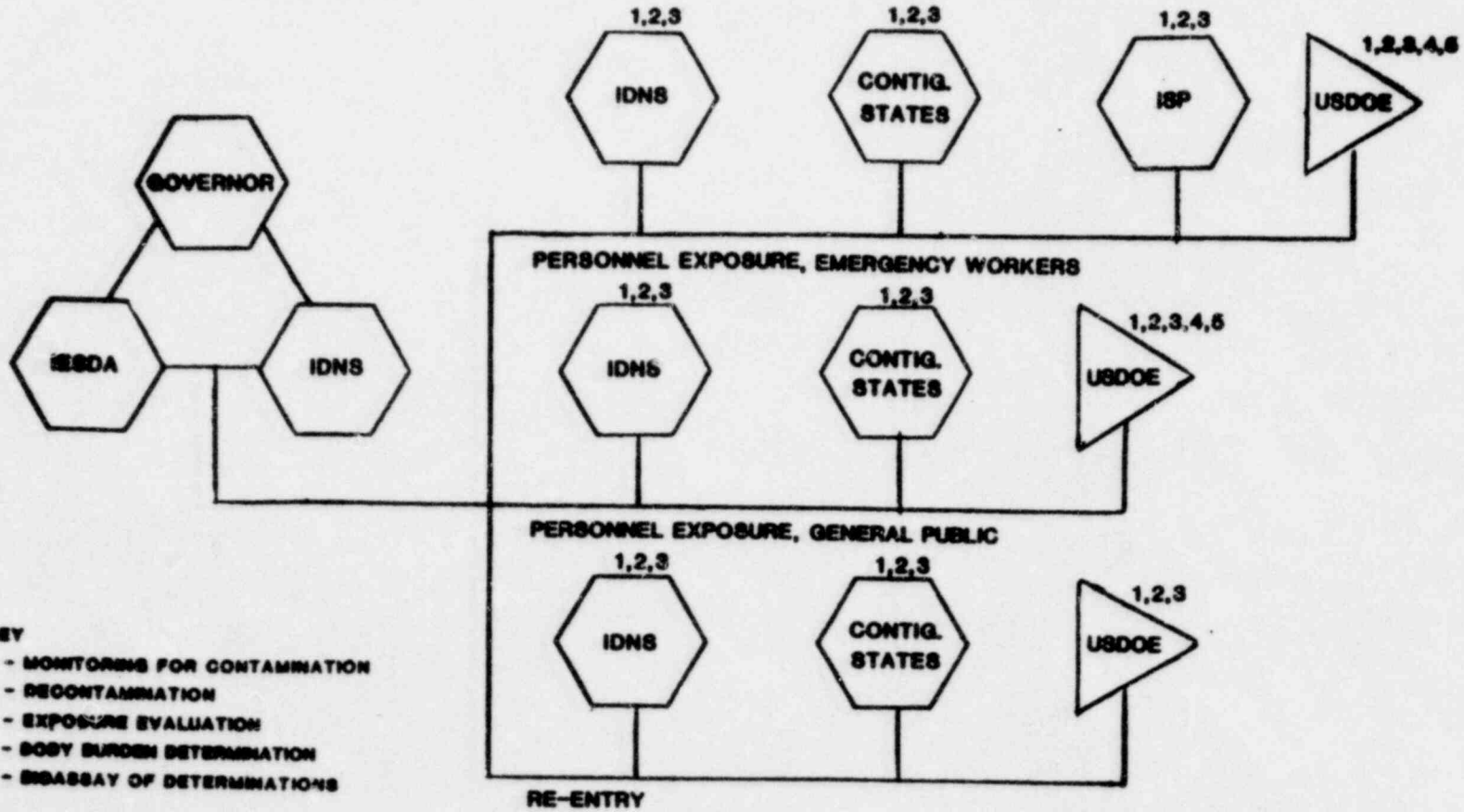

FIGURE G.1

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H. Resources

In order to perform those tasks associated with the radiological response to a nuclear accident, IDNS maintains a comprehensive inventory of appropriate equipment. A listing of primary and backup response equipment and procedures for inventory, inspection and calibration are reflected in the appropriate SOPs. Additional equipment may be obtained from other State and Federal agencies upon request should the situation warrant.

The major resource activated by IDNS during a nuclear accident consists of its technical and support staff. At this time, IDNS has approximately 70 individuals who make up their emergency response team. The technical expertise of this team includes: nuclear engineers, health physicists, radiochemists and geologists. The technical staff is supported by electronic data processing, electronic, administrative and clerical staffing. Additional personnel resources are available from supporting State and Federal agencies. Federal agency support is outlined in the Federal response plans. Support of other State agencies is outlined in Section I, "Supporting State Agencies".

To ensure rapid activation of necessary equipment and personnel resources in the event of a nuclear accident, IDNS maintains equipment accountability and operability in a constant state of readiness. Response team personnel rotate on an on-call status, thereby maintaining a core group ready for activation at all times.

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I. Supporting State Agencies

It is the responsibility of IDNS to coordinate the specific activities assigned to those State agencies with a role in radiological assessment. The following sections outline those assigned tasks for each State agency. Although IDNS has primary responsibility for radiological assessment, each assisting agency will be responsible for maintaining their own equipment in operable order. IDNS will ensure that necessary radiological training is provided to all personnel participating in this radiological assessment. Training is discussed in detail in Chapter 10, "Planning Functions".

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I. 1. Illinois Department of Agriculture

Responsibilities

The primary role of the Illinois Department of Agriculture will be to oversee the production and marketing of consumable products, both plant and animal, that are to be used for food and food processing.

The Division of Meat, Poultry and Livestock Inspection will be responsible for monitoring sick animals, the safe disposition of animals, assuring safe housing for livestock, the provision of non-contaminated feeds, the release of animals for market, laboratory differential diagnoses, as well as the disposition of contaminated meat and poultry and the supervision of slaughter houses and meat processing plants.

The Division of Agricultural Industry Products will be responsible for checking all crops, grain, grain elevators, warehouses, pre-pack operations and finding safe food for livestock.

Initial Notification

The Assistant to the Director of IDA, or in his absence, his alternate, will receive the initial notification of a nuclear incident from IDNS REAC by phone, either at IDA headquarters or at home. Both a primary and secondary contact person of IDA has been provided to ensure 24-hour availability.

The Assistant to the Director shall assess the situation and notify appropriate personnel within IDA. If requested, field teams from the General Office and/or the Division of Agricultural Industry Regulation will be activated.

Command and Coordination

Upon activation of the field teams from the Division of Agricultural Industry Regulation, these personnel will be temporarily assigned to IDNS. Other personnel from IDA involved with the mitigation of the incident effects, who are not temporarily assigned to IDNS, will be administratively under the command and coordination of the Assistant to the Director of IDA.

Radiological Assessment

The field teams from IDA will be temporarily incorporated into IDNS RAFT and will be utilized primarily for the collection and sampling of agricultural crops and feeds for subsequent analysis and determination of radioactive contents.

At the request of IDNS, through the IDA Assistant to the Director, IDA will excise and provide thyroid glands of slaughtered livestock to IDNS for analysis of their radioactive contents. Such analysis will assist in assessing the extent of radioactive contamination of livestock.

Protective Actions

IDA has the authority to inspect, condemn, embargo and confiscate agricultural and horticultural products to prevent undesirable and unwholesome contamination of such products.

At the request of IDNS, IDA will exercise such authority to prevent assimilation of contaminated products into commerce.

Parallel Actions

For the purposes of radiation exposure control, IDA personnel assigned duty within potentially contaminated areas will report first to the RAFT Command Center. There, they will be issued self-reading and thermoluminescent dosimeters and a radiation dosage reporting form by IDNS. After each day's assignment, IDA personnel will return to the RAFT Command Center to have their radiation exposure recorded and to turn in their TLDs to the RAFT Exposure Control Officer. Information on radiation exposure will be maintained by the RAFT Exposure Control Officer.

Prior to re-entry, IDA will assist in monitoring agricultural and horticultural products to assure that such products are appropriate for commercial distribution. Such activities will be undertaken at the request and direction of IDNS.

Resources

IDA resources to be supplied to IDNS include one team of two persons each for the purposes of sampling vegetation, soil, water and other medias as required.

IDA will also direct its staff to enforce regulations pertaining to the consequences of radiological contamination of agricultural and horticultural products.

I. 2. Illinois Environmental Protection Agency

Responsibilities

The primary role of the Illinois Environmental Protection Agency is to protect the State water, air and land from the effects of pollution, control solid waste disposal, collect meteorological data and make long range studies of natural resources.

Initial Notification

The Supervisor, Emergency Response Unit of IEPA, or appropriate alternate, will receive the initial notification of a nuclear incident from IDNS REAC by telephone, either at IEPA headquarters or at home. To facilitate such notification, the IEPA Duty Officer is provided with a pager and can be accessed in the event the Supervisor, or appropriate alternate, cannot be contacted.

The Supervisor, Emergency Response Unit will assess the situation and notify appropriate personnel within IEPA. If requested, field teams from the Emergency Response Unit will be activated and/or equipment supplied.

Command and Coordination

Upon activation of the field teams from the Emergency Response Unit, these personnel will be temporarily assigned to IDNS. Other personnel from IEPA involved with the mitigation of the incident effects that are not temporarily assigned to IDNS will be administratively under the command and coordination of the Supervisor, Emergency Response Unit.

Radiological Assessment

The field teams from IEPA will be temporarily incorporated into IDNS RAFT and will be utilized primarily for the collection and sampling of water, soil, vegetation, air and other entities as required for subsequent analysis and determination of radioactive contents.

In addition, meteorological data including forecasts will be supplied to REAC, upon request. A meteorologist may be dispatched to REAC if the need arises.

IEPA has 41 monitoring stations distributed throughout Illinois. These stations are equipped to measure wind speed and direction. Those stations which are in the general area of nuclear power stations in Illinois are: Joliet, LaSalle, Moline, Waukegan, Rockford, Springfield, Peoria and Decatur (See Figure I.2.a, "Meteorological Stations").

Additional weather information is available through a weather wire from 25 major airports within the State and neighboring states (See Figure 1.2.a). Information from this service includes: temperature, cloud coverage, dew point, visibility, precipitation measurements, upper air movements, etc.

In addition, in each of the major cities in the State of Illinois there is an air pollutant monitoring station which collects data regarding concentrations of carbon monoxide, sulfur dioxide and ozone.

All of the above data is telemetered into the IEPA Meteorological Center on an hourly basis. This information can also be augmented by the meteorological data from all the operating nuclear power stations.

Protective Actions

In the event of a nuclear accident, any water supply, sewage treatment plant, waste disposal site, as well as the soil and air, and other natural and man-made items may become contaminated by radioactive materials.

IEPA has the authority to investigate, serve notice of non-compliance and embargo public water supplies. At the request of IDNS, IEPA will exercise this authority to prevent the possible widespread ingestion of radioactive contaminants. IEPA routinely inspects for contaminants and pollutants of air, water, land and disposal sites.

Parallel Actions

For the purposes of radiation exposure control, IEPA personnel assigned duty within potentially contaminated areas will report first to the RAFT Command Center. There, they will be issued self-reading and thermoluminescent dosimeters and a radiation dosage reporting form by IDNS. After each day's assignment, IEPA personnel will return to the RAFT Command Center to have their radiation exposure recorded and to turn in their TLDs to the RAFT Exposure Control Officer. Information on radiation exposure will be maintained by the RAFT Exposure Control Officer.

Prior to re-entry, IEPA will monitor municipal water supplies to assure the appropriateness of re-entry. Such activities will be undertaken at the request and direction of IDNS.

Resources

IEPA will supply any of the following resources to IDNS in the event of a nuclear accident should such resources be requested:

a. One Headquarters Liaison at IEPA or REAC;
b. Seven teams of two for collecting samples;
c. Two staff meteorologists - one may be assigned to IDNS, REAC headquarters if requested;
d. One 3/4 ton van;
e. Eight Hi-volume samplers* (Four Mobile - need external power source);
f. Two hundred filters for Hi-volume samplers;
g. Two Hi-volume samplers* presently within the Dresden Station 10-mile radius, one presently within the 10-mile radius of LaSalle Station* and four presently within the 10-mile radius of Zion Station*;
h. One to three additional surface transportation units (station wagon and sedans); and/or
i. Facsimile transmission capability.

*For particulate samples only.

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Meteorological Stations

1. Alton
2. Bloomington
3. Burlington, IA
4. Cahokia
5. Cape Girardeau
6. Carbondale
7. Champaign
8. Danville
9. Dubuque, IA
10. Decatur
11. DuPage
12. East St. Louis
13. Edwardsville
14. Evansville, IN
15. Galesburg
16. Glenview Naval Air Station
17. Janesville, WI
18. Joliet
19. LaSalle
20. Marion
21. Marseilles
22. Mattoon
23. Meigs Airport
24. Midway Airport
25. Moline
26. Mt. Vernon
27. O'Hare Int. Airport
28. Paducah, Ky
29. Peoria
30. Quincy
31. Rockford
32. Scott Air Force Base
33. Springfield
34. St. Louis, MO
35. Terre Haute, IN
36. Waukegan
37. Wood River

○ - Airports
△ - EPA Stations
✱ - Nuclear Power Stations

A - Dresden
B - Quad Cities
C - Zion

FIGURE I.2.a

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I. 3. Illinois Department of Energy and Natural Resources

Responsibilities

The primary role of the Illinois Department of Energy and Natural Resources is to conduct research, collect data and perform environmental studies, and to provide assistance, information and data relating to the technology and administration of the natural resources of this State.

Initial Notification

The Director of the Department, or in his absence, his alternate, will receive the initial notification of a nuclear incident from IDNS REAC by phone, either at IENR headquarters or at home. Both a primary and secondary contact person or IENR has been provided to assure 24-hour availability.

The Director of the Department shall assess the situation and notify appropriate personnel within IENR. If requested, field teams from within the various divisions of IENR will be activated.

Command and Coordination

Upon activation of the field teams from IENR, these personnel will be temporarily assigned to IDNS. Other personnel from IENR involved with the mitigation of the incident effects that are not temporarily assigned to IDNS will be administratively under the command and coordination of the Director of the Department.

Radiological Assessment

The field teams from IENR will be temporarily incorporated into IDNS RAFT and will be utilized primarily for the collection and sampling of water, soil, air, vegetation and other entities as needed for subsequent analysis and determination of radioactive contents.

Parallel Actions

For the purposes of radiation exposure control, IENR personnel assigned duty within potentially contaminated areas will report first to the RAFT Command Center. There, they will be issued self-reading and thermoluminescent dosimeters and a radiation dosage reporting form by IDNS. After each day's assignment, IENR personnel will return to the RAFT Command Center to have their radiation exposure recorded and to turn in their TLDs to the RAFT Exposure Control Officer. Information on radiation exposure will be maintained by the RAFT Exposure Control Officer.

