EMERGENCY PLAN IMPLEMENTING PROCEDURES

SHOREHAM

NUCLEAR POWER STATION

UNIT No 1

LONG ISLAND LIGHTING COMPANY

VOLUME 1

8204080119 820402
PDR ADOCK 05000322
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Submitted: _____

Approved: _____
(Plant Manager)

DRAFT

DRAFT - PRELIMINARY

SP Number 69.005.02
Revision: B
Date Eff.: _____
TPC _____
TPC _____
TPC _____

TECHNICAL SUPPORT CENTER (TSC) ACTIVATION

1.0 PURPOSE

This procedure provides instructions for activation of the Technical Support Center. It is concerned with the duties of personnel before and during the activation process.

2.0 RESPONSIBILITY

The Emergency Director is responsible for ensuring compliance with this procedure.

PPF1021.600-6.421

MAR 19 1982
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3/11/82

3.0 DISCUSSION

3.1 The Technical Support Center (Appendix 12.2) is an onsite facility which has the capability to display and transmit plant status information to individuals responsible for engineering and management support during emergency situations.

3.2 The Technical Support Center (TSC) serves as the emergency response facility responsible for accident assessment and emergency classification during Alert and higher level emergencies. Command and control of the emergency is handled at the TSC until the Emergency Operations Facility (EOF) assumes command or the emergency terminates.

3.3 Activation of the TSC consists of

3.3.1 Arrangement of tables and equipment

3.3.2 Installation of phones and communications

3.3.3 Assumption of responsibilities by personnel assigned to the TSC.

4.0 PRECAUTIONS

N/A

5.0 PREREQUISITES

5.1 An Alert, Site Area Emergency or General Emergency has been declared in accordance with Emergency Plan Implementing Procedure SP69.Ø1Ø.Ø1, "Classification of Emergency Action Levels".

5.2 Emergency Plan Implementing Procedure SP69.ØØ9.Ø1 "Notifications" has been initiated.

6.0 LIMITATIONS AND ACTIONS

N/A

7.0 MATERIALS AND EQUIPMENT

N/A

8.0 PROCEDURE

8.1 Activation

8.1.1 After receiving notification either by phone or over the Public Address system, all TSC support personnel should immediately proceed to the TSC.

8.1.2 Emergency Director, call the Shift Supervisor and inform him that the TSC is to be opened.

8.1.3 Shift Security Supervisor, dispatch a security officer with proper key(s) to unlock the TSC. The TSC is located adjacent to the Office and Service Building.

8.1.4 The security officer will remain at the TSC until the arrival of staffing personnel. The officer may then leave the TSC, return the key, and resume his normal security duties. Stay for access control!

8.1.5 If an evacuation has been ordered, personnel shall use the frisher monitor at the TSC entrance before entry. Contaminated individuals should not enter the center. They shall report to the personnel decontamination facility in the Office and Service Building.

8.1.6 The first person to arrive at the TSC should:

8.1.6.1 Complete the TSC Readiness List (Appendix 12.1)

8.1.6.2 Log personnel in and out of the TSC using the TSC Accountability Log (Appendix 12.4)

8.1.7 As initial emergency response personnel and/or their reliefs arrive, they should fill out their respective checklists (Appendices 12.5) to assure that they are prepared to assume their duties and support activation of the TSC.

8.1.7.1 Emergency Director Checklist - Appendix 12.5

8.1.7.2 Radiation Protection Manager & Support Checklist - Appendix 12.6

8.1.7.3 Administrative Supervisor Checklist - Appendix 12.7

8.1.7.4 Maintenance Manager Checklist - Appendix 12.8

8.1.7.5 Plant Technical Manager Checklist - Appendix 12.9

8.1.7.6 Core/Thermal Hydraulic Engineer checklist - Appendix 12.10

8.1.7.7 Emergency Planning Advisor #2 Checklist - Appendix 12.11

8.1.8 Upon Completion of the Emergency Director and Radiation Protection Manager & Support Checklist, Plant Manager call the Control Room and, upon agreement with the Watch Engineer, declare the TSC activated and assume direction and control for the emergency. Make this announcement over the station PA system.

8.2 Operation

8.2.1 TSC personnel, perform duties in accordance with Emergency Plan Implementing Procedure SP 69.ØØ1.Ø1 "Emergency Organization".

8.2.2 TSC personnel, request manpower support by contacting the OSC supervisor in the OSC.

8.3 Documentation and Records

8.3.1 Upon deescalation of an emergency and subsequent deactivation of the TSC the following guidelines apply:

8.3.1.1 All forms, attachments and logs, shall be completed before any individual is relieved of his position.

8.3.1.2 All documentation shall be forwarded to the Administrative Supervisor following deactivation of the TSC and forwarded to Document Control.

9.0 ACCEPTANCE CRITERIA

N/A

10.0 FINAL CONDITIONS

The Radiation Protection Manager & Support and Emergency of Director Checklists have been completed and the TSC has been activated.

11.0 REFERENCES

Shoreham Nuclear Power Station, Emergency Plan, section 7.1.3.

12.0 APPENDICES

12.1 TSC Readiness List

12.2 TSC Layout (Later)

12.3 TSC Phone Diagram (Later)

12.4 TSC Accountability Log

12.5 Emergency Director Checklist

12.6 Radiation Protection Manager & Support Checklist

12.7 Administrative Supervisor Checklist

12.8 Maintenance Manager Checklist

12.9 Plant Technical Manager Checklist

12.10 Core/Thermal Hydraulic Engineer Checklist

12.11 Emergency Planning Advisor #2 Checklist

Appendix 12.1

TSC READINESS LIST

Date/Time	Initials	Action Items
/		1. Set up tables as shown in Appendix 12.2 if necessary.
/		2. Remove phones from communications plug them into like jacks bearing their numbers. See Appendix 12.3 for the location of these jacks. Test for a dial tone on all phones.
/		3. Test dedicated lines by contacting the party on the other end of the line.
/		4. Ensure each desk has a in-out mail basket. If not, obtain them from the supply cabinet.
/		5. Place name plates on each desk. Use Figure 1 for guidance.
/		6. Ensure that the three Area Radiation Monitors are in their prooper place and turn on the Continuous Air Monitor.
/		7. Set up the status boards (if necessary).