In the event of a nuclear accident, any area of soil, water or other natural resources may become radioactively contaminated. Post-incident studies of the environment will be initiated as long term projects.

Resources

IENR will provide any of the following resources to IDNS in the event of a nuclear accident should such resources be requested:

a. Consulting services regarding geology, meteorology, hydrology and other natural resources will be supplied as requested;
b. Three teams of two for collecting samples;
c. Five surface vehicles (vans, station wagons, etc.);
d. Topographic maps of the vicinity surrounding each site;
e. Meteorological instruments;
f. Site geology consultants regarding stratigraphy, acquifiers and surface/ground water; and/or
g. Water use data.

I. 4. Illinois Department of Public Health

Responsibility

The Illinois Department of Public Health is mandated to protect the public health and safety. IDPH will have primary responsibility for assuring the safety of the food supply and dairy products, and will provide assistance to IDNS in the identification and sampling of food supplies and dairy products. In addition, IDPH will support IESDA by providing assistance with planning and implementing the evacuation of health care facilities, obtaining emergency medical services and providing consultation and technical assistance as requested (See Chapter 6, "Operational Response").

Initial Notification

The IDPH Emergency Officer will receive initial notification of the incident from the IESDA Dispatcher. The Emergency Officer or his backup is accessible on a 24-hour basis by telephone or pager. Upon receipt of the initial information, the IDPH Emergency Officer will contact the Director of IDPH by telephone, followed by the Regional Health Officer and other key IDPH staff. The specific procedure is identified in IDPH-SOP-1, "Initial Notification, Communication and Command".

Command and Coordination

The Director of IDPH maintains overall responsibility for decision making during the incident. Following the initial notification, the IDPH Emergency Officer will report to the State EOC and, from that location, will coordinate the information flow from the EOC to and from IDPH staff. Immediate telephone access to the Director will be maintained to enable the timely flow of priority information.

IDPH maintains eight Regional Offices. A Regional Health Officer is administratively responsible for the activities of each region. The Regional Health Officer will provide overall coordination of the field effort. The Regional Health Officer or his designee, will report to the State Forward Command Post following initial notification to maintain constant contact by telephone or radio with IDNS and/or the State EOC in Springfield, and local EOCs.

Division Regional Office Supervisors from the Divisions of Food, Drugs and Dairies; Engineering and Sanitation; and Emergency Medical Services will be responsible for technical assistance in their respective programs and will maintain contact with the Regional Health Officer. The Regional Health Officer will in turn be responsible for communication from the field to the IDPH Emergency Officer.

Protective Actions

The primary responsibility of IDPH during evacuation will be assisting in the handling of health care facilities (e.g., hospitals and nursing homes) as requested by local officials. Additional assistance in evacuation was provided during the planning phase.

Regional emergency medical services staff will be on 24-hour call, as in their normal daily operation, and can provide assistance in patient transport, transfer or obtaining specialized medical care. Such assistance will be provided in accordance with established procedures, through the Illinois Trauma System.

Additional IDPH staff will be at the scene of the incident to assist in the evacuation process.

Upon notification of the IDPH Emergency Officer by IDNS of a suspected or confirmed release of radiation, supervisory personnel from the Division of Food, Drugs and Dairies will be notified. These supervisors as identified in IDPH-SOP-1 will then be assigned to the service of RAFT Command. In cooperation with RAFT Command, based on the recommendations of IDNS, milk and food field staff will assist in the identification and proper disposition of food and/or dairy products. Actions may include embargo or issuance of an order for destruction of the product.

Detailed procedures for activities in food, water and milk control are provided in IDPH-SOP-2, "Identification and Disposition of Contaminated Milk Products", and IDPH-SOP-3, "Identification and Disposition of Contaminated Food Products".

Parallel Actions

IDPH will have three distinct responsibilities relative to emergency medical services.

a. Routine EMS activities involving assisting hospitals in patient transfer to specialized medical facilities will be performed as under normal conditions by the designated EMS Coordinator. A communication scheme to handle such emergencies is presently established in existing operating policies and procedures.

b. IDPH is responsible for referral of patients for additional evaluation and treatment following radiation exposure. A Regional EMS staff member will be assigned to the location of the IDNS Exposure Control Officer to coordinate the transport of patients and contact with selected hospitals capable of providing services necessary for internal decontamination of exposed workers or

the public. Based on the degree of contamination, as determined by IDNS, the number of exposed persons and the number of patients an individual facility can handle, the EMS staff person will direct those exposed to the appropriate facility. A listing of the hospitals with adequate facilities will be available at the Exposure Control location.

c. The Division of EMS, Regional Coordinator will be available to provide any additional services needed during the incident and to coordinate the activities of other EMS field staff. Initial notification by the Regional EMS Coordinator will include all staff within the 50-mile radius of the accident site. Regional staff will remain on alert throughout the incident to provide any assistance necessary.

EMS Communications

This coordination is accomplished through an organized, comprehensive communication system called Medical Emergency Radio Communications of Illinois, or MERCI. MERCI comprises all EMS communications, including radio, telephone and telemetry. The foundation of this system is the ambulance to hospital radio communications capability. Medical radio base stations serve all Illinois and vicinity hospitals through radio, telephone and telephone-radio patches. This system gives every hospital in Illinois radio communication capabilities with 1,500 ambulances and virtually assures patient delivery coordination.

Medical Facilities

The Division of Emergency Medical Services and Highway Safety initiated the regionalization and categorization of hospitals in 1971. This regionalization was accomplished by identifying medical facility emergency department capabilities and the designation of some 50 trauma and specialized trauma centers throughout the State.

In planning for a radiological accident, hospitals were additionally classified relative to their capability to handle radiation exposed patients. Hospitals with nuclear medicine programs that have specific capability and bed space to retain contaminated patients are identified in IDPH-SOP-4, "Telephone Contact of Key Department Staff".

IDPH staff will continue their efforts through re-entry particularly with reference to surveillance of milk and food supplies. Such products will be declared fit for human consumption in each evacuated sector prior to re-entry. Declaration of fitness will result from analyses performed by IDNS.

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SIGNATURE SHEET

We, the undersigned, have read the Illinois Plan for Radiological Accidents. We accept the duties and responsibilities assigned to us, and acknowledge the relationships herein established. We further agree to provide all resources, both manpower and material, necessary to perform our assigned tasks.

Director, Illinois Emergency Services and Disaster Agency — Date: 8/1/85

Director, Department of State Police — Date: 1/09/85

Secretary, Department of Transportation — Date: 8/85

Director, Department of Conservation — Date: 8/15/85

Chairman, Illinois Commerce Commission — Date: 8/6/85

Adjutant General, Military and Naval Department — Date: 2 Aug 85

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Director, Department of Public Health	10-15-85 Date
Director, Department of Central Management Services	8/13/85 Date
Director, Department of Corrections	8/15/85 Date
Director, Department of Mental Health and Developmental Disabilities	2/5/86 Date
Director, Department of Insurance	9/30/85 Date
Director, Department of Employment Security	8/20/85 Date
Director, Department of Public Aid	8/12/85 Date

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OPERATIONAL RESPONSE

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OPERATIONAL RESPONSE

A. Illinois Emergency Services and Disaster Agency

In the event of a nuclear incident, the Illinois Emergency Services and Disaster Agency is responsible for initiating and coordinating the operational response functions at all levels of government. This command and coordination process has two primary goals:

- To safeguard the health of the general public and the emergency personnel in the affected EPZ through the implementation of recommended protective actions; and

- To ensure that decision makers, government agencies, the press and the public receive timely and correct information concerning the incident.

The IPRA system for distributing information and implementing protective actions has been made as simple as possible. IDNS will analyze all available technical information and assess the implications and consequences of the radiological incident. Based upon this assessment, IDNS will determine and provide their protective action recommendations to the Governor and IESDA simultaneously. Concurrent with the IDNS determination, IESDA will determine the feasibility of implementing protective actions. IESDA will simultaneously advise the Governor and IDNS of their determination. The Governor will make the final decision concerning protective actions and commitment of State resources. IESDA will coordinate the dissemination of the Governor's decision for recommended protective actions and IESDA will coordinate the distribution of resources and personnel necessary to implement those protective actions.

The IESDA Director is the principal coordinator of the State's operational response. In this role, he serves as liaison between the Governor and local governments for the implementation of protective action recommendations. Although the IESDA Director usually directs the operational response from the State EOC, he may choose to relocate to a near-site facility. The IESDA Director will ensure that all IESDA personnel in the various operational centers carry out their assigned tasks.

1. Operational Centers

To facilitate the coordinated response effort, IESDA may activate a number of operational centers. The State Emergency Operations Center, which is located within IESDA headquarters in Springfield, serves as the principal operational command center for State personnel during times of disaster. Having a centralized meeting place enables representatives from State agencies to consult with one another and formulate plans.

This capability ensures a single, unified response to any emergency situation. In this way, if any protective action is called for, the State can provide coordinated support to local governments.

The State EOC also serves as an information center, a clearinghouse where information can be gathered, analyzed and distributed. This information can be used by State agencies to make informed decisions about allocating State manpower and equipment.

IESDA's chief role in the State EOC is to coordinate the activities of agencies and personnel involved in the operational response. IESDA's duties are two-fold: to support other State agencies that need assistance and to gather data to be used by the Governor in making decisions about protective actions.

The IESDA Chief of Operations is responsible for oversight and supervision of the State EOC in the absence of the IESDA Director. An Operations Assistant will be present to assist the IESDA Director and/or Chief of Operations in the operational response effort at the State EOC. NARS control personnel will be present at the State EOC to ensure that NARS messages are properly transmitted, received and verified in a timely manner. Additional IESDA personnel will report to the State EOC as directed.

The State EOC has the capability to house a number of State agency representatives. The Operations Room will have at least one representative from the Office of the Governor, IDNS, ISP, IDOT/DOH, IDOC, Illinois National Guard, ICC and IIS. Other State agencies represented in the EOC may be Corrections, CMS, DMHDD, IDOT/Aeronautics, Board of Education, IDPA, Insurance, Employment Security and IDPH. The American Red Cross and the Salvation Army may also be represented.

The State EOC consists of 13,000 square feet of operational area which is divided equally into a main floor and a lower level. The Operations Room is located on the lower level. The building is equipped with its own 125 kw diesel generator, a 4,000 gallon reserve supply of diesel fuel, emergency battery lighting, a 20,000 gallon tank of potable water, a mechanical filter ventilation and heating system and electromagnetic pulse protection for communications equipment and associated antennas.

The State EOC is equipped with a variety of communications equipment. NARS connects the State EOC with IDNS, the utility and counties and contiguous states within EPZs. There is a direct line between the State EOC and REAC. Three priority lines connect the State EOC to the Governor's Office. Finally, there are adequate commercial telephone lines for all agencies represented in the State EOC.

The State Forward Command Post may be activated to serve as a near-site extension of the State EOC. The primary function of the State Forward Command Post is to allocate State resources and personnel to local governments that have requested assistance. The IESDA Chief of Field Services will coordinate the allocation of State resources in support of local government response efforts. The ISP, IDOT, IDOC and IDNS will be represented at the State Forward Command Post.

For Dresden, LaSalle, Byron and Braidwood Stations, the State Forward Command Post for each station is a pre-determined stationary facility located near the perimeter of each EPZ. For Zion Station and Quad Cities Station, the State Forward Command Post consists of the IESDA communications van and the ISP communications vans which assemble at a designated location.

The IESDA Regional Coordinator may be directed to activate the IESDA Regional Office in the affected area. He will serve as liaison between the State and the local governments and will ensure that Congregate Care Shelters are opened in the event of an evacuation.

In addition to manning the State EOC, the State Forward Command Post and the Regional Office, IESDA may have representatives at other operational facilities.

The IESDA Chief of Planning and Analysis will report to the utility's EOF to serve as liaison between the State and the utility.

The IESDA Public Information Officer will be present at the JPIC. He will be responsible for collecting information concerning the operational response and summarizing this information for release by the Governor or his designee. He will also ensure that this information is made available to other State agencies, the utility and contiguous states.

The IESDA Communications Officer will control the use of primary operational communication channels including NARS. In addition, the Communications Officer will man the IESDA communications van when it is dispatched to the incident site.

An IESDA representative will be assigned to each county EOC within the affected EPZ or to the Community Coordination Center if it is activated. This IESDA representative will serve as liaison between the State and the county.

Figure A.1.a, "Operational Center Staffing", illustrates the manning of the various operational centers.

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OPERATIONAL CENTER STAFFING

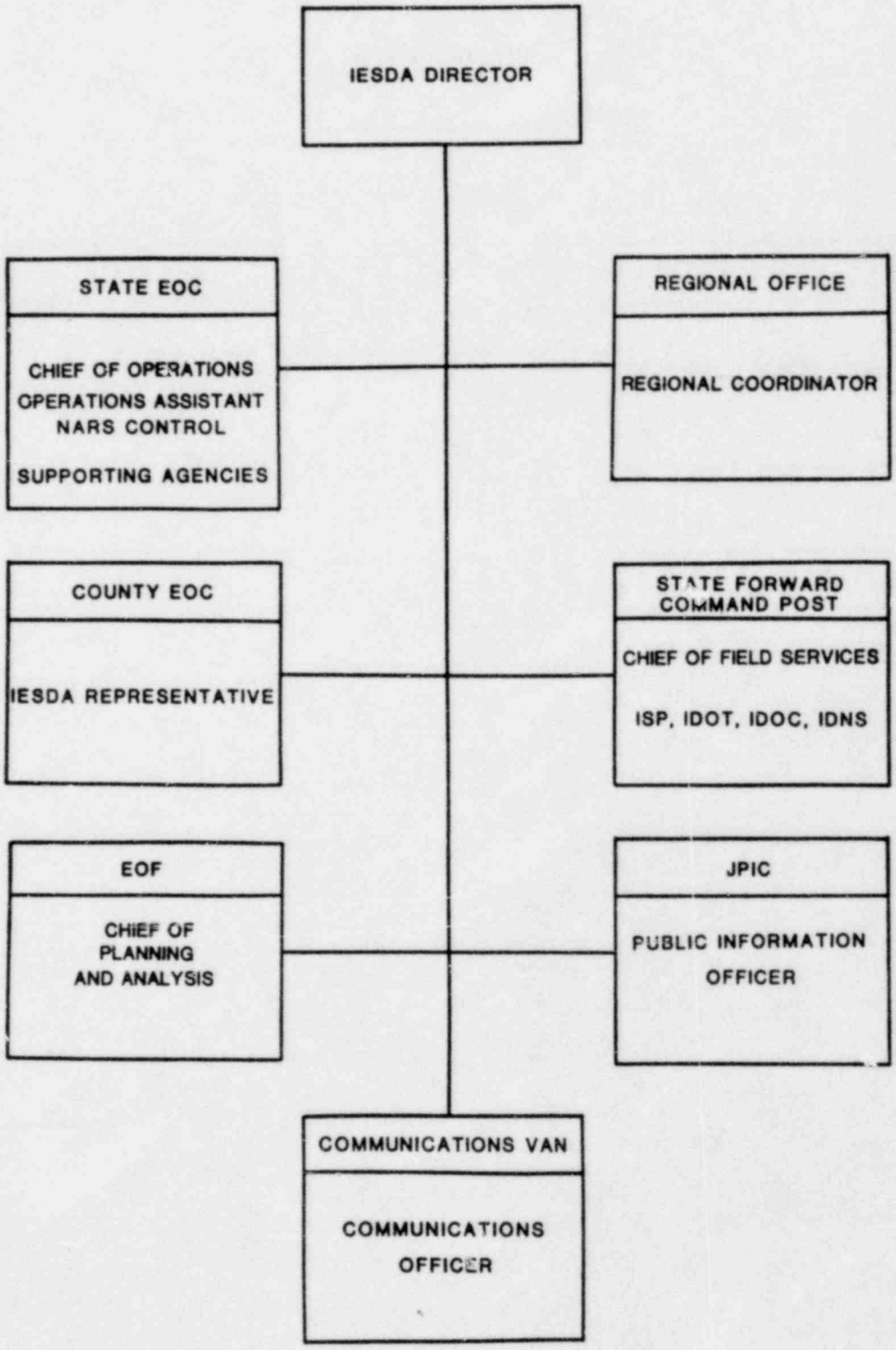

FIGURE A.1.a

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A. 2. Initial Notification and Mobilization

An important element in the operational response to an incident at a fixed nuclear facility is the notification and mobilization of emergency response personnel. This section outlines the IESDA initial notification and mobilization procedures by accident classification.

a. Unusual Event

Upon receiving notification of an Unusual Event from the utility via NARS, IESDA will complete the following tasks:

1. Verify the message by return call to the utility on commercial telephone lines.

2. Notify the IDNS Duty Officer on pager.

3. Notify the IESDA Duty Officer.

4. Notify local governments via NARS as directed by the IESDA Duty Officer.

5. Make additional notifications as the situation warrants.

b. Alert

Upon receiving notification of an Alert from the utility via NARS, IESDA will complete the following tasks:

1. Verify the message by return call to the utility on commercial telephone lines.

2. Notify the IDNS Duty Officer on pager.

3. Notify the IESDA Duty Officer.

4. Notify local governments via NARS as directed by the IESDA Duty Officer.

5. Make notifications in accordance with the IESDA Dispatcher IPRA Procedures.

6. Make additional notifications as the situation warrants.

c. Site Area Emergency

Upon receiving notification of a Site Area Emergency from the utility via NARS, IESDA will complete Steps A.2.b.1 through A.2.b.6 above and the following tasks:

1. Activate the State EOC, if required.

2. Activate the State Forward Command Post and/or the Regional Office as the situation warrants.

3. Dispatch the IESDA communications van as the situation warrants.

d. General Emergency

Upon receiving notification of a General Emergency from the utility via NARS, IESDA will complete Steps A.2.b.1 through A.2.b.6 above and the following tasks:

1. Activate the State EOC if not already in operation.

2. Activate the State Forward Command Post and/or the Regional Office as the situation warrants.

3. Dispatch the IESDA communications van if not already at the scene.

4. Notify the Wisconsin Division of Emergency Government if a General Emergency at Byron Station.

5. Notify the Indiana Department of Civil Defense and Emergency Preparedness if a General Emergency at Dresden Station.

NOTE: If General Emergency is the initiating condition, the affected county governments will be notified of the situation by the utility via NARS.

B. Assisting State Agencies

IESDA's major responsibility is to coordinate the specific activities assigned to those State agencies with a role in operational response. The following sections outline those assigned tasks for each State agency*, dividing them into sections dealing with responsibilities, accident assessment, initial notification, command and coordination, protective actions and parallel actions and resources, as applicable. Each of these agencies is responsible for training their staff in their particular response actions and for participating in the training sessions held by IESDA and IDNS. They are also responsible for maintaining their own equipment as recommended by the manufacturer.

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*Detailed information on the role of district offices can be found in Chapter 1, "General Information", of the site-specific volumes.

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B. 1. Illinois State Police

Responsibility

The primary responsibility of the ISP will be to assist local authorities in carrying out the functions of traffic and access control, public notification and law enforcement. Additionally, they will have Hazardous Materials Officers trained and equipped for radiation monitoring of posts manned by ISP and they will monitor areas in which local law enforcement personnel are active. No changes in enabling legislation or formal agreements are necessary for the ISP to perform these roles.

Accident Assessment

The ISP will be able to provide the information on radiation dose rates measured by the Hazardous Materials Officers as they monitor the areas in which ISP personnel are located. This information can be relayed to the IDNS RAFT through the State Forward Command Post. The information can also be given to the nearest district headquarters to send to the ISP Command Center which will relay it to the ISP representatives at the State EOC.

Initial Notification

The ISP is an emergency-oriented agency. Command Center, the ISP communications facility in Springfield and the radio rooms of ISP district headquarters are manned around the clock by operations officers and dispatchers. Command Center and district radio rooms are in direct contact by telephone and the LEADS computer network. LEADS is an information retrieval network linking ISP districts with local law enforcement agencies.

The ISP Command Center is on the IESDA call list, and will be notified of any accident at a nuclear power station classified as an Alert, Site Area Emergency or General Emergency. The Command Center Operations Officer will verify the message by return call to IESDA and notify the headquarters of the ISP district in which the nuclear power station having trouble is located. The Operations Officer can then begin a call-out of ISP staff in Springfield as indicated in his IPRA procedures.

The Operations Officer of the district, upon receiving notification from Command Center, will begin a call-out of district personnel according to the district Operations Officer IPRA procedures. Until the District Commander or Operations Lieutenant can assume command, the Operations Officer on duty will direct the district's response.

The ISP can be requested by IESDA to assume increased readiness by having personnel put on emergency standby. The request would be made to the Superintendent of State Police by the IESDA Director. If the Superintendent agrees and places personnel on emergency standby, they are required to be able to report for duty within an hour. Personnel are assigned this duty by their District Commander either individually or in any combination of operational units.

Command and Coordination

The Superintendent of State Police is in command of ISP personnel and resources. For administrative purposes, Illinois is divided into four areas commanded by majors. The areas are further divided into districts for operations and administration. Each of the 21 districts is commanded by a captain or lieutenant. There are also a number of sergeants who assume responsibilities for the operations of the district when they are designated by the Operations Officer. Troopers within a district are organized into squads that have a sergeant as their field supervisor. Each squad normally works the same shift and is associated with a sergeant and a specific area of the district.

The districts have contact with other State agency district offices and facilities that are within their district.

During the initial phase of a radiological emergency, the district command structure of the ISP will be unchanged. The district Operations Sergeant will assign troopers tasks according to the district IPRA procedures and request assistance from the Command Center as necessary.

Command of ISP personnel responding to the radiological emergency will be assumed by the captain of the district in which the incident is occurring (or the major in command of the area in which the incident is occurring). Once the State Forward Command Post is established, one of the district lieutenants and his staff will go to the ISP Van and assume command of ISP personnel within the EPZ. Operations for the areas outside the EPZ will be carried on from district headquarters.

The ISP will cooperate with local law enforcement agencies during a radiological emergency. Requests for assistance and information pertinent to coordinating the actions of law enforcement agencies will be transmitted from local EOCs to the IESDA representative at the State Forward Command Post. The IESDA representative will coordinate the State response in the EPZ by working with State agency representatives, including the ISP representative, present at the State Forward Command Post.

The Superintendent of State Police will direct Statewide operations of the ISP. He will be advised by his Field Operations Commander and his Staff Services Commander and their staffs, which include the Hazardous Materials Section and the Air Operations Section. The Superintendent will communicate with district Commanders through Command Center facilities. The ISP will have a representative at the State EOC in Springfield. The representative will be a Hazardous Materials Officer from the Staff Services Command. This officer will be responsible for advising other agency representatives at the State EOC of ISP actions and capabilities obtained directly from the district, State Forward Command Post or through the Command Center. The ISP representative will also relay requests for action or information from other State agency representatives in the State EOC to the district or the ISP representative at the State Forward Command Post.

In his absence, the Superintendent is to be succeeded by the ISP Field Operations Commander. The ISP Staff Services Commander is next in command, should the Field Operations Commander be unavailable.

ISP Officers can be transferred between districts during an emergency. Requests for additional personnel will be handled by the Area Commander if the request originates from districts within his area. Otherwise, requests for additional manpower will be handled through the Field Operations Commander. Reinforcements will normally be in the form of squads of troopers commanded by a Field Supervisor. The Field Supervisor will take his orders from the district Commander or the ISP Officer in charge at the incident site.

Protective Actions

The ISP will support local law enforcement officials in the protective actions of evacuation, take shelter and traffic and access control.

During the evacuation, ISP Officers will be assigned to traffic and access control posts to direct evacuation traffic onto appropriate roads and through congested intersections, thereby supplementing local law enforcement personnel. ISP personnel, in excess of those needed to man roadblocks, will be assigned roads to patrol for accidents or traffic bottlenecks in an effort to keep traffic moving at the fastest possible rate.

The ISP will also man traffic and access control posts in conjunction with local law enforcement personnel at the perimeter of sheltered or evacuated areas for access control.

ISP personnel will assist in warning the general public to take shelter or evacuate by using the public address

systems in their automobiles. They will coordinate their efforts with those of local law enforcement agencies to ensure that all the areas of concern, rural and urban, have been warned.

The ISP Air Operations Section will support the affected ISP District by providing aircraft and pilots to survey traffic and assist in warning the populace.

Parallel Actions

The ISP will assist local law enforcement agencies with law enforcement and crime control in evacuated areas and their peripheries. They will also be available to patrol areas in which State personnel are active and where State equipment is being stored or used.

ISP districts with nuclear power stations within their boundaries will receive sufficient dosimeters and radiation exposure recording forms from IDNS to equip all ISP personnel assigned duty in an EPZ.

For the purpose of radiation exposure control, each ISP district within an EPZ will assign personnel as a DCO and an assistant to help perform duties which include: ensuring the distribution of dosimetry (instant-read dosimeter(s) and TLD card), completion of a radiation exposure record for all personnel that may be entering an exposure pathway. KI tablets will also be distributed at this time, but will only be taken upon the recommendation of IDNS on a voluntary basis. A Dosimetry Control Log for district ISP personnel will be maintained as part of the DCO's duties, as well as maintaining the dosimetry equipment and KI tablets.

At the completion of an incident or upon the request of IDNS, each district ISP DCO will: collect all dosimetry and radiation exposure records, complete a Dosimetry Control Log and forward all radiation exposure records and TLDs to:

Illinois Department of Nuclear Safety
1035 Outer Park Drive
Springfield, IL 62704

Information on any radiation dosages received by the ISP personnel will be relayed by IDNS to the ISP Command Staff at the State Forward Command Post or the Command Center in Springfield.

ISP Hazardous Materials Officers will monitor radiation levels in areas where ISP personnel are on duty. They will monitor other areas as requested by local law enforcement personnel who will be entering areas that may be radiologically contaminated.

Resources

The resources of the ISP that would be available at the site of a radiological emergency depend upon the time that has elapsed since the initial warning and the existing commitment of ISP personnel in other parts of Illinois.

Under normal circumstances, a minimum of ten patrol cars will usually be available within thirty minutes at any of the nuclear power plant sites. Four Hazardous Materials Officers, with special radiation detection equipment, will be available within two hours to monitor the areas in which ISP Officers are working.

A maximum force of 250 ISP Officers could be available within six hours of the initial warning. An additional twelve Hazardous Materials Officers could be available as well. This level of assistance can be maintained for up to 24 hours.

Up to 50 ISP Officers could remain at the incident site for three weeks without causing serious damage to the State's ability to patrol the highways. The levels of response for the time period between the initial and maximum response would depend upon individual site location, making possible a generalized estimate of intermediate support for all sites.

ISP Air Operations Section has seven aircraft located throughout the State.

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B. 2. Illinois Department of Transportation

a. Division of Highways

Responsibility

The Illinois Department of Transportation/Division of Highways is responsible for the planning and construction of highways, the maintenance and preservation of such highways, the expeditious and safe movement of traffic and the many allied responsibilities relating thereto. IDOT/DOH will support State and local authorities with traffic and access control and re-entry. IDOT/DOH will also be responsible for the radiation exposure control of IDOT/DOH personnel.

IDOT/DOH operates the 24-hour IDOT communications facility called Station One. The Division of Aeronautics and the Division of Water Resources with their unique capabilities, will be accessible through Station One.

Initial Notification

Station One, located in the IDOT Administration Building in Springfield, is capable of providing communications by radio with all nine district offices and mobile units in the State. Station One will receive initial notification of a radiological incident from IESDA and, upon verification, will advise the DOH Duty Officer, or his alternate, and the Emergency Services Coordinator. After assessing the situation, the Duty Officer and/or the ESC will activate the calling of emergency personnel as provided in the IDOT EHTR Plan.

On the advice of the ESC and/or Duty Officer, the Station One dispatcher will notify the personnel of the districts involved in accordance with the IDOT EHTR Plan. Eight districts have an EHTR Plan which serves as a standard operating procedure and a resource manual. This plan includes the manner and sequence of calling personnel for duty during an emergency.

Command and Coordination

Each of the nine districts is headed by a District Engineer who has an assistant and a staff that head the various offices and bureaus (Maintenance, Traffic, etc.). Each district is further divided into areas called maintenance team sections, with a team consisting of lead workers and workers supervised by a field technician. A Field Engineer is normally in direct charge of two or more team sections.

During an emergency, on the authority of the ESC and on order of the District Engineer, manpower, equipment and material are mobilized under the supervision of the District Maintenance Engineer who then functions as the District Disaster Coordinator.

When the State Forward Command Post is established, Maintenance Field Engineers for each district involved will be assigned to serve as IDOT liaisons at the State Forward Command Post.

At the State level, the Director of the IDOT/DOH is responsible for all DOH personnel and resources. DOH is divided into ten bureaus, with the Bureaus of Maintenance and Traffic providing the majority of DOH emergency response capabilities.

The Bureau of Maintenance is responsible for the opening and clearing of all highways, moving barricades and equipment and, when practical, providing any other assistance needed to effectuate a complete and orderly evacuation. The Engineer of Maintenance and members of his staff make up the DOH Disaster Control Group. If IESDA has activated the State EOC, a member of the Disaster Control Group will be assigned to report to the State EOC.