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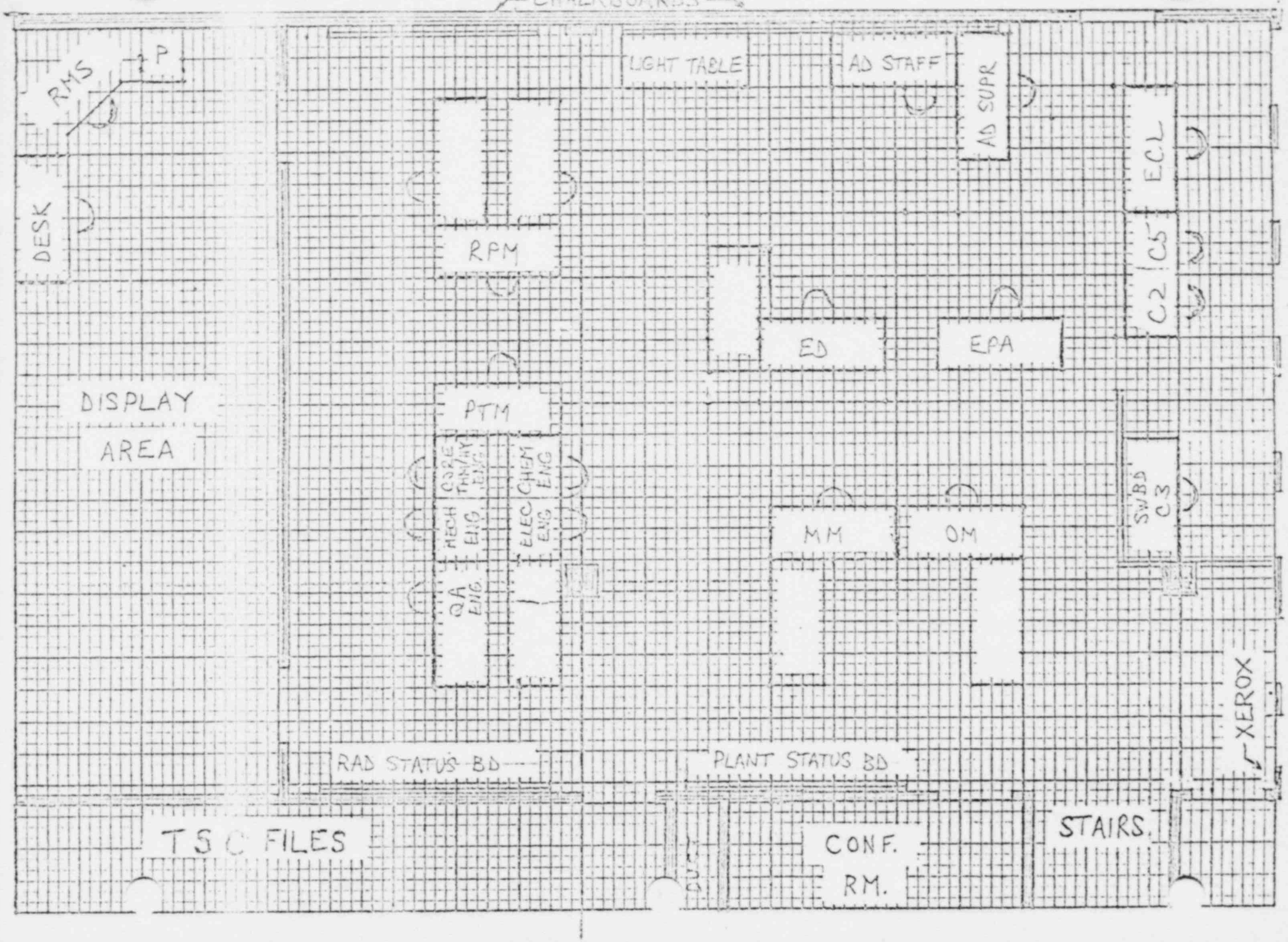