Local officials can request IDOT/DOH assistance through the State Forward Command Post. The State Forward Command Post will relay this request to the DOH representative in the State EOC. The DOH representative will then arrange for the needed resources through the appropriate district or districts.

The Bureau of Traffic is responsible for determining the capacities and projected capacities of the highway network, the determination of overloads and oversized vehicles, the determination of detours and signing of the highways and detours. If the ISP, as a result of the emergency situation, has closed roads prior to the arrival of DOH personnel at the State EOC, upon arriving at the State EOC, such DOH personnel will approve ISP actions and/or work out other routes with the ISP and direct the signing thereof.

Protective Actions

The District Engineers of the districts involved will, under the direction of the Governor make available all IDOT personnel, equipment and facilities necessary for the efficient access control and evacuation of the area determined to be unsafe.

IDOT personnel may be assigned to support law enforcement authorities in directing evacuation traffic and controlling access to sheltered and evacuated areas by barricading, signing and manning designated traffic and access control posts.

The District Engineers of the districts in which the incident has occurred will, under the direction of the Governor, officially close those State and Federal highways providing access to the site of the nuclear incident. DOH personnel will barricade and sign those highways that have been closed. At other points in Illinois, IDOT/DOH personnel will place signs along highways as determined by the Bureau of Traffic to detour traffic away from the incident site.

Parallel Actions

For the purpose of radiation exposure control, each IDOT district within an EPZ will assign personnel as a DCO and an assistant to help perform duties which include: ensuring the distribution of dosimetry (instant-read dosimeter(s) and TLD card) and completion of a radiation exposure record for all personnel that may be entering an exposure pathway. KI tablets will also be distributed at this time, but will only be taken upon the recommendation of IDNS on a voluntary basis. A Dosimetry Control Log for DOH district personnel will be maintained as part of the DCO's duties, as well as maintaining the dosimetry equipment and KI tablets.

At the completion of an incident or upon the request of IDNS, the DOH district DCO will: collect all dosimetry equipment and radiation exposure records, complete a Dosimetry Control Log and forward all radiation exposure records and TLDs to:

Illinois Department of Nuclear Safety
1035 Outer Park Drive
Springfield, IL 62704

Information on any radiation dosages received by IDOT/DOH personnel will be relayed by IDNS to the IDOT/DOH Command Staff at the State Forward Command Post or the Administrative Staff in Springfield.

IDOT/DOH will also assist in re-entry procedures. All elements of IDOT/DOH will work with other State agencies to effect such a conclusion to the emergency.

Resources

The initial response to an incident at one of the nuclear power plants would be from nearby maintenance team sections. The resources of each section differ, but for the counties near nuclear power stations it can be expected there will be a minimum of 25 men and 15 trucks of 1½ tons and over.

The maximum level of response will depend upon conditions within the rest of the State that require IDOT/DOH resources. There are 1350 trucks weighing 1½ tons and more throughout the State, as well as a work force of 2700 people, not including engineers and administrative personnel. It cannot be expected that all these resources will be available even under the best of circumstances, but it does illustrate the substantial resources of IDOT/DOH.

The speed of DOH response to a request for assistance will vary according to the timing of the request. DOH is not emergency oriented, and its resources are not normally employed on a 24-hour basis, except during emergencies such as heavy snow fall or flooding. Response time to a request during working hours would probably be from one to four hours, with the longer periods occurring during bad weather, on weekends and during rush hours.

B. 2. b. Division of Aeronautics

Responsibility

The Illinois Department of Transportation/Division of Aeronautics will support in accident assessment, public notification, evacuation, traffic and access control, food, water and milk control, emergency medical services, radiation exposure control and law enforcement activities.

Accident Assessment

The Division of Aeronautics will support IDNS by flying missions to sample air near the nuclear power station having difficulty.

Initial Notification

The Rotary Wing Flight Operations Section of the Bureau of Air Operations provides the primary emergency response for the Division. The helicopter pilots are on pager with a 20 minute response time. The initial request for assistance will be made from IESDA to IDOT Station One. Station One will notify the helicopter pilot on duty and the Rotary Wing Chief Pilot that there is a mission to perform.

The Chief Pilot for the Fixed Wing Flight Operations Section will be notified by Station One that a radiological accident has occurred and that pilots and ground crews should be alerted to standby for possible assignments.

If aircraft are needed when the Division of Aeronautics is not completely staffed, pilots can be contacted by Station One using phone, radio or pager and dispatched under the authority of the IDOT/DOH ESC. The Division of Aeronautics will be advised of such actions once they are operational.

Command and Coordination

The Director of the Division of Aeronautics is in overall command of Division of Aeronautics aircraft. Under his direction are the Rotary Wing Flight Operations Section and the Fixed Wing Flight Operations Section, both headed by Chief Pilots. During an incident, the representative of the IDOT Disaster Control Group in the State EOC will act to coordinate flights and relay information on missions to be performed to the Director and his staff through Station One. These orders will be relayed to the Chief Pilots for execution.

Protective Actions

The Division of Aeronautics can support evacuation by using helicopters to fly seriously ill people to hospitals outside the area of the emergency. Several of the helicopters have public address capabilities and search lights which may be used to notify the public in the event of take shelter and evacuation recommendations. Fixed wing aircraft would be available for flying food, water and milk samples to laboratories for testing.

Parallel Actions

The Division of Aeronautics can support law enforcement agencies by flying surveillance missions. The Rotary Wing Section can support emergency medical services by flying injured or sick persons to treatment facilities.

For the purposes of radiation exposure control, Division of Aeronautics personnel who have been assigned flights within potentially contaminated areas will report first to the State Forward Command Post. There they will be issued dosimetry and a radiation dosage recording form by a representative of IDNS. After duty, Division of Aeronautics personnel will forward all radiation exposure records to:

Illinois Department of Nuclear Safety
1035 Outer Park Drive
Springfield, Illinois 62704

Information on any radiation dosages received by Division of Aeronautics personnel will be relayed by IDNS to the Division of Aeronautics.

Resources

The Division of Aeronautics has two four-place helicopters, one six-place helicopter, one ten-place helicopter, eight single-engine utility aircraft, two twin-engine utility aircraft and five twin-engine executive transport aircraft.

B. 3. Illinois Department of Conservation

Responsibility

The Illinois Department of Conservation will warn and evacuate visitors on IDOC lands near the incident site. The IDOC Division of Law Enforcement will support traffic and access control and law enforcement activities in the incident area. IDOC will also be responsible for the radiation exposure control of IDOC personnel.

Initial Notification

The Chief of the Division of Law Enforcement or, in his absence the Captain of Operations, will receive initial notification of a nuclear power station accident classified as an Alert, Site Area Emergency or General Emergency from IESDA by phone if at the IDOC Headquarters or home, or by radio through ISP Command Center if on the road. The Chief will notify the Regional Commander or the Operations Sergeant of the area in which the nuclear accident is occurring by phone or radio. The Regional Commander will in turn notify the District Supervisors within his area, as well as the Bureau of Public Land and Historic Sites Regional Land Manager. The District Supervisors will notify the field officers in their areas. Regional Land Managers will notify the Superintendents of those parks and conservation areas that may need to be evacuated.

If the initiating condition is a General Emergency, the Operations Officer for the ISP district in which the nuclear power station having trouble is located will notify the Site Superintendents or Rangers of those IDOC properties in the EPZ.

The Chief will also contact the U. S. Coast Guard Headquarters for the district in which the nuclear incident is occurring, and request that those waterways delineated by the Governor or the IESDA Director be closed to commercial shipping.

Division of Law Enforcement personnel can be put on one-hour standby alert in case of an impending emergency. Each officer could be put on standby alert by the Chief of the Division, after he has consulted with the Regional Commanders.

Command and Coordination

The IDOC has divided the State into five regions for the purposes of administration. In the instance of the Division of Law Enforcement, Regional Commanders have the rank of lieutenant. Division of Law Enforcement regions are further divided into districts supervised by a Field Supervisor with

the rank of sergeant. The Field Supervisors each have between four to six officers, often assigned one to a county.

The Bureau of Public Land and Historic Sites regions are administered by a Regional Land Manager. Under him are the Site Superintendents and their staffs for individual parks and conservation areas. The Regional Commanders and Regional Land Managers are often located in the same building.

The Chief of the Division of Law Enforcement or the Captain of Operations will be in overall command of Division of Law Enforcement personnel. The Regional Commander for the area in which the incident occurs, or the senior Regional Commander, if the incident site spans two or more of the Division of Law Enforcement regions, will become the DFC at the incident site. The DFC will direct Division of Law Enforcement personnel at the site, and relay information from the incident site to the Chief and advise him of personnel and equipment necessary to cope with the incident.

Officers and their supervisors will be mobilized on an individual basis and reassigned to the DFC by the Chief, or the Captain of Operations, after consulting with their Regional Commanders.

During the emergency, the Regional Land Manager for the incident area and the DFC will coordinate their actions. Once the State Forward Command Post is established, the DFC and his staff and, if necessary, the Regional Land Manager will conduct operations from it. The DFC will coordinate the Division of Law Enforcement activities with other State and local agencies.

The IDOC Division of Law Enforcement Headquarters will receive notification from IESDA concerning which waterways the IESDA Director, or his alternate, has ordered closed to recreational boating. The Chief of Law Enforcement will then direct the DFC to begin patrolling those waterways and to coordinate with other states' and local governments' water patrols. The Division of Law Enforcement will also support the U.S. Coast Guard if the waterways near the nuclear accident site are closed to commercial traffic. That support will be coordinated by the DFC.

The Division of Law Enforcement will have a representative at the State EOC chosen by the Captain of Operations from Headquarters personnel. This officer will transmit general information, information on the existing situation, and other agencies' plans of action to the Division Headquarters in Springfield. He will also relay information on the status and actions of IDOC to other State agencies in the State EOC.

Protective Actions

Upon the recommendation of IDNS, the IDOC Bureau of Public Land and Historic Sites will warn and/or evacuate visitors on State lands in the EPZ of the nuclear power station having difficulty. IDOC will also assist in the evacuation by accommodating evacuees who intend to camp out or live in recreation vehicles on IDOC lands.

The Division of Law Enforcement will coordinate warning commercial and recreational craft on nearby waterways and the patrols to deny access to the incident site by water. The Division of Law Enforcement will coordinate with the U.S. Coast Guard, local governments' and neighboring states' water patrols to assure a comprehensive control of all water traffic near an incident site.

Parallel Actions

Those Division of Law Enforcement personnel not needed for policing IDOC properties and patrolling waterways will be available to assist local law enforcement authorities.

For the purposes of radiation exposure control, dosimeters and radiation exposure recording forms will be stocked at each park and conservation area by IDNS. These will be issued by the Site Superintendent to maintenance personnel before they are sent out to warn visitors on IDOC lands. The dosimeters and forms will be collected by the Site Superintendents after the evacuation is complete and returned to IDNS.

During the initial hours of an accident, IDOC Division of Law Enforcement officers will pick up dosimeters and radiation exposure recording forms from Site Superintendents. After duty, the DCO will forward all radiation exposure records and TLDs to:

Illinois Department of Nuclear Safety
1035 Outer Park Drive
Springfield, Illinois 62704

Information on any radiation dosages received by IDOC personnel will be relayed by IDNS to the DFC or the Regional Land Manager at the State Forward Command Post or to the Administrative Staff in Springfield.

Resources

The IDOC Division of Law Enforcement has approximately 145 sworn personnel stationed throughout the State. The Division has over 150 radio equipped vehicles, including over 70 with four-wheel drive. A small, open out-board work boat

and trailer are assigned to officers in areas with rivers and lakes. In addition, 20 officers have larger radio equipped speed boats for patrol work. There is a 38-foot steel-hulled cruiser moored at the Great Lakes Naval Training Station in Lake County manned by IDOC Division of Law Enforcement personnel. In addition to their regular equipment, 16 officers in northern Illinois have snowmobiles.

Most Site Superintendents have PA-equipped vehicles assigned to them. Additional vehicles are available for site maintenance personnel; the numbers of workers and vehicles vary from site to site.

B. 4. Illinois Commerce Commission

Responsibility

The Illinois Commerce Commission Transportation Division, Railroad Section, is the primary agency for controlling access by railroad to the area of an incident. The ICC can also support evacuation and re-entry operations.

Initial Notification

The IESDA Dispatcher will contact the ICC Railroad Duty Officer by telephone or pager. The Duty Officer in turn will call the Manager and Deputy Manager of the Transportation Division, the Chief Engineer of the Railroad Section and the Chief Engineer of the Public Utilities Division. The Duty Officer will phone the dispatchers for the railroads on lines operating in the EPZ of the nuclear power plant having difficulty, using one of the prepared lists in the Duty Officer manual and will instruct them to move all trains out of the affected EPZ. Additional instructions will be given to the railroads as the incident develops.

The ICC can prepare for increased readiness if it appears necessary. The Duty Officer will be contacted and will report to the State EOC as soon as it is activated.

Command and Coordination

The ICC Transportation Division, Railroad Section, has the authority to control rail traffic in Illinois. In the case of an accident requiring control of rail traffic, the Duty Officer would act according to standing orders and direct railroad dispatchers to clear trains from the area. The Chief Engineer, Deputy Manager and/or Manager, will go to the site of the incident to assess the situation and make sure the railroads are complying with ICC directions.

Protective Actions

ICC will assist in an evacuation by coordinating the movements of trains so they do not block evacuation routes.

The ICC will be the primary agency for controlling access to the site by rail. The Duty Officer at the State EOC will act on the recommendations of IDNS on whether to allow rail traffic through the area of the incident. The Duty Officer will do this by instructing the dispatchers for the railroads running through the accident area.

Parallel Actions

For the purposes of radiation exposure control, personnel assigned duty within potentially contaminated areas will report first to the State Forward Command Post. There they will be issued dosimetry and a radiation exposure record form by a representative of IDNS. After going off duty, ICC personnel will return to the State Forward Command Post to have their radiation exposure record forms updated and, if necessary, their dosimetry read. Information on any radiation dosages received by the ICC personnel will be relayed by IDNS to the engineer in charge of operations.

In addition, the ICC representative will distribute dosimeters to train crews entering areas of possible contamination, and will make arrangements with the railroad for the return of the dosimeters to himself or the State Forward Command Post.

The ICC can assist in re-entry by controlling rail traffic so that priority rail traffic can get through. The ICC can also inform State and local officials during reentry of potential uses of the railroads in carrying out specific tasks.

Resources

ICC officials will travel to the site by their own automobiles.

B. 5. Illinois National Guard

Responsibility

The primary role of the Illinois National Guard will be to support local authorities in evacuation, traffic and access control and law enforcement activities. The Guard can provide limited support for emergency medical transportation and support in an evacuation if they are mobilized previously by providing transportation to and shelter in armories.

Initial Notification

Initial notification of the Illinois National Guard occurs after the Governor, or his designee, has determined that assistance from the Guard is necessary. IESDA will notify the Plans, Operations and Military Support Officer during duty hours. After duty hours, the State operator can be instructed to reach the Military and Naval Duty Officer by pager. The Duty Officer, using the standard operating procedures for radiological accidents, will notify necessary personnel of the Adjutant General's staff to report for duty.

Included in the initial notification from IESDA will be information on the roles that the Guard should perform during the emergency. The Guard acts on this information in two ways, simultaneously. One, the assignment of roles is translated into a mission to be performed. A force of Illinois National Guard units appropriate for the mission is mobilized by a call from the Adjutant General's office to the Commander of each unit selected. The individual units have call-up procedures based on a fan-out technique, whereby each Guardsman calls up the personnel immediately under his command. The mobilization of a unit normally takes from four to eight hours. Mobilization takes longer during bad weather when travel is difficult and on weekends when notification takes more time. Secondly, as the call-up is progressing, the Adjutant General appoints a Commander of Troops. This officer will command Guard forces in the field and serve as a liaison between the Guard and the civilian authorities to whom the Guard is to provide assistance. The Commander of Troops will contact those civilian authorities while units are still mobilizing.

The Guard can be put on alert by the Governor if full-scale mobilization is not immediately warranted, but may become necessary. The Adjutant General, members of his staff and Commanders of units likely to be mobilized may be put on 24-hour standby. In addition, liaison with the State and local authorities which are likely to be involved will be established by the Plans, Operations and Military Support Officer.

Command and Coordination

The majority of the response will come from the Illinois Army National Guard however, the Illinois Air National Guard is capable of supporting missions with like equipment. Two infantry brigades and a combat service support brigade of similar size are the major commands within the Illinois Army National Guard. Units suited to the mission assigned to the Guard will be selected for mobilization by the Adjutant General from any of these three major commands. During mobilization, an officer of sufficient rank to command the units being mobilized is selected to be Commander of Troops by the Adjutant General. The command of Guard units in the field will be made in the traditional manner, with a chain of command culminating with the Adjutant General.

The Commander of Troops also coordinates Guard units with those of State and local agencies. For that purpose, he will report to the State Forward Command Post to coordinate the missions assigned to the Guard. The Commander of Troops, or a member of his staff, will maintain continuous liaison with the Adjutant General.

The Adjutant General and his staff coordinate support and logistics for Guard units in the field. A member of the Adjutant General's staff will be on duty at the State EOC around the clock to provide information on Guard capabilities and equipment to other government agencies, and to collect information on the situation at the incident site.

Protective Actions

The Illinois National Guard will support local authorities and other State agencies in traffic and access control. Preferably, Guardsmen will be integrated into traffic and access control teams that consist of law enforcement officials and local highway or IDOT personnel. Guard helicopters can perform surveillance of the perimeter of a cordoned-off area. In addition, the Guard has tanker trucks and trailers that could be used to refuel vehicles in the field. These tankers are primarily to provide fuel to active Guard units, but they can be mobilized independently of their assigned units to provide additional refueling capacity. The additional capacity can then be used to transport fuel from CMS depots. Fuel may be purchased from private suppliers near the incident site to refuel State vehicles.

The Guard can provide support for an evacuation if units are mobilized before the evacuation.

The National Guard also has wreckers and crews available that can clear highways of debris and vehicles up to the size of semi- trailer trucks. In the event of an evacuation, the utility helicopters can airlift patients and medical equipment

to alternate care facilities. Finally, the armories of the Illinois National Guard can be used to shelter evacuees or to serve as shelter areas for State and local emergency personnel.

Parallel Actions

The Illinois National Guard can provide ambulances and helicopters to support local medical facilities in providing emergency medical transportation. The Guard can also provide support to State and local law enforcement officials. For the function of law enforcement, Guard personnel should be accompanied by a law enforcement official.

For the purposes of radiation exposure control, Guard personnel assigned duty within potentially contaminated areas will report first to the State Forward Command Post. There they will be issued dosimetry and radiation exposure recording forms by a representative of IDNS or Guard personnel assigned to assist IDNS in issuing dosimetry. After going off duty, Guard personnel will return to the State Forward Command Post to have their radiation exposure recording forms updated and, if necessary, their dosimetry read. Information on any radiation dosages received by Guard personnel will be relayed by IDNS to the Commander of Troops' staff at the State Forward Command Post.

Resources

The resources of the Illinois Army National Guard include six battalions of infantry, two artillery battalions and one battalion each for supply, transportation, military police and medical. The Military Police units have enough vehicles to enable them to patrol highways. The Transportation Battalion has trucks stationed at various armories, with a capacity to transport personnel as cargo. The Guard is equipped with ambulances. The Guard has wreckers available throughout the State.

The Guard has 1200 gallon tanker trucks and 600 gallon fuel pods mounted on 2½ ton trucks, as well as 600 gallon fuel pods mounted on trailers. They also have available several 5,000 gallon semi-trailer tankers. The tankers provide for both diesel and gasoline refueling.

In addition to the ground units, the Guard has UH-1H utility helicopters and OH-58 two passenger observation helicopters. Two of the utility helicopters are normally available with one hour notice during duty hours (8 a.m. until 4:30 p.m. on weekdays). One helicopter is stationed at Midway Airport in Chicago, the second at Decatur Airport in Decatur.

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B. 6. Illinois Department of Public Health

Responsibility

The Illinois Department of Public Health is mandated to protect the public health and safety. IDPH will support IESDA by providing assistance in planning and implementing the evacuation of health care facilities, obtaining emergency medical services where needed, assuring safe, healthful living conditions at evacuation sites and providing additional consultation and technical assistance as required. In addition, IDPH will support IDNS by providing assistance in assuring the safety of food and dairy products (See Chapter 5, "Technical Functions").

Initial Notification

The IDPH Emergency Officer will receive initial notification of the incident from the IESDA Dispatcher. The Emergency Officer or his backup is accessible on a 24-hour basis by telephone or pager. Upon receipt of the initial information, the IDPH Emergency Officer will contact the Director of IDPH by telephone, followed by the Regional Health Officer and other key IDPH staff. The specific procedure is identified in IDPH-SOP-1, "Initial Notification, Communication and Command".

Command and Coordination

The Director of IDPH maintains overall responsibility for decision making during the incident. Following the initial notification, the IDPH Emergency Officer will report to the State IDPH staff. Immediate telephone access to the Director will be maintained to enable the timely flow of priority information.

IDPH maintains eight Regional Offices. A Regional Health Officer is administratively responsible for the activities of each Region. The Regional Health Officer will provide overall coordination of the field effort. The Regional Health Officer or his designee EOC following initial notification to maintain constant contact by telephone or radio with IDNS and/or the State EOC in Springfield and local EOCs.

Division Regional Office Supervisors from the Divisions of Food, Drugs and Dairies, Engineering and Sanitation and Emergency Medical Services will be responsible for technical assistance in their respective programs and will maintain contact with the Regional Health Officer. The Regional Health Officer will in turn be responsible for communication from the field to the IDPH Emergency Officer.

Central Office staff and other field personnel will also receive direction from and maintain communications with the Emergency Officer to provide a centralized source of information gathering and dissemination.

Protective Actions

The primary responsibility of IDPH during evacuation will be assisting in the handling of health care facilities as requested by local officials. Additional assistance in evacuation was provided during the planning phase.

Regional emergency medical services staff will be on 24-hour call, as in their normal daily operation, and can provide assistance in patient transport, transfer or obtaining specialized medical care. Such assistance will be provided in accordance with established procedures, through the Illinois Trauma System.

Additional IDPH staff will be at the scene of the incident to assist in the evacuation process.

Parallel Actions

IDPH will perform routine EMS activities involving, assisting hospitals in patient transfer to specialized medical facilities. These activities will the performed as under normal conditions by the EMS Coordinator designated. A communications scheme to handle such emergencies is presently established in existing operating policies and procedures.

The Division of EMS, Regional Coordinator will be available to provide any additional services needed during the incident and to coordinate the activities of other EMS field staff. Initial notification by the Regional Coordinator will include all staff within the 50-mile radius of the accident site. Regional staff will remain on alert throughout the incident to provide any assistance necessary.

EMS Communications

This coordination is accomplished through an organized, comprehensive communications system which is called MERCI. MERCI comprises all EMS communications, including radio, telephone and telemetry. The foundation of this system is the ambulance-to-hospital radio communications capability. Medical radio base stations serve all Illinois and vicinity hospitals through radio, telephone and telephone-radio patches. This system gives every hospital in Illinois radio communications capabilities with 1,500 ambulances and virtually assures patient delivery coordination.

Medical Facilities

The Division of Emergency Medical Services and Highway Safety initiated the regionalization and categorization of hospitals in 1971. This regionalization was accomplished by identifying medical facility emergency department capabilities and the designation of some 50 trauma and specialized trauma centers throughout the State.

In planning for a radiological accident, hospitals were additionally classified relative to their capability to handle radiation exposed patients. Hospitals with nuclear medicine programs that have specific capability and training for evaluation of radiation exposure and uptake and bed space to retain contaminated patients are identified in IDPH-SOP-4, "Telephone Contact of Key Department Staff".

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B. 7. Illinois Department of Central Management Services

Responsibility

The Department of Central Management Services will support evacuation, take shelter, traffic and access control and law enforcement activities.

Initial Notification

The initial notification of a nuclear emergency would be made by IESDA to the Director of CMS, the Deputy Director, Office of Property Management and other persons as he may designate. The Deputy Director will contact Division of Vehicles administrative personnel in Springfield and in proximity to the incident site using an existing 24-hour notification system.

Upon request from the Governor or IESDA Director, the CMS Director or Deputy Director will instruct the Division of Vehicles personnel to make automobiles available for use during the emergency, including presently assigned vehicles which are subject to recall and reassignment.

Command and Coordination

During an emergency, the Director of CMS, Deputy Director or designees will coordinate the assignment of CMS vehicles and fuel, and the acquisition of additional fuel. Requests for fuel or vehicles will be made to the State EOC and relayed by IESDA to the Division of Vehicles.

Protective and Parallel Actions

During a nuclear emergency, CMS will provide fuel and vehicles for the use of State personnel involved in the emergency.

Resources

CMS has a total of 180 automobiles available. CMS has 24 garages and an additional 65 fuel depots Statewide. CMS can purchase more fuel and have it delivered to the fuel depots or garages near the emergency site.

Illinois Information Service

The Illinois Information Service, a section of CMS, will provide personnel to staff the State rumor control network (See Chapter 8, "Public Information"). IIS will also provide staff support to the Governor's press office as requested.

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B. 8. Illinois Department of Corrections

Responsibility

The Illinois Department of Corrections will support in evacuation, take shelter and traffic and access control activities at Department of Corrections facilities.

Initial Notification

Initial notification will be made to the Department of Corrections Duty Officer by IESDA. The Duty Officer will notify the Officers of the Day at the institutions affected by the radiological emergency. All institutions near nuclear power stations have 24-hour staff.

Command and Coordination

The Director of the Department of Corrections is in overall control of Department of Corrections facilities and personnel. The Warden or Superintendent of each institution is responsible for the institution's residents, staff, facilities and equipment.

Protective and Parallel Actions

In the event it becomes necessary to either shelter in place or evacuate a Department of Corrections facility, the Director of the Department will support the Warden of the affected facility with personnel and vehicles. Additional personnel will also be available to facilities serving as relocation centers for an evacuating facility.

Resources

The Department of Corrections will utilize all of its resources during a radiological emergency to take the necessary protective and parallel actions for its residents.

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B. 9. Illinois Department of Mental Health and Developmental Disabilities

Responsibility

The Illinois Department of Mental Health and Developmental Disabilities will support in evacuation, take shelter, traffic and access control and social service activities.

Initial Notification

Initial notification will be made to the Officer of the Day at the facilities affected by the radiological emergency. All DMHDD facilities near nuclear power stations have 24-hour staff.

Command and Coordination

The Director of DMHDD is in overall control of DMHDD facilities and personnel. The Managing Officer of each facility is responsible for the residents, staff and equipment of that facility.

Protective and Parallel Actions

There is one DMHDD facility within the EPZ of a nuclear power station. At the recommendation of IDNS through the State EOC, the staff and residents of the Waukegan Developmental Center will be instructed to either shelter in place or evacuate the facility.

Available DMHDD personnel with vehicles will assist in the evacuation of the public and DMHDD security personnel will assist in traffic and access control if requested by IESDA. In addition, DMHDD will provide evacuees with shelter and food, as resources permit. DMHDD will also provide the appropriate staff to assist in crisis counseling. DMHDD activities will be coordinated by an Officer of the Day available at the facility around the clock, or the DMHDD liaison officer in Springfield.

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B. 10. Illinois Department of Insurance

Responsibility

The Illinois Department of Insurance/Consumer Division is the primary agency providing liaison between ANI and the State of Illinois. The Consumer Division will also support in social service activities.

Initial Notification

The IESDA Dispatcher will contact a member of the Department of Insurance liaison group for nuclear incidents.

Command and Coordination

The Illinois Department of Insurance will provide liaison between the State of Illinois and ANI in the event of an incident at a nuclear power station. During the initial hours of a nuclear incident, IESDA will provide to the Department of Insurance information on the number of persons evacuated, the locations of shelters and the number of evacuees in shelters. IESDA may request that a representative from ANI and/or the Department of Insurance be sent to the State EOC to serve as liaison with the State of Illinois. This will enable the Department of Insurance to assist ANI in setting up claims operations and will assure a response by the ANI that is coordinated with State and local actions.

Parallel Actions

The Illinois Department of Insurance/Consumer Division will support in social services.

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B. 11. Illinois Department of Employment Security

Responsibility

The Illinois Department of Employment Security will support in evacuation and social service activities.

Initial Notification

Initial notification will be made to the Department of Employment Security liaison to IESDA. The Department of Employment Security liaison will direct the notification of affected Department offices.

Command and Coordination

The Manager of the General Services Division is in overall control of Department of Employment Security facilities and personnel during an incident at a nuclear power station. The Department of Employment Security, Unemployment Insurance and Job Services offices throughout the State are the responsibility of the local office managers.

Protective and Parallel Actions

The Department of Employment Security office within the EPZ of a nuclear power station will be evacuated at the same time as the area it serves.

Resources

The Department of Employment Security will utilize all of its resources during a radiological emergency to provide continued services to those clients affected.