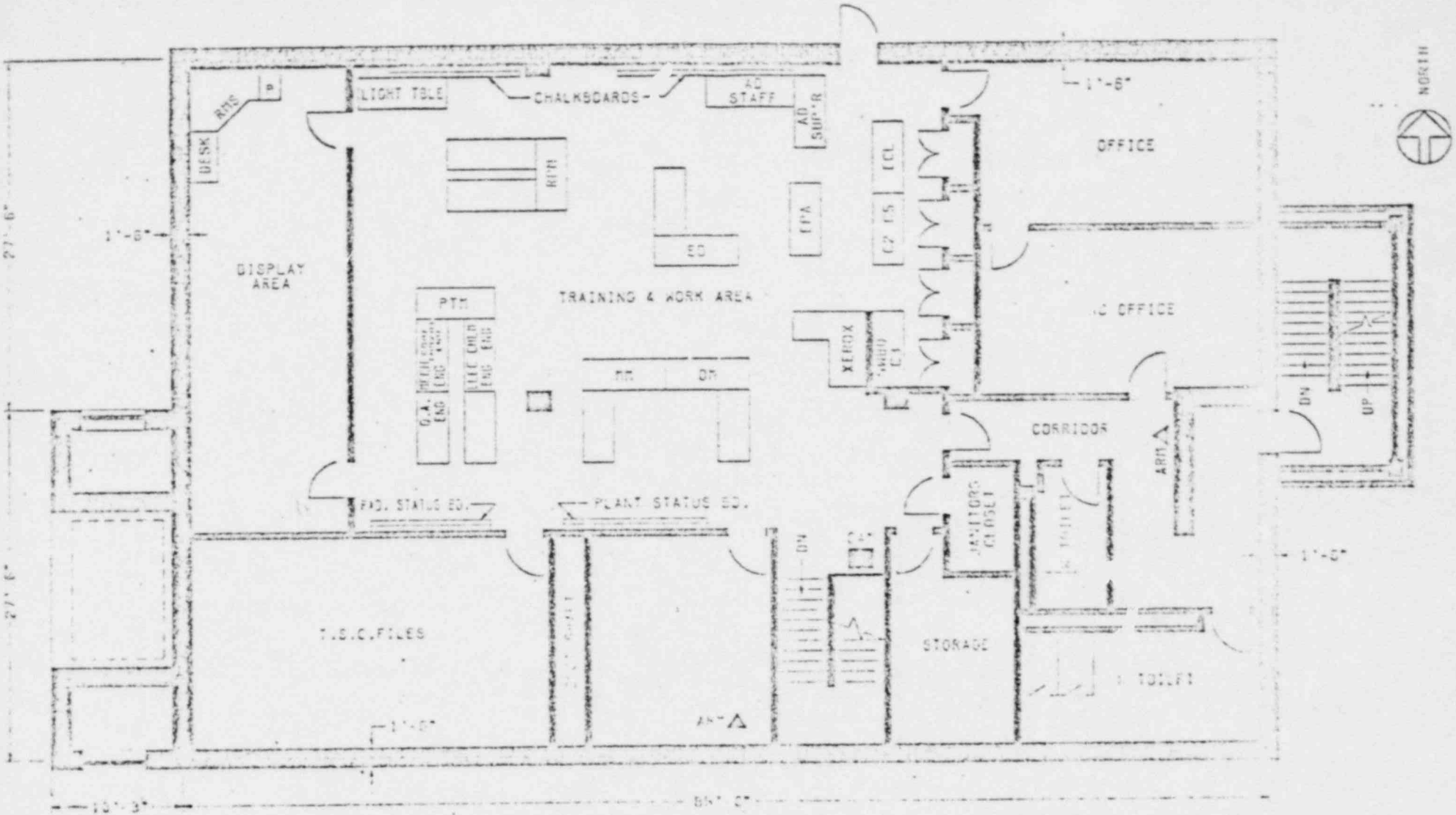
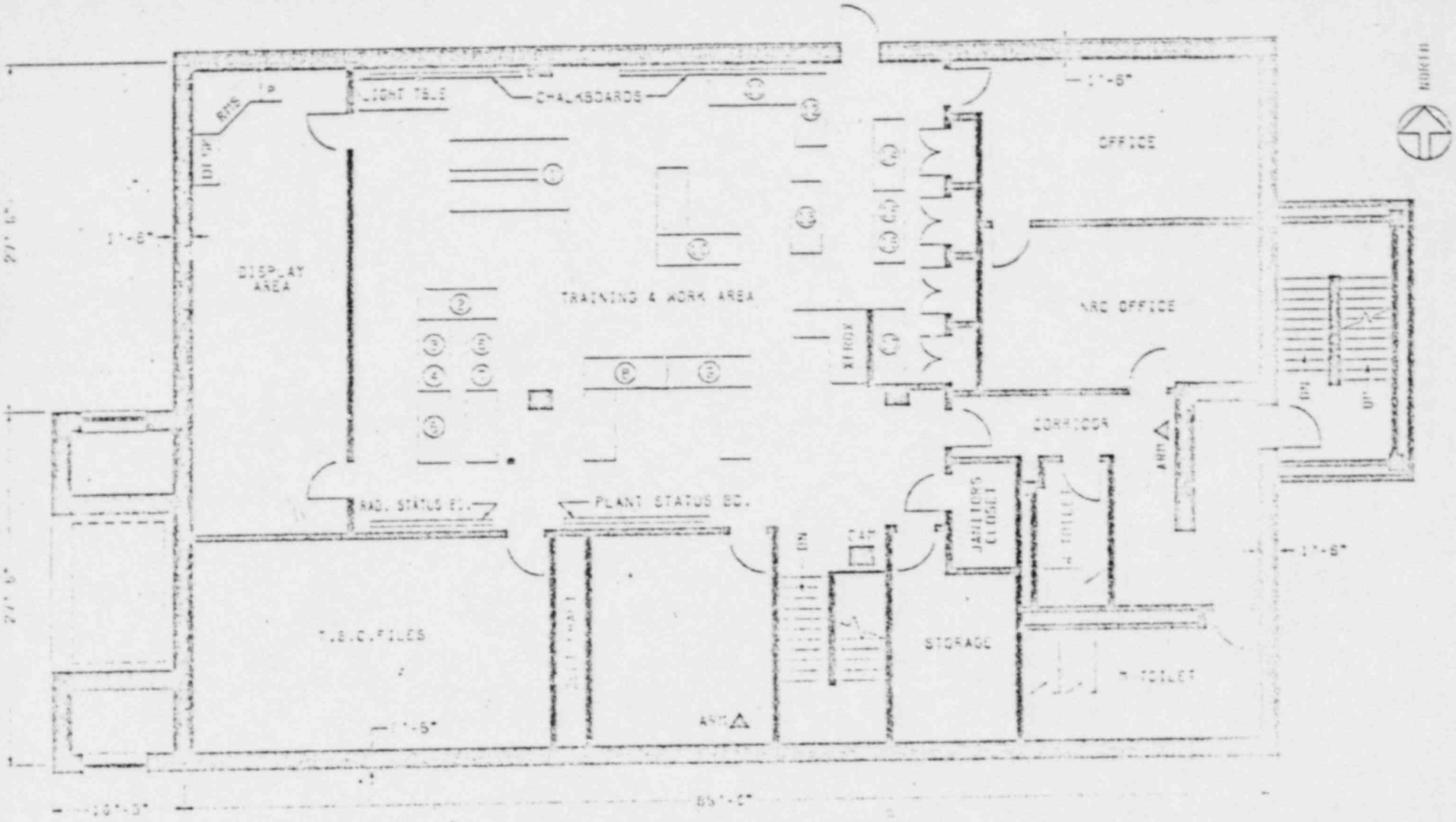
46 0940





SCALE-FEET

FIGURE 3A
DESK LAYOUT
TSC-FIRST FLOOR PLAN
SHOREHAM NUCLEAR POWER STATION-UNIT 1



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SCALE-FEET

FIGURE 3B
PHONE LOCATIONS
TSC-FIRST FLOOR PLAN
SHEARON HARRIS NUCLEAR POWER STATION-UNIT 1

C.21 Kennedy

TECHNICAL SUPPORT CENTER
TELEPHONE COMMUNICATIONS

(1) Radiation Protection Manager

Five Direct Dial Lines (DD-01, DD-02, DD-02, DD-04, DD-05)
Three Internal Extensions (IE-01, IE-02, IE-03)

(2) Plant Technical Manager

Direct Line to Emergency Operations Facility (DL-03)
Five Direct Dial Lines (DD-01, DD-02, DD-03, DD-04, DD-05)
Three Internal Extensions (IE-01, IE-02, IE-03)

(3) Core Thermal/Hydralic Engineer

(4) Mechanical Engineer

(5) Quality Assurance Engineer

(6) Chemical Engineer

(7) Electrical Engineer

(8) Maintenance Manager

(9) Operations Manager

(10) Emergency Director

Direct Line to Control Room (DL-01)
Direct Line to Emergency Operations Facility (DL-02)
Five Direct Dial Lines (DD-01, DD-02, DD-03, DD-04, DD-05)

(11) Administrative Staff

(12) Administrative Supervisor

(13). Emergency Planning Advisor

Five Direct Dial Lines (DD-01, DD-02, DD-03, DD-04, DD-05)
Three Internal Extensions (IE-01, IE-02, IE-03)

(14) Emergency Communications Liason

(15) Communicator 5

Five Direct Dial Lines (DD-01, DD-02, DD-03, DD-04, DD-05)
Four Internal Extensions (IE-01, IE-02, IE-03, IE-04)
Direct Line to Operational Support Center (DL-04)

(16) Communicator 2

(17) Communicator 3

(ENS) NRC Hotline
N.Y.S./S.C. Hotline
NAWAS
One Automatic Dialer

Appendix 12.4

TSC ACCOUNTABILITY LOG

Name	Department	Date/Time In	Date/Time Out

Appendix 12.5

EMERGENCY DIRECTOR CHECKLIST

Date/Time	Initials	Action Items
/		1. Contact the Watch Engineer and discuss:
/		a. Status of plant conditions including emergency classification and corrective actions underway.
/		b. Which Emergency Action Level (EAL) was exceeded to cause the emergency condition.
/		c. Recommended protective actions made to date and his knowledge of the implementation of these actions.
/		d. Status of EOF if activated simultaneously.
/		e. Location of Response Manager.

RADIATION PROTECTION MANAGER & SUPPORT CHECKLIST

Date/Time	Initials	Action Items
/		1. Perform survey of TSC. First arrival check that all materials needed to perform assessments are available.
/		a. Procedure and forms.
/		b. Walkie-talkie for field team communications.
/		c. Check all monitoring equipment.
/		2. Radiation Protection Manager contact the inplant Radiation Monitoring Technician and determine:
/		a. Extent of radiological releases and plant conditions.
/		b. Meteorology
/		c. Status of inplant surveys (if any)
/		d. Location and extent of any contaminated areas.
/		e. Projected offsite doses and Protective Action. Recommendations made to date.
/		3. Radiation Protection Manager determine that adequate staff is on hand to perform initial tasks.

Appendix 12.7

ADMINISTRATIVE SUPERVISOR CHECKLIST

Date/Time	Initials	Action Items
/		1. Coordinate requests from TSC and other station personnel concerning supplies, equipment and transportation.
/		2. Determine if adequate administrative and logistics personnel are present to carry out duties.

Appendix 12.8

MAINTENANCE MANAGER CHECKLIST

Date/Time	Initials	Action Items
___/___	_____	1. Contact Operations Manager and determine:
___/___	_____	a. Plant status as it affects maintenance or fire fighting.
___/___	_____	b. Status of repairs or fire (if any) in progress.
___/___	_____	2. Determine how many support personnel are available at the OSC to support maintenance or fire fighting operations.
___/___	_____	3. Recommend that offsite fire fighting support be requested by the Emergency Director if conditions warrant.

PLANT TECHNICAL MANAGER CHECKLIST

Date/Time	Initials	Action Items
___/___	_____	1. Determine plant status from the Shift Technical Advisor and relay this information to the Core/Thermal Hydraulics Engineer, Electrical Engineer, Mechanical Engineer and Chemical Engineer.

CORE/THERMAL HYDRAULIC ENGINEER CHECKLIST

Date/Time	Initials	Action Items
/		1. Obtain information on plant status as it relates to core parameters in order to determine current core conditions.
/		2. Inform Plant Technical Manager concerning recommendations for operation that would result in safer core conditions.

EMERGENCY PLANNING ADVISOR #2 CHECKLIST

Date/Time	Initials	Action Items
/		1. Upon arrival, lend emergency planning advise to any members who request assistance.

Submitted: _____

Approved: _____
(Plant Manager)

DRAFT

DRAFT - PRELIMINARY

SP Number 69.005.03
Revision: B
Date Eff.: _____
TPC _____
TPC _____
TPC _____

OPERATIONAL SUPPORT CENTER (OSC) ACTIVATION

1.0 PURPOSE

This procedure provides instructions for activation and operation of the Operational Support Center. It is primarily concerned with the duties of key personnel before and during the activation process.

2.0 RESPONSIBILITY

The OSC Supervisor is responsible for ensuring compliance with this procedure.

PP:1021.600-6.421

MAR 19 1982

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3/9/82

3.0 DISCUSSION

The Operational Support Center serves as a staging area for emergency response personnel. Personnel reporting to the OSC would muster until requests for assistance are received by the OSC Supervisor from the Technical Support Center. The OSC Supervisor would then assign these support tasks to various persons and dispatch them as necessary. After dispatch the support personnel will be under control of the person requesting the assistance.

4.0 PRECAUTIONS

N/A

5.0 PREREQUISITES

5.1 An Alert, Site Area Emergency or General Emergency has been declared in accordance with Emergency Plan Implementing Procedure SP69.Ø1Ø.Ø1 "Classification of Emergency Action Levels".

5.2 Emergency Plan Implementing Procedure SP69.ØØ9.Ø1 "Notifications" has been initiated.

6.0 LIMITATIONS AND ACTIONS

N/A

7.0 MATERIALS

N/A

8.0 PROCEDURE

8.1 Activation

8.1.1 After receiving notification either by phone or over the Public Address system, OSC personnel report to the OSC.

8.1.2 The first person at the OSC should:

8.1.2.1 Turn on lights

8.1.2.2 Complete OSC Readiness List (Appendix 12.1)

8.1.3 The first arrival shall assume command (until the OSC Supervisor arrives) and delegate the following tasks:

8.1.3.1 Designate a person to log all actions on the OSC Status Board.

8.1.3.2 Designate a person to initiate accountability of all personnel in the OSC using the OSC Accountability Log (Appendix 12.2).