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B. 12. Illinois Department of Public Aid

Responsibility

The Illinois Department of Public Aid will support in evacuation and social service activities.

Initial Notification

Initial notification will be made to the IDPA liaison to IESDA. The IDPA liaison will direct the notification of affected IDPA offices.

Command and Coordination

The Director of IDPA is in overall control of IDPA facilities and personnel. The IDPA offices throughout the State are the responsibility of the Administrators.

Protective and Parallel Actions

There are IDPA offices within the EPZs of three nuclear power stations. The offices will be evacuated at the same time as the area they serve.

Resources

IDPA will utilize all of its available resources during a radiological emergency to provide continued services to those clients affected by it.

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COMMUNICATIONS

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COMMUNICATIONS

An integral component of IPRA is the communications network which facilitates the flow of information needed to implement the IPRA concept of operations. The primary communication networks are the Nuclear Accident Reporting System, the IESDA Statewide Radio Network and IDNS Radio Network.

In addition to the primary networks, systems are available to back up the primary networks. This redundancy ensures that emergency communications capabilities exist at all times.

A. Nuclear Accident Reporting System

The purpose of NARS is to establish, operate and maintain an effective Statewide warning system that can quickly alert State and local governments in the event of an incident at a fixed nuclear facility. NARS employs a dedicated telephone network which links selected utility, State and local facilities in a variety of combinations.

The utility, IESDA and IDNS have NARS dial activation capability. NARS extensions without dial capability cannot activate NARS. NARS activities at these locations are to receive and acknowledge only.

NARS employs a number of selective dial codes. In an emergency, the nuclear power plant activating a NARS circuit can dial a two digit number which will tie together a series of pre-selected stations. The dial codes allow for the following combinations:

- the utility and IESDA;
- the utility, IESDA and IDNS;
- the utility, IESDA, IDNS and local governments in the EPZ within Illinois; and
- the utility, IESDA, IDNS, contiguous states and local governments within the EPZ, both within and outside of Illinois.

After receiving notification of an incident from the utility via NARS, IESDA will verify the NARS message by return call to the utility on commercial telephone lines. After this verification and confirmation by IDNS, IESDA will reactivate NARS to notify local governments. The local governments will verify the NARS message by return call to IESDA on commercial telephone lines.

NARS will also be utilized during an incident to provide continuous updates on the status of the incident and any protective actions recommended. The responsibility for the development and execution of all steps necessary to ensure the continuous operation of NARS lies with IESDA and the utility. In cooperation with the utility, IESDA conducts daily tests of NARS dial code circuits to ensure that on-line status is maintained. IESDA and the utility

are also responsible for additional extensions and maintenance. The commercial telephone is the primary backup system to NARS.

B. IESDA Statewide Radio Network

To expedite its coordination role during any emergency, IESDA maintains a point-to-point radio network. This network has transceivers in the State EOC, all IESDA Regional Offices and in all counties within EPZs of nuclear power stations. This network allows communications between the State EOC and responding county EOCs to coordinate their overall operational response within the EPZ.

The IESDA network also employs the IESDA communications van which is equipped with the IESDA frequency and the frequencies for the other major State agencies, including the ISP and IDNS. ISP and IDNS possess communications vans which are similarly equipped and which will also report to the affected area.

With the IESDA Statewide Radio Network receive/transmit capacity, the vans can communicate directly with the county EOC and can relay messages to appropriate State agency district offices and responding vehicles. The vans will be located at designated points at the perimeter of the affected EPZ. These points have commercial power plugs and telephone jacks already in place.

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C. IDNS Radio Network

IDNS operates a low band radio network with base stations located in Springfield and in close proximity to each nuclear power station. All base stations are remote controlled from REAC which provides a vital communications link with RAFT and mobile units during the deployment and operational phases of a radiological emergency response. As a contingency, all base stations are capable of operation on the IESDA low band frequency. In addition to the IDNS and IESDA low band frequencies, all mobile units are equipped to communicate on several high band frequencies including the ISP, MERCI and IREACH networks.

IDNS employs its fully equipped communications van in the affected area of operations to support REAC and RAFT in accomplishing the confirmatory accident assessment and other essential technical functions by establishing an immediate exchange of information channel with deployed environmental monitoring teams. Communications capability is further extended by positioning this mobile communications center at an appropriate selected site where electrical, telephone and data circuit services are permanently maintained.

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D. State Agency Communications Networks

In addition to NARS, the IESDA Statewide Radio Network and the IDNS Radio Network, ISP, IDOT and IDOC possess communications networks which will be utilized in the event of a nuclear incident.

The ISP has an extensive communications network. Each ISP district office and the Command Center in Springfield has the following VHF radio capability:

- District - low and high bands
- Statewide - low and high bands
- Point-to-point - low and high bands
- ISPERN - high band.

There are some miscellaneous frequencies as well. The ISP district offices and Command Center have State Centrex telephone lines in addition to local exchange lines.

The Law Enforcement Agency Data System is a computer system which ties together ISP district offices and Command Center. LEADS is used for routing messages and license checks. All local police agencies are either on LEADS or have access to it.

IDOT has a Statewide radio network. Four VHF low band frequencies are assigned to the various district offices and the headquarters in Springfield. Headquarters is designated Station One for communications purposes.

Station One can transmit over any of the IDOT district low band base stations to mobile units anywhere in the State. These district base stations and offices are connected to Station One through microwave and direct line links. Station One operates on a 24-hour basis. The IDOT district offices have State Centrex telephone lines in addition to local exchange lines.

IDOC is dispatched through the ISP Command Center. IDOC operates on a four channel Statewide low band radio network.

Figure D.1, "State Radio Communications Network", illustrates the transmit and receive capabilities between State agencies.

The National Warning System serves as an additional means of communications for the State. ISP Command Center is the Illinois warning point for NAWAS. The IESDA Communications Center is the alternate warning point for NAWAS. All ISP district offices are on NAWAS.

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STATE RADIO COMMUNICATIONS NETWORK

AGENCY / DESIGNATION	IESDA UHF	STATE UHF	ISP	IDOC	IDNS DIR. AND CON.	IESDA DIR. AND CON.	IDOT	IDOT-AIRCRAFT	RACES	STATEWIDE ESDA	IREACH	MERCI	ISPERN	ARES								
IESDA-COMMUNICATIONS CENTER	T/R	T/R			T/R	T/R	T/R	T/R	T/R	T/R				T/R								
IESDA - COMMUNICATIONS VAN	T/R	T/R	T/R	T/R	T/R	T/R	T/R	T/R	T/R	T/R	T/R	T/R	T/R	T/R								
IDNS			T/R		T/R	T/R				T/R	T/R	T/R										
ISP			T/R	T/R				T/R			T/R	R	T/R									
IDOC-MOBILE ONLY			T/R	T/R				T/R														
IDOT-STATION ONE						T/R	T/R	T/R														
IDOT-AERONAUTICS			T/R	T/R		T/R	T/R	T/R			T/R	T/R	T/R									
IEPA						T/R																
ICC						T/R																

ARES - Amateur Radio Emergency Services
CON - Control
DIR - Direction
IREACH - Illinois Radio Emergency Aid Channel
ISPERN - Illinois State Police Emergency Radio Network
MERCI - Medical Emergency Communications of Illinois
R - Receive
RACES - Radio Amateur Civil Emergency Services
T - Transmit
UHF - Ultra High Frequency

FIGURE D.1

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PUBLIC INFORMATION

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PUBLIC INFORMATION

A crucial component of the IPRA is public information, or keeping the public apprised of the nature and consequences of a radiological accident, both during and after. The State's role in public information is just one part of the overall public information process which includes many other sources:

- the utility;
- Federal agencies;
- county and municipal governments;
- private agencies; and
- contiguous states.

Although the State has no direct control over these other sources of information, the State will endeavor to ensure a coordinated dissemination of information.

A. Flow of Public Information

The Governor is the official spokesperson for the State of Illinois. The Office of the Governor, Springfield Press Office, maintains a staff experienced in news dissemination and media relations. The Press Office can hold press conferences in the State Capitol Radio/TV Room located in the State Capitol Building. As a backup, or in the case of very large media attendance, one of the Illinois House or Senate hearing rooms in the State Capitol will be used for press conferences. The JPIC also has space available for press conferences should the Governor choose to locate in the accident vicinity.

The Governor's staff will receive information from two primary sources. IESDA will collect and summarize information concerning the operational response of the State. IDNS will provide a technical summary of the accident and its consequences, actual and potential, upon the EPZ population and dairy animals within the ingestion exposure pathway.

Information from the site will be relayed to the State EOC and REAC via NARS.

The IESDA PIO, augmented by IIS personnel, will prepare and submit information summaries to the Office of the Governor and IDNS. The IDNS PIO, augmented by IIS personnel, will submit information summaries to the Office of the Governor and IESDA. The Office of the Governor will submit prepared news releases or news information to IESDA and IDNS for verification before dissemination. The Governor's Press Office will issue State of Illinois press releases via commercial telephone facsimile machine to the State of Illinois public information personnel at the JPIC, who will then notify public information personnel from the operating utility, contiguous states and the Federal government present at the JPIC. County

government spokespersons or State of Illinois public information personnel stationed at the county EOCs will also receive the press releases issued by the Governor's Press Office.

Information prepared for dissemination by the operating utility, contiguous states, the Federal government and affected county governments at the JPIC will be quickly relayed to the State EOC via commercial telephone facsimile machine. This information will then be given to the Governor's Press Office.

All information prepared for release by the State of Illinois, the operating utility, county and municipal governments, contiguous states and Federal agencies will be shared with all other above-mentioned parties prior to dissemination to ensure coordination.

B. Rumor Control

The State of Illinois rumor control network is designed to support affected EPZ counties and municipalities when those local governments cannot control locally-generated rumors. As rumors are generated, and especially when rumors exceed a local government's capability to provide a timely response, the State EOC will be notified of the problem.

The State rumor control network will then become operational. Dedicated telephone numbers located at the State EOC will then be announced to affected EPZ local governments. The telephone numbers are not for public dissemination.

The State rumor control network will be staffed by personnel from the IIS. As calls are received, they will be written down and the response will be incorporated into the next press briefing at the JPIC and the Governor's Radio/TV Room in Springfield.

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C. Public Education

The State of Illinois, the operating utility and affected county governments are committed to distributing an informational booklet on an annual basis. The public information booklet, "Emergency Information", will be distributed to the public residing within the 10-mile EPZ and will address how the public will be notified and what their actions should be in an emergency.

The public information brochure will include instructions on how to obtain additional information, instructions to follow if take shelter or evacuation is recommended, educational information concerning radiation, a map of major evacuation routes and a list of communities which are likely to serve as host shelter areas.

The public information booklets are also used to identify persons in each nuclear power station EPZ who have special concerns related to their ability to follow protective actions which may be recommended. These special concerns include hearing and walking difficulties, transportation problems and special medical needs. Each public information booklet contains a self-addressed, stamped business reply card which is to be completed and returned to IESDA by the recipient of the booklet if that recipient has any of special concerns indicated on the card.

In addition to a direct mailing, the public information booklet will be available at area hotels and motels, recreational areas, schools, industries, health care facilities, public libraries, local ESDA offices and local utility offices.

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D. Media Education

To acquaint the news media with IPRA, press briefings will be held annually. The briefings will cover the following topics: Overview of IPRA, Concept of Operations, Accident Classification Scheme, Communications, Protective Actions, Parallel Actions and Public Information. In addition, the media will be given a portfolio of handouts including a map of evacuation routes, the public information booklet, an EPZ map showing population by sector and an IPRA fact sheet.

The press briefings will include presentations from the State of Illinois, the operating utility and affected counties.

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SIGNATURE SHEET

We, the undersigned, have read the Illinois Plan for Radiological Accidents. We accept the duties and responsibilities assigned to us, and acknowledge the relationships herein established. We further agree to provide all resources, both manpower and material, necessary to perform our assigned tasks.

The Illinois Plan for Radiological Accidents is now adopted for use by the State of Illinois.

Acting Director, FEMA, Region V	20 Aug 85 Date
Area Manager, National Weather Service, Chicago	8/19/85 Date
Regional Administrator, Nuclear Regulatory Commission, Region III	10/5/85 Date
Commander, U.S. Corps of Engineers, Chicago District	23 Jan 1986 Date
Commander, U.S. Corps of Engineers, Rock Island District	20 Aug 85 Date
A. M. DANIELSEN, RADM, USCG Commander, U.S. Coast Guard, 9th District (Cleveland)	8-20-85 Date
Commander, U.S. Coast Guard, 2nd District (St. Louis)	8/20/85 Date

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Hilary J. Rauch — 8/20/85

Manager, U.S. Department of Energy,
Chicago Operations Office — Date

8-25-85

Illinois Wing Commander, Civil Air Patrol — Date

10/15/85

Vice President Claims, American
Nuclear Insurers — Date

1-7-1986

Vice-President and General Manager,
American Red Cross, Midwestern
Operations Headquarters — Date

August 16, 1985

Walter C. French, Treasurer
The Salvation Army — Date

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EXTERNAL ORGANIZATIONS

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EXTERNAL ORGANIZATIONS

A. Federal Agencies

1. Federal Emergency Management Agency

The Federal Emergency Management Agency establishes policy and coordinates the civil emergency planning management, mitigation and assistance functions of the executive agencies of the United States. FEMA is also responsible for establishing a program of Federal disaster preparedness and for providing technical assistance to states in developing comprehensive plans and practical programs for preparation against disaster.

Among the disasters with which FEMA is concerned is the possibility of an accident at a nuclear power station. FEMA's responsibilities in preparing for such an emergency, as outlined in the Memorandum of Understanding between FEMA and the USNRC, are:

a. To take the lead in off-site emergency planning and review and assess state and local emergency plans for adequacy;

b. To determine whether state and local emergency plans are adequate and capable of being implemented (e.g., adequacy and maintenance of procedures, training, resources, staffing levels and qualifications and equipment adequacy);

c. To assume responsibility for emergency preparedness training of state and local officials;

d. To develop and issue an updated series of interagency assignments which would delineate respective agency capabilities and responsibilities and define procedures for coordination and direction for emergency planning and response.

In the event of an incident at a nuclear power station requiring Federal response, FEMA will deploy an Emergency Response Team to serve as liaison to the Federal government for requests for assistance. The operation of the Emergency Response Team is included as an annex to the Regional Emergency Operations Plan. The framework for FEMA's response plan is contained in the Federal Radiological Emergency Response Plan (Interim Plan) dated September 12, 1984, and the USNRC/FEMA Operational Response Procedures for Response to a Commercial Nuclear Reactor Accident (NUREG 0981/FEMA 51) dated November 1983.