8.1.4 Upon arrival, OSC Supervisor assume command and determine the following:

8.1.4.1 Status of plant conditions from the control room.

8.1.4.2 If manpower support available at the OSC adequate. If not, request additional manpower through a Control Room or TSC Communicator.

8.1.4.3 Announce over the PA system that the OSC is activated and notify the TSC of same.

8.2 Operation

8.2.1 As emergency response facilities request assistance, OSC Supervisor assign personnel to perform the support task (if available).

8.2.2 OSC Supervisor, ensure support task personnel are equipped for their mission or that they will pick up equipment at the center where the assistance was requested.

8.2.3 Log the following information on the OSC Task Sheet (Appendix 12.5):

8.2.3.1 Team members

8.2.3.2 Support task description

8.2.3.3 Team destination

8.2.3.4 Time team was dispatched

8.2.3.5 Time task was completed

8.2.3.6 Person requesting assistance

8.2.3.7 Other pertinent information (equipment, routes, etc.)

8.2.4 When support team is dispatched, OSC Supervisor notify person requesting assistance and inform him that team is dispatched and that the support task personnel are under his jurisidication.

8.3 Documentation and Records

8.3.1 Upon deescalation of an emergency and subsequent deactivation of the OSC, the following guidelines apply:

8.3.1.1 All forms, attachments, logs, shall be completed to insure reconstruction of emergency events.

8.3.1.2 All documentation shall be forwarded to the Administrative Supervisor following deactivation of the OSC and then to Document Control.

9.0 ACCEPTANCE CRITERIA

N/A

10.0 FINAL CONDITIONS

The OSC Supervisor has completed the OSC Readiness List and the OSC has been activated.

11.0 REFERENCES

Shoreham Nuclear Power Station Emergency Plan, Section 7.1.4.

12.0 APPENDICES

12.1 OSC Readiness List

12.2 OSC Accountability Log

12.3 OSC Layout

12.4 OSC Phone Diagram

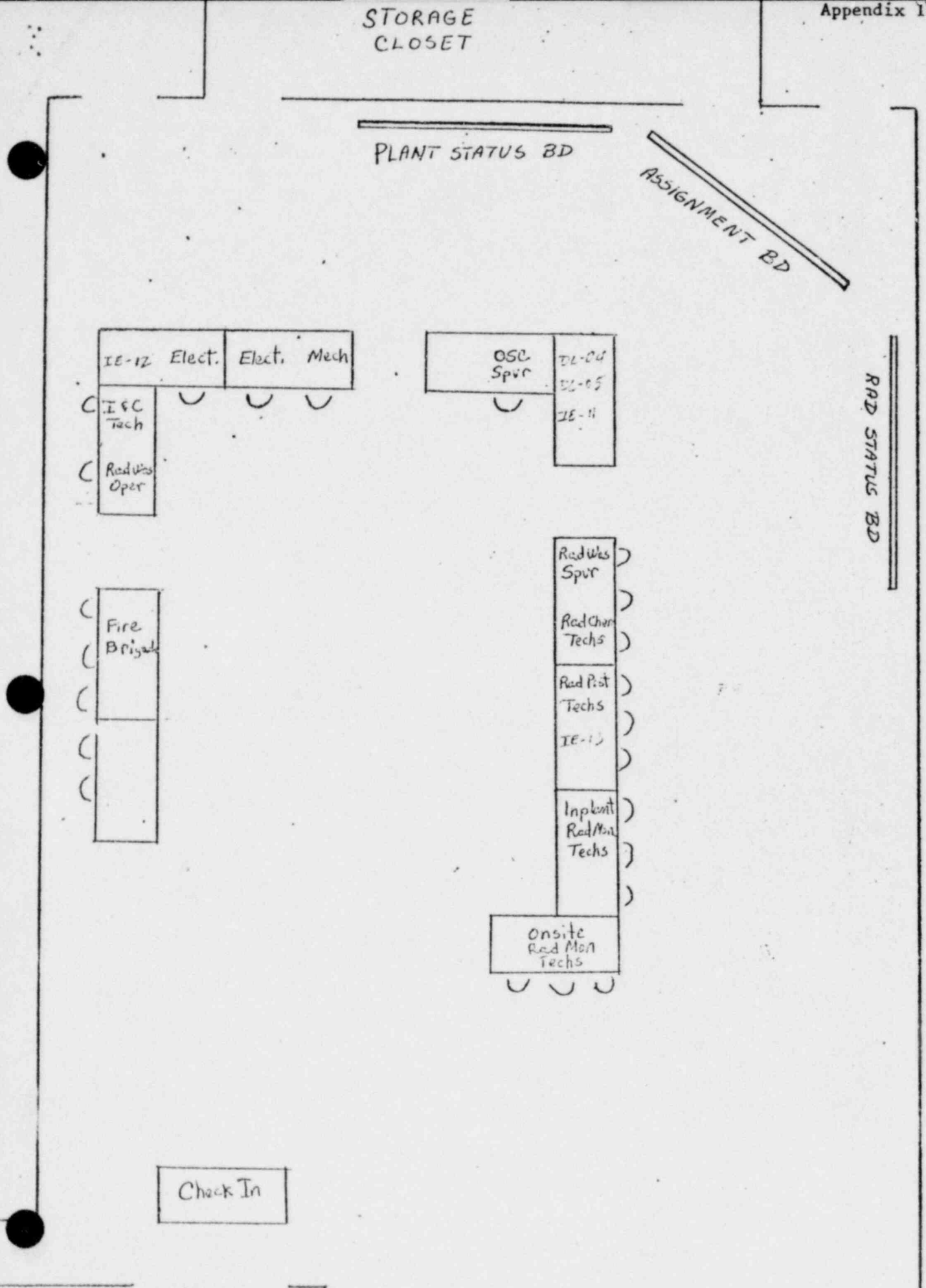
12.5 OSC Task Sheet

OSC Readiness List

Date/Time	Initials	Action Items
___/___	_____	1. Set up tables as shown in Appendix 12.3 if necessary.
___/___	_____	2. Remove phones from the communications locker and plug them into like jacks bearing their numbers. See Appendix 12.4 for the location of these jacks. Test for a dial tone on all phones.
___/___	_____	3. Test dedicated lines by contacting the party on the other end of the line.
___/___	_____	4. Ensure that all monitoring equipment is in its proper place and that a qualified Radiation Protection person is checking operations on each piece of equipment.
___/___	_____	5. Position status board in place (if necessary).

OSC ACCOUNTABILITY LOG

NAME	DEPARTMENT	DATE/TIME IN	DATE/TIME OUT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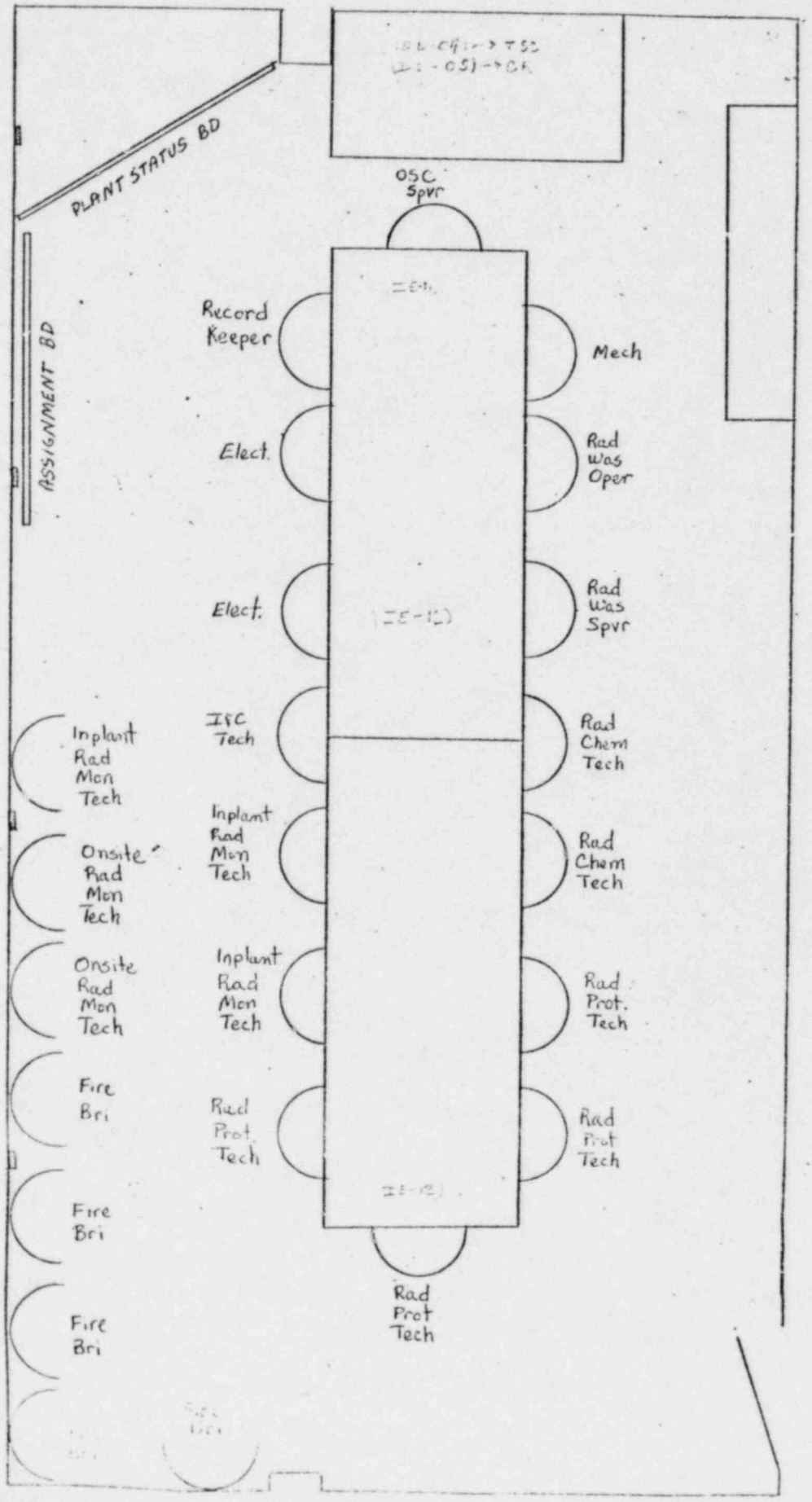
PLANT STATUS BD
ASSIGNMENT BD
RAD STATUS BD
IE-12
Elect.
Elect.
Mech
I&C Tech
Rad Wks Oper
OSC Spvr
DL-04
DL-05
IE-11
Rad Wks Spvr
Rad Chem Techs
Rad Prot Techs
IE-13
Inplant Rad Mon Techs
Onsite Rad Mon Techs
Fire Brigade
Check In
COAT RACKS


PLANT STATUS BD
ASSIGNMENT BD
OSC Spvr
Record Keeper
Elect.
Elect.
I&C Tech
Inplant Rad Mon Tech
Onsite Rad Mon Tech
Onsite Rad Mon Tech
Fire Bri
Fire Bri
Fire Bri
Inplant Rad Mon Tech
Inplant Rad Mon Tech
Rad Prot Tech
Mech
Rad Was Oper
Rad Was Spvr
Rad Chem Tech
Rad Chem Tech
Rad Prot. Tech
Rad Prot Tech
Rad Prot Tech

APPENDIX 12.4

LATER

OSC TASK SHEET

TEAM MEMBERS	SUPPORT TASK	TEAM DESTINATION	TIME DISPATCHED	TIME SENT	PERSON REQUESTING ASSISTANCE	MISCELLANEOUS INFORMATION

Submitted: _____

Approved: _____

DRAFT

DRAFT - PRELIMINARY

SP Number 69.007.01
Revision B
Date Eff. _____
TPC _____
TPC _____
TPC _____

COMMUNICATIONS EQUIPMENT

1.0 PURPOSE

To describe the communications equipment that are available for emergency use, their location, and their function. Specific operating instructions are not included.

2.0 RESPONSIBILITY

The Health Physics Engineer shall be responsible for ensuring the availability of these communications equipment for use during emergency conditions.

PPI021.6?0-6.421

Disc #9
JM 7/23

3.0 DISCUSSION

3.1 The SNPS communications capabilities include multiple systems and redundant power supplies which ensure the transmitting and receiving of vital information within the plant and within locations on-site and off-site.

3.2 Figure 1 illustrates the major communication modes and paths and Appendix I lists the type of communications capability provided in each of the emergency facilities.