2. National Weather Service

The National Weather Service, National Oceanic and Atmospheric Administration will be contacted by the Staff Meteorologist of IEPA in the event of an incident at a nuclear power plant. As requested by the Staff Meteorologist, the NWS will provide current information, weather forecasts and advisory services, particularly information regarding changes in wind, boundary layer mixing and precipitation conditions. Through the Federal Radiological Monitoring and Assessment Plan coordinated by the USDOE, the NOAA Air Resources Laboratories can also provide consultation regarding atmospheric boundary layer transport and defusion.

3. Nuclear Regulatory Commission

The United States Nuclear Regulatory Commission is responsible for licensing and regulating nuclear facilities and materials, and for conducting research in support of the licensing and regulatory process. These responsibilities include protecting the public health and safety, protecting the environment, protecting and safeguarding materials and plants in the interest of national security and assuring conformity with antitrust laws.

The Memorandum of Understanding between the USNRC and FEMA, which describes each agency's responsibilities in preparing for emergencies at nuclear facilities, reserves the following activities to the USNRC:

a. To assess licensee emergency plans for adequacy;

b. To verify that licensee emergency plans are adequately implemented (e.g., adequacy and maintenance of procedures, training, resources, staffing levels and qualifications and equipment adequacy);

c. To review the FEMA findings on the adequacy and capability of implementation of state and local plans;

d. To make decisions regarding the overall state of emergency preparedness (i.e., integration of emergency preparedness on-site as determined by the USNRC and off-site as determined by FEMA and reviewed by USNRC) and the issuance of operating licenses or the shutdown of operating reactors.

The USNRC also has the responsibility to respond to an incident at a nuclear power plant as outlined in the USNRC, Region III Emergency Response Implementing Procedures, NUREG 0728 and NUREG 0845, Supplement 3.

4. United States Army Corps of Engineers

The Corps of Engineers will be contacted by IDOC in the event of an incident at a nuclear power plant. The Corps will be responsible for closing their locks and dams to all waterway traffic leading into the affected area, allowing only traffic leaving the area through the locks and dams. The Corps could operate the locks and dams in certain limited instances to facilitate the cleanup of contamination in the waterways.

5. United States Coast Guard

The Coast Guard will be contacted by IDOC in the event of an incident at a nuclear power plant. The Coast Guard will be responsible for officially closing the waterways to all commercial traffic. This will be done through a series of notices which will be broadcast to all mariners over Channel 16 VHF-FM.

6. United States Department of Energy

The United States Department of Energy will be contacted by IDNS in the event of an incident at a nuclear power plant. When requested, USDOE will respond to a request for assistance with the appropriate USDOE resources and assistance capability. In addition, USDOE, as the coordinating agency for the FRMAP, will activate this plan should additional resources be required. The radiological assistance provided by USDOE is limited to advice and emergency action essential for the control of the immediate hazards to health or safety. It is terminated as soon as the emergency situation is under control.

USDOE responsibilities for radiological assistance do not in any way abridge State or local governmental authority. When requested by IDNS, however, USDOE will assist in carrying out radiological monitoring, decontamination, radioactive material protection and recovery, and other emergency operations as indicated by the situation.

The radiological assistance personnel from the USDOE, including staff from other FRMAP signatories, are primarily responsible for advice and, if necessary, for performance of those radiological emergency operations which appear to be required to save life, to minimize personal injury, to protect the public from exposure to radioactive materials, to control radiological hazards and to protect property and the environment from radioactive contamination. To accomplish these objectives, USDOE personnel will act to:

a. Define the immediate and potential health and safety problems, including areas of radioactive contamination,

extent of personnel radiation exposure, nature of the radiological hazard and the emergency measures which should be taken;

b. Recommend and assist in immediate emergency measures to control the radiological and other hazards to health and safety;

c. Document the radiological incident conditions and the emergency health and safety counter measures that were carried out and/or recommended;

d. Communicate radiological and other information concerning the protection of health and safety to the authorities in charge of emergency operations at the scene; and

e. Terminate radiological assistance operations when the hazards have been brought under control, individuals involved with the incident have been appropriately monitored for radioactive contamination and radiation exposure and any necessary protection of the public health and safety has been assured.

In addition to the resources of the USDOE, radiological assistance personnel can be activated from either USDOE contractors and/or the various signatory agencies to the FRMAP.

4. Civil Air Patrol

Responsibility

The Civil Air Patrol, United States Air Force Auxiliary, is a civilian non-profit corporation chartered by Congress to provide volunteer resources in response to local, state or national emergencies. The CAP may respond as the Auxiliary of the US Air Force in an Imminently Serious Condition without there being first declared a National Emergency or Major Disaster, if conditions are of such imminent seriousness that immediate action is required to "save human lives, prevent human suffering, and avoid property damage or destruction". In such cases, an Air Force Mission number may be obtained for CAP by request through the IESDA Dispatcher at the State EOC in Springfield, which would bring the CAP volunteers under the Federal Employees Compensation Act for worker's compensation liability coverage and for reimbursement of CAP for out of pocket fuel and oil expenses. It is therefore of benefit to the CAP volunteers to operate under an Air Force mission number.

The CAP may also respond to State-level mission requests in support of emergencies covered by this Plan which are not of such seriously imminent conditions to warrant obtaining a

mission number through the Air Force. In such cases, the Illinois Wing CAP acts in cooperation with the IDOT, Division of Aeronautics within the responsibilities of the Division of Aeronautics to coordinate within and for the State of Illinois, emergency services or disaster measures relating to all general aviation aircraft (other that Civil Air Reserve Fleet aircraft) made necessary by local or national emergencies. Requests for CAP and mission number will be issued through the State EOC in Springfield.

IDNS will be responsible for providing personal safety equipment such as dosimeters, and for training of CAP volunteers, in units within the vicinity of nuclear power plants, in the proper procedures necessary to ensure the personal safety of participants in emergency actions in response to this Plan. These procedures should include, but are not limited to use of dosimeters, related equipment and procedures for recording levels of exposure. Upon being trained, CAP volunteers will be sworn to the ESDA oath in support of IESDA with oaths kept on file to verify training received and to bring the volunteers under the provisions of the Illinois State Workers Compensation Act. CAP members who respond without previous training will be given on the spot personal safety briefings and sworn to the ESDA oath prior to being given responsibilities.

Reimbursement of CAP members operating under a State mission number will be upon request through the Illinois Wing Headquarters to IESDA. Such reimbursement will be limited to actual expenses incurred for aircraft and vehicles specifically requested and assigned sorties by the IESDA/IDNS mission coordinator.

Initial Notification

The CAP may be notified for emergency assistance by the IESDA Dispatcher at the State EOC in Springfield by activating the current Illinois Alert Notification Roster. Upon being given a mission number, either Air Force or IESDA, the Illinois Wing representative contacted by the IESDA Dispatcher will contact the CAP group commander with designated responsibility for the power facility involved.

Utilization of CAP in training exercises must be pre-coordinated through the Commander of the Illinois Wing CAP.

Command and Coordination

CAP volunteers will respond as a unit under the command of their respective unit commander. Coordination of CAP support will be through the designated CAP Senior Mission Coordinator.

Protective Actions

The Illinois Wing CAP will provide aircraft and crews within its resources to fly aerial reconnaissance of evacuation routes, serve as aerial communications platform and provide transportation of personnel and/or equipment necessary for effective mission execution. The CAP will furnish radio operators and equipment to the State Forward Command Post and/or IESDA communications van, upon request, to coordinate CAP activities.

Parallel Actions

The CAP may also provide:

- Aircraft as a radiological monitoring platform;
- Airborne videotaping of the evacuation routes;
- Ground vehicles for mobile communications and transportation of personnel or equipment;
- Ground teams to assist with the evacuation effort; and
- Collection of air samples and/or meter readings providing CAP personnel trained in airborne radiological monitoring are available.

Resources

The Illinois Wing CAP will respond within the resources available to the organization and its individual members. These resources include trained, uniformed personnel (adults and teenagers) accustomed to taking direction from authority; aircraft and vehicles, both corporate and privately owned; radio operators and radio equipment for air-to-ground, ground-to-ground, and HF capable of reaching Springfield from most parts of Illinois.

B. Private Agencies

1. American Nuclear Insurers

American Nuclear Insurers and Mutual Atomic Energy Liability Underwriters are the insurance carriers for those utilities which have nuclear power plants. ANI and MAELU will provide the first $160 million in insurance to cover a utility's legal liability for bodily injury and/or property damage caused by the nuclear energy hazard resulting from an incident at a nuclear power plant. ANI provides a capacity of $124 million with MAELU providing the additional $36 million. Additional coverage for such liability is provided under the Secondary Financial Protection policy. Under the SFP policy, each utility which holds a license for an operating nuclear reactor is committed with respect to any nuclear incident to contribute up to $5 million for each reactor if the initial $160 million provided by the private insurance market is exhausted as the result of such incident. Claims coming under the SFP policy are managed by ANI and MAELU.

ANI will receive notice of an incident from the utility itself. The State will also establish contact with ANI and the Illinois Department of Insurance will act as liaison for the State. Both of these sources will keep ANI informed of the situation.

When notice of an incident is received, ANI/MAELU will, as soon as possible, make a decision in regard to committing its emergency assistance program. In making the decision, all factual information will be reviewed by ANI/MAELU to assess the extent of the accident, the likelihood that it will affect members of the public and the application of policy coverage.

If it is determined by ANI/MAELU that implementing its emergency assistance program is warranted, they will immediately prepare to open one or more claim offices as they determine are necessary and will decide upon the location of these offices after receiving the circumstances of the incident. These offices will be opened as soon as reasonably practicable and potential claimants will be informed of their existence via the general media.

2. American Red Cross

In the event of a nuclear power plant accident or transportation accident involving radioactive materials, and if public authorities order an evacuation of the area around the plant or accident scene, the ARC will provide assistance in the area of mass care services for the evacuees and emergency workers. IESDA will notify the ARC state Relations Liaison of the incident while local chapters in the host areas will be alerted by their local ESDA Coordinators.

The ARC will be expected to provide disaster trained personnel to assist in the operation of approved shelters in accordance with current ARC policies and procedures. A more detailed description of how the sheltering component will operate can be found in Chapter 1, "General Information", of each site-specific volume.

In disasters with company or owner liability implications, the customary emergency services are extended on either a mass care basis or to individuals or families if such help is not or cannot be provided immediately by the owner of the property involved. Individual assistance, including temporary maintenance, transportation, clothing, and payment of private duty nurses, shall be provided only after a determination with responsible representatives of the company or owner as to whether they are prepared to meet the continuing needs of persons affected by the disaster.

A Statement of Understanding between IESDA and the ARC can be found in Section D.

3. Salvation Army

The Salvation Army provides assistance to individuals and communities that have sustained damage as the result of any kind of a disaster. The Salvation Army can provide the following types of assistance:

a. Registration and identification of victims. Operation of missing person services (locating individuals and answering inquiries from concerned relatives and families outside the disaster area);

b. Temporary shelter in Salvation Army institutions or temporary facilities assigned for that purpose;

c. Mass feeding in existing Salvation Army institutions or temporary facilities assigned for that purpose;

d. Mobile feeding consisting of hot meals and/or snacks for disaster victims and emergency workers at the scene of the catastrophe;

e. Collection of donated goods for victims according to need: food, clothing, furniture, medical supplies, building materials, bedding, utensils, tools, etc.;

f. Distribution of clothing, food and commodities, furniture, bedding, cleaning supplies and Bibles;

g. Spiritual counseling (comforting the bereaved, consoling the injured and distressed);

h. Family counseling and casework services;

i. Referrals to appropriate governmental and private agencies for special services.

IESDA will notify the appropriate Salvation Army division office of the incident, while local chapters in the host areas will be alerted by their local ESDA coordinators.

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C. Contiguous States

The problem of contiguous state involvement in either the 10-mile plume exposure pathway EPZ or the 50-mile ingestion exposure pathway EPZ arises with many of the nuclear power plants operating in the State of Illinois. For those states which are included in the 10-mile EPZ (Wisconsin and Iowa), primary notification of an incident will be received over NARS. NARS drops are operational in Kenosha County and Madison, Wisconsin and Clinton County, Scott County and Des Moines, Iowa to provide for the immediate notification of the the Wisconsin Division of Emergency Government and the Iowa Office of Disaster Services, and for the overall coordination of operational response activities. More details on this subject are included in the Quad Cities and Zion site-specific volumes.

Information on the notification of those states in the 50-mile EPZ (Indiana, Iowa and Wisconsin) and the means of activity coordination can be found in the IDNS 2-SOP-3, "Notification of Federal and State Support Agencies and Contiguous States". The SOP also includes details on the coordination between IDNS and those states located in the 10-mile EPZ in the areas of notification and accident assessment.

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D. Statement of Understanding between the State of Illinois Emergency Services and Disaster Agency and the American Red Cross

1. Legal Authority

The responsibilities of the State of Illinois Emergency Services and Disaster Agency and of the American Red Cross in disaster situations are authorized and defined by federal and state statutes and are reaffirmed in an Agreement between the State of Illinois Emergency Services and Disaster Agency and the American Red Cross previously entered into.

2. Responsibilities in Disaster

a. Illinois Emergency Services and Disaster Agency

Because it is essential that overall direction and coordination be maintained during times of emergency or disaster, that power is vested in the State of Illinois Emergency Services and Disaster Agency. This statutory power includes coordination of those state and local agencies responsible for, but not limited to, protection of persons and property, maintenance of law and order, fire protection, designation of hazardous buildings, public health and sanitation, care of the dead, maintenance of usual community services and restoration of public property that has been damaged or destroyed. This coordination role may include the American Red Cross with its approval hereby provided unless there has been, under the terms of the Federal Disaster Relief Act of 1974 (P.L. 93-288), a Presidential Declaration of an Emergency or Major Disaster, by which the American Red Cross comes under the coordination of the designated Federal Coordinating Officer.

Regardless of where the coordination responsibility is assigned in a given disaster situation, the American Red Cross will maintain liaison with the State of Illinois Emergency Services and Disaster Agency to keep it informed of the American Red Cross plans and actions, and to coordinate such plans and actions with those being directed and coordinated by the State of Illinois Emergency Services and Disaster Agency.

b. American Red Cross

The American Red Cross, under its Congressional mandate (36. U.S.C. 1 et. seq.) is expected to "continue and carry on a system of national and international relief in time of peace and apply the same in mitigating the sufferings caused by pestilence, famine, fire, floods and other great national calamities, and to devise and carry on measures for preventing the same."

The American Red Cross is concerned primarily with the emergency and immediate needs of individual and families who are disaster victims and with damage assessment surveys necessary to adequately plan and carry out its relief functions. The American Red Cross may also provide more extended assistance to disaster victims when government-funded recovery programs are either unavailable or not adequate to meet a family's disaster-caused needs.