3.3 Topics covered in this procedure include:

4.0 PRECAUTIONS

N/A

5.0 PREREQUISITES

N/A

6.0 LIMITATIONS AND ACTIONS

Specific operating instructions for the communications equipment described are not included.

7.0 MATERIALS AND TEST EQUIPMENT

N/A

8.0 PROCEDURE

8.1 Hotline

8.1.1 This communications link will be the primary means for notification of the State and County of emergency conditions at Shoreham.

8.1.2 These dedicated phone lines, made operational upon pick-up of the receiver and selection of desired location, shall provide the capability enabling any and all of the following locations to communicate simultaneously:

.1 Control Room
.2 Technical Support Center (TSC)
.3 Emergency Operations Facility (EOF)
.4 New York State Emergency Operations Center (Albany)
.5 New York State Southern District Office (Poughkeepsie)
.6 Suffolk County Emergency Operations Center

8.2 Dedicated Lines

8.2.1 In addition to the Hotline, dedicated lines will be installed as the primary means of communication with the Nuclear Regulatory Commission and for intra-Company communications.

8.2.2 The NRC dedicated phone system will allow simultaneous communication with the NRC's Bethesda Office and their King of Prussia Regional Office.

8.2.3 Internally there will also be three separate dedicated lines installed as follows:

.1 Between the Control Room and the TSC.

.2 Between the TSC, EOF, and Support Corporate Emergency Response and Recovery Center (SCERRC).

.3 Between the EOF and Emergency News Center (ENC).

8.3 National Alert Warning System (NAWAS)

A dedicated NAWAS line will serve as the primary backup communication link between the Shoreham site and Suffolk County Emergency Operations Center and the New York State Emergency Operations Center (Albany). This will allow simultaneous notification of the two agencies.

8.4 Commercial Telephone

The commercial telephone system consists of various dial-type telephones connected to the New York Bell Telephone System. These phones provide a means of communication offsite, and may be used as a secondary backup to the Hotline. They are powered by normal voltage supply and are therefore susceptible to loss of offsite power. They are located in various parts of the plant as well as the following:

8.4.1 Control Room

8.4.2 Technical Support Center

8.4.3 Operational Support Center

8.4.4 Emergency Operations Facility

8.4.5 Emergency News Center

8.4.6 Support Corporate Emergency Response and Recovery Center

8.5 Emergency Card Dialer Phone

The emergency card dialer phone is connected to the commercial telephone system and has automatic dialing capability by insertion of pre-coded dialing cards. This phone will be located in the Control Room, or the Technical Support Center when activated.

8.6 Private Automatic Exchange

8.6.1 The private automatic telephone exchange consists of a network of commercial telephones that may be used in the dialing mode for intra-site communications. These phones are located throughout the plant including the following locations.

8.6.1.1 Control Room

8.6.1.2 Technical Support Center

8.6.1.3 Operational Support Center

8.6.2 Several essential members of the emergency organization shall have phones tied into this network installed in their private homes. They may include the following personnel:

8.6.2.1 Plant Manager

8.6.2.2 Chief Technical Engineer

8.6.2.3 Chief Operating Engineer

8.6.2.4 Health Physics Engineer

8.6.2.5 Operating Engineer

8.6.2.6 Reactor Engineer

8.6.2.7 Security Supervisor

8.7 Public Address and Party Line

Six separate and independent communications channels, one page and five party lines, exist to provide voice communication between two or more locations within the plant, even in areas of extreme noise. The page channel is used to call personnel over the loud speakers, issue plantwide

instructions or communicate between two or more handsets. The party lines are used to carry on inter-communications after the page channel call is completed. Audio tone signals can be introduced into this system to allow for possible fire, system emergencies, etc. Each handset and speaker has its own amplifier and they are independent of all other components in the system with respect to their operation. The page/party system is supplied by an uninterruptible power source and is not dependent upon the on-site power supply. This system is located throughout the site, as well as the following areas:

8.7.1 Control Room

8.7.2 Technical Support Center

8.7.3 Operational Support Center

8.8 Sound Powered Telephone

The sound powered telephone system consists of independent string circuits connecting critical points in the plant. Communications within the system is by means of sound powered, portable headsets which can be plugged into any jack along a string circuit located throughout the plant. The sound powered phone system requires no power and is not affected by a loss of site power. This system shall be located in the following locations, as well as various areas within the plant.

8.8.1 Control Room

8.8.2 Technical Support Center

8.8.3 Operational Support Center

8.9 Beepers

In conjunction with the call-out by commercial telephone of Company personnel essential to the emergency organizations, beepers will also be activated. Upon activation of beepers, personnel shall call in on predetermined phone numbers to be given the course of action to be taken, plus any pertinent information regarding the emergency situation. The following personnel may be issued beepers:

8.9.1 Plant Manager

8.9.2 Chief Technical Engineer

8.9.3 Chief Operating Engineer

8.9.4 Health Physics Engineer

8.9.5 Operating Engineer

8.9.6 Reactor Engineer

8.9.7 Security Supervisor

8.10 Two-Way Radio

8.10.1 A low powered UHF Radio Base Station with two frequencies, is established at the plant for communications between the Control Room Radio Communications Center, mobile car units, and portable "walkie-talkie" units, as well as with off-site locations.

8.10.2 A third frequency on this UHF Radio Base Station shall be established to provide the capability of two-way communication link between the station and police.

8.10.3 A VHF Radio Base Station shall be established for communications between the Control Room and the LILCO Operations Center in Hicksville.