American Red Cross assistance is available to individuals and families in need as a result of natural disasters, transportation mishaps, industrial accidents and, as a part of community actions, for those suffering as the result of civil disorder or economic maladjustments. The American Red Cross responds to the needs of disaster victims regardless of the magnitude of the event and the number of families involved. The American Red Cross meets the urgent needs for food, clothing, shelter, health services, blood or blood products, and it may assist hospitals in providing mass casualty care. As conditions in the disaster area permit individuals or families to begin planning the return to normal living, the American Red Cross may provide further assistance in the form of funds for food, clothing and maintenance; minor repairs to owner-occupies buildings; essential household furnishings; health and medical needs and personal occupation supplies and equipment. The American Red Cross also assists families by referring them to other available resources, governmental and private, and aiding them with their applications for such aid if necessary. In providing its help, the American Red Cross works closely with private voluntary agencies. In addition, the American Red Cross maintains a register of those families who have sought aid and handles welfare inquiries from anxious relatives in other locales.

All American Red Cross services and assistance are provided on a grant basis with no obligation for repayment by the recipient. The American Red Cross maintains administrative and financial control in the conduct of its relief program.

3. Responsibilities in Enemy-Caused Disasters

The State of Illinois Emergency Services and Disaster Agency has the responsibility for development and execution of a plan of emergency service for the protection of life and property in the State of Illinois during enemy attack. This responsibility is part of the joint federal/state nationwide civil defense plan established by Congress. The State of Illinois Emergency Services and Disaster Agency will carry out

this function with the assistance of private and public groups including, but not limited to, the American Red Cross. Within the State of Illinois, the Illinois Emergency Services and Disaster Agency is responsible for overall command and control responsibility in time of such an emergency. The American Red Cross will provide maximum support within the limitations of its resources and its other Federal Charter responsibilities.

4. Coordination of Efforts

The parties hereto agree to attempt, in all respects, to coordinate efforts between the two in accordance with the terms of the Agreement. The parties expressly understand that they have read this Agreement and the responsibilities enumerated herein and find them to be acceptable.

5. General Responsibilities

It is understood that throughout the State of Illinois, the State of Illinois Emergency Services and Disaster Agency has responsibility as mentioned in this Agreement.

The American Red Cross Responsibilities for National Field Office, 10195 Corporate Square, St. Louis, Missouri, 63132: The American Red Cross has the authority to designate geographic responsibilities for carrying out its functions to divisions located within or having jurisdiction of part of the State of Illinois. It shall inform the State of Illinois Emergency Services and Disaster Agency in advance in writing of the designation of such field offices and the geographical area through which they will serve.

s/ James R. Thompson
Governor
State of Illinois

June 26, 1980
Date

s/ [illegible]
Manager
Midwest Field Office
American Red Cross

2 JUNE 1980
Date

s/ E. Eldon Jones
Director
State of Illinois Emergency
Services and Disaster Agency

June 9, 1980
Date

E. Letters of Agreement

Michael Reese Hospital and Medical Center

Department of Medical Physics
29th Street and Ellis Avenue
Chicago, Illinois 60616

(312) 791- 2514
Jacques Ovadia, Ph.D.
Chairman

November 15, 1984

Mr. Steve Dunas
Division of Emergency Planning
Illinois Department of Nuclear Safety
1035 Outer Park Drive
Springfield, Illinois 62704

Dear Mr. Dumas:

By way of this letter I wish to inform you that I am willing to offer my assistance by providing consultation utilizing my Radiation Physics background in the event of a radiation incident.

Very truly yours,

Jacques Ovadia

Jacques Ovadia, Ph.D.
Certified Health Board Physicist
American Board of Physics

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MICHAEL REESE/UNIVERSITY OF CHICAGO
CENTER FOR RADIATION THERAPY

DEPARTMENT OF RADIATION ONCOLOGY
BIOLOGICAL SCIENCES DIVISION
PRITZKER SCHOOL OF MEDICINE

962-6883

University of Chicago Medical Center
5841 South Maryland Avenue, Box 440
Chicago, Illinois 60637

November 5, 1984

Mr. Eugene Field
Division of Emergency Planning
Illinois Department of Nuclear Safety
1035 Outer Park Drive
Springfield, Illinois 62704

Dear Mr. Field:

I would be happy to continue to serve on your Division of Emergency Planning involving nuclear safety. This is an interest of mine and background in radiation effects and neutron radiation certainly will fit with the needs of your Division.

I currently serve on the Nuclear Regulatory Commission on the Medical Advisory Board in Washington. I am also a member of the Radiation Study Section at the National Institutes of Health. I hold a Professor's appointment in Radiation Oncology at the University of Chicago.

If you desire further information please let me know.

Sincerely yours,

Melvin L. Griem, M.D.
Professor of Radiation Oncology

MLG-b

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STATEMENT OF UNDERSTANDING

This Statement of Understanding confirms the commitment between the State of Indiana, acting through the Indiana State Board of Health, and the State of Illinois, acting through the Illinois Department of Nuclear Safety, to provide mutual aid and assistance in the event of an accident at a nuclear power plant in either State which affects or could affect the health and safety of the citizenry of either State.

Although the USEPA Manual of Protective Action Guides is utilized by both Illinois and Wisconsin as a basis for decision making concerning sheltering, evacuation and field responses to incidents, protective and parallel actions may vary between states, as each state must consider factors that may not apply to the other. It is understood that primary responsibility for assessing the magnitude of such an accident and the need for and nature of any emergency response measures to be taken in that State rests with the officials of that State neither State shall have the authority to prescribe protective actions to be taken in or by the other State.

In the event of such an accident, the officials of each State agency will provide mutual aid and assistance in and to the other State to the extent practicable upon request by officials from the other State agency. This aid and assistance may include provision of personnel and equipment to assist in any necessary measures to protect the health and safety of human beings and/or to protect the environment in either State.

In the event of such an accident, and to the extent appropriate, officials from each State agency shall seek to establish and maintain telephone liaison with officials from the other State agency.

Woodrow Meyers, M.D.
State Health Commissioner
Indiana State Board of Health
1330 West Michigan Street
Indianapolis, IN 46206

Terry R. Lash, Director
Illinois Department of Nuclear Safety
1035 Outer Park Drive
Springfield, IL 62704

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PERMISSION FOR USE

This statement confirms the permission for use of the 156.000 MHz High Band radio frequency by the Illinois Department of Nuclear Safety (IDNS).

The IDNS Radiological Assessment Field Team (RAFT) will utilize this frequency as a means of radio communication between RAFT and Wisconsin's radiological response field teams during peacetime radiological incidents or exercises involving the States of Illinois and Wisconsin.

10-11-85

Thomas E. Alt, Deputy Secretary
Department of Administration
c/o Division of Emergency Govt.
4802 Sheboygan Ave., P.O. Box 7865
Madison, WI 53707

Terry R. Lash, Director
Illinois Department of Nuclear Safety
1035 Outer Park Drive
Springfield, IL 62704

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STATEMENT OF UNDERSTANDING

This Statement of Understanding confirms the commitment between the State of Iowa, acting through the Iowa Department of Health, and the State of Illinois, acting through the Illinois Department of Nuclear Safety, to provide mutual aid and assistance in the event of an accident at a nuclear power plant in either State which affects or could affect the health and safety of the citizenry of either State.

Although the USEPA Manual of Protective Action Guides is utilized by both Illinois and Iowa as a basis for decision making concerning sheltering, evacuation and field responses to incidents, protective and parallel actions may vary between states, as each state must consider factors that may not apply to the other. It is understood that primary responsibility for assessing the magnitude of such an accident and the need for and nature of any emergency response measures to be taken in that State rests with the officials of that State and neither State shall have the authority to prescribe protective actions to be taken in or by the other State.

In the event of such an accident, the officials of each State agency will provide mutual aid and assistance in and to the other State to the extent practicable upon request by officials from the other State agency. This aid and assistance may include provision of personnel and equipment to assist in any necessary measures to protect the health and safety of human beings and/or to protect the environment in either State.

In the event of such an accident, and to the extent appropriate, officials from each State agency shall seek to establish and maintain telephone liaison with officials from the other State agency.

Paul F. Carlson

Paul F. Carlson
Acting Commissioner of
Public Health
Iowa Department of Health
Lucas State Off. Bldg., 4th Fl.
Des Moines, IA 50319-0075

Terry R. Lash

Terry R. Lash, Director
Illinois Department of Nuclear Safety
1035 Outer Park Drive
Springfield, IL 62704

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PLANNING FUNCTIONS

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PLANNING FUNCTIONS

A. Exercises and Drills

All emergency response organizations involved with the emergency response effort at each nuclear power station participate in exercises designed to test the major elements of IPRA, both the State General Plan and the site-specific volume. State and local government personnel and resources will be mobilized, and command and coordination functions will be rigorously tested.

The utility, State and local governments will participate in an exercise which tests the emergency plans prior to the issuance of an operating license for a nuclear power station. In addition, the utility participates in exercises with State and local governments so that the off-site emergency response organizations involved with each site-specific volume of IPRA are exercised biennially, in accordance with USNRC and FEMA guidance.

The scenario for each site-specific exercise will vary each year so that all major elements of the plan and response organizations are tested within a five-year period. Exercises will be scheduled at various times during the day and at night, and under various weather conditions. Some exercises will be unannounced.

Each exercise scenario will include the following information: the name of the exercise; any references and authorities; the exercise objectives; the date, time and locations of the exercise; a list of participating organizations; timetables of real and simulated events, including a master schedule and a schedule for each of the participating organizations; a narrative summary describing how the exercise will be conducted, including sections on exercise direction and control, communications and public information and a list of those arrangements made for qualified observers.

A Federal critique will be held as soon as practicable following each exercise. At this time, Federal observers will informally outline their evaluations of the organizations that participated in the exercise. Approximately 45 days later, the comments expressed during this critique will be organized into a formal written evaluation critique document which will then be forwarded to IESDA.

IESDA will forward a copy of the critique to all participating agencies. All organizations will carefully evaluate the Federal critique comments, paying special attention to those comments recommending areas for improvement. Each organization will be responsible for implementing the necessary corrective actions and for ensuring that such corrective measures are, in fact, made.

However, IESDA has the ultimate responsibility for guaranteeing that all necessary changes have been made by all of the organizations involved and for submitting a detailed timeline schedule of corrective actions to FEMA.

If the USNRC and FEMA rule that the exercise did not sufficiently test the emergency plan, a remedial exercise will be required. The extent of participation in the remedial exercise will depend on the results of the Federal critique.

The utility, IESDA, IDNS and local governments within the 10-mile EPZ participate in monthly communications drills using NARS. Quarterly communications drills are to be held with the Federal emergency response organizations and states within the ingestion exposure pathway EPZ. The nuclear facility, State and local EOCs and field assessment teams are involved in an annual communications drill.

Radiological monitoring drills, including collection and analysis of all sample materials (e.g., water, grass, soil, air) will be held annually. Health physics drills will be held twice each year, and will involve a response to, and analysis of, simulated elevated airborne and liquid samples and direct radiation measurements in the environment.

B. Training

An essential component of an effective emergency response is the training of emergency response personnel.

IESDA and IDNS are jointly responsible for training all State and local emergency personnel in technical and operational aspects of IPRA. The types of personnel for whom this training will be provided include directors or coordinators of State and local response organizations, their key assistants and public information personnel, those responsible for IPRA planning functions, those responsible for accident assessment, radiological monitoring teams, key local officials, police and firefighting personnel, local ESDA personnel, local highway personnel, first aid and rescue personnel, medical support personnel and local school officials.

Training, initial and refresher, will be provided on an as needed or as requested basis at a minimum of once each year. For this purpose, a training program has been developed covering the basis of nuclear power plant operation, the relative dangers of radiation, radiation recording devices and their use, the IPRA concept of operations and the duties for which each organization and individual are responsible. The training program will be followed by a series of workshops in which various aspects of IPRA will be discussed in more detail. The State provides the initial training and the annual retraining. The county government is responsible for training made necessary by the addition of new personnel.

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C. Plan Maintenance and Updating

The IPRA planning effort is a joint responsibility of IESDA and IDNS. Both agencies have, through their normal duties, developed considerable expertise in the area of disaster and emergency planning. In addition, all State agencies with a potential role in disaster mitigation, response and recovery have a liaison on the State Disaster Planning Group for the purpose of disaster planning and coordination.

On the State level, it is these liaison to the State Disaster Planning Group who have the responsibility for radiological emergency response planning and who will be the emergency planning coordinators responsible for the development, updating and coordination of their organization's plans. For IESDA, this person is the Chief of Planning and Analysis. For IDNS, it is the Chief of Emergency Planning. It should be noted, however, that the ultimate authority for planning policy, as with any other policy, is vested in the Director of each State agency.

IESDA is responsible for overseeing the updating of IPRA, including the plans, standard operating procedures and training modules. At the State level, IESDA will ensure that each State agency involved with IPRA will review their portion on an annual basis. Any changes considered necessary by lessons learned during the drills and exercises, as well as those resulting from agency reorganization, address and telephone changes, and so on, will be incorporated during the IPRA update process. IESDA will also be responsible for ensuring that the same requirement is met at the local level.

All State, local and private organizations, upon review and update of their sections, will forward to IESDA either a statement saying that no changes are necessary or a copy of their portions with all revisions clearly marked and dated. Upon receipt of all update materials, IESDA will organize a total update packet which will then be distributed to all holders of controlled copies of IPRA, including Federal and State agencies, county and municipal governments, private organizations and selected libraries.

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D. Supporting Plans to IPRA

1. State Plans

Title	Agency
Disaster Response Plan General Order #79-7	IDOC
Emergency Highway Traffic Regulation Plan	IDOT
Illinois Comprehensive Disaster Response Plan	IESDA
Illinois Internal Security Plan	Illinois National Guard
IPRA-Dresden, Vol. II	IESDA
IPRA-LaSalle, Vol. III	IESDA
IPRA-Quad Cities, Vol. IV	IESDA
IPRA-Zion, Vol. V	IESDA
IPRA-Byron, Vol. VI	IESDA
IPRA-Braidwood, Vol. VII (Preliminary)	IESDA
IPRA-Clinton, Vol. VIII (Preliminary)	IESDA
IPRA-Transportation Accident, Vol. X	IDNS
Radio Services for Direction and Control	IESDA
State Emergency Broadcast System Operational Plan	IESDA

2. Federal Plans

Title	Agency
Federal Radiological Emergency Response Plan	FEMA
Federal Radiological Monitoring and Assessment Plan	USDOE

3. Private Plans

Title	Agency
Clinton Power Station Emergency Plan	IPC
Emergency Claims Manual	ANI
Generating Stations Emergency Plan	CECo