8.11 Hard Copy Transceivers (Telecopy)

(later)

9.0 ACCEPTANCE CRITERIA

N/A

10.0 FINAL CONDITIONS

N/A

11.0 REFERENCES

N/A

12.0 APPENDICES

12.1 Facility Communications List

FACILITY COMMUNICATIONS LIST

A. Control Room

1. Hotline
2. Dedicated Lines
3. NAWAS
4. Commercial Telephone
5. Private Automatic Exchange
6. Party/Page System
7. Sound Powered Phone
8. Card Dialer Phone
9. Radio

B. Technical Support Center

1. Hotline
2. Dedicated Lines
3. NAWAS
4. Commercial Telephone
5. Private Automatic Exchange
6. Party/Page System
7. Sound Powered Phone
8. (Card Dialer Phone)
9. Radio

C. Operational Support Center

1. Dedicated Lines
2. Commercial Telephone
3. Private Automatic Exchange
4. Party/Page System

D. Emergency Operations Facility

1. Hotline
2. Dedicated Lines
3. NAWAS
4. Commercial Telephone
5. Private Automatic Exchange
6. Radio

E. New York State Emergency Operations Center

1. Hotline
2. NAWAS
3. Commercial Telephone
4. Radio

F. Suffolk County Emergency Operations Center

1. Hotline
2. NAWAS
3. Commercial Telephone
4. Radio

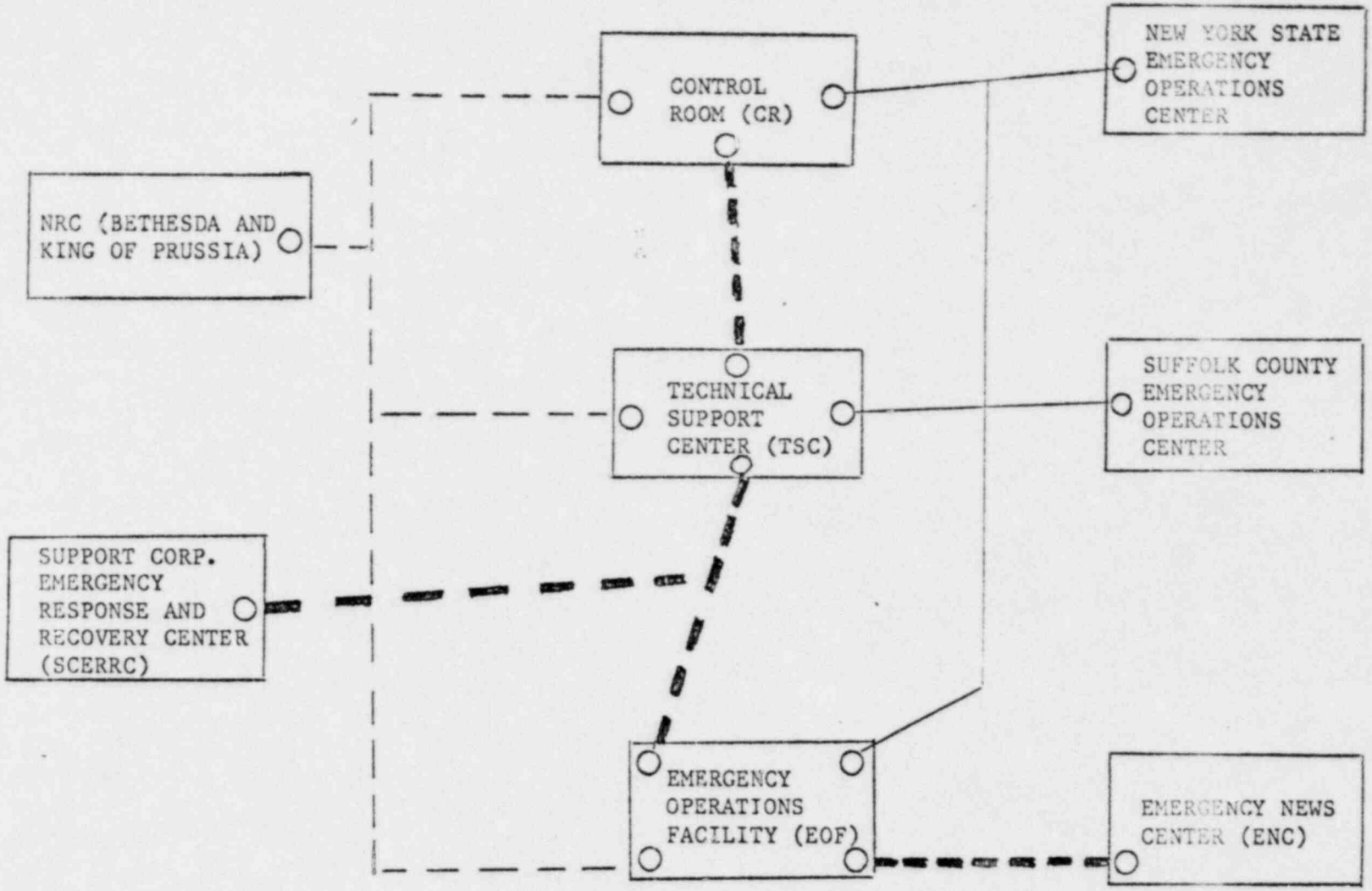
G. Emergency News Center

1. Dedicated Line
2. Commercial Telephone

H. Support Corporate Emergency Response and Recovery Center

1. Dedicated Line
2. Commercial Telephone
3. Private Automatic Exchange

MAJOR COMMUNICATIONS MODES AND PATHS



KEY

Hot Line

NRC Dedicated Line

Intra-Company Dedicated Lines (3)

FIGURE I

Submitted:_____

Approved:_____

DRAFT - PRELIMINARY

SP Number: 69.009.01
Revision: B C
Date Eff.:_____
TPC_____
TPC_____
TPC_____

NOTIFICATIONS

1.0 PURPOSE

To specify the means by which communications for all emergency levels are made for all levels of emergency classification and to delineate personnel who would be called to augment the emergency response organization.

2.0 RESPONSIBILITY

The Health Physics Engineer is responsible for ensuring compliance with this procedure.

MAR 19 1982

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3.0 DISCUSSION

3.1 Establishment of a quick effective means of notification of an emergency is a critical part of emergency response. Primary and secondary modes of communication are provided to insure the availability of proper communications.

3.2 Preplanned message statements allow for accurate and complete transfer of information. Persons making the notification simply read pre-written statements containing the necessary data.

3.3 Topics covered in this procedure:

4.0 PRECAUTIONS

Only persons authorized by the Emergency Director shall make notifications as prescribed in this procedure.

5.0 PREREQUISITES

An emergency has been classified in accordance with Emergency Plan Implementing Procedure SP 69.010.01, "Classification of Emergency Action Levels".

6.0 LIMITATIONS AND ACTIONS

N/A

7.0 MATERIALS AND EQUIPMENT

Communications equipment as described in Ref. 11.1.

8.0 PROCEDURE

8.1 Initial Notification

8.1.1 Emergency Director or designee:

.1 Provide a completed Initial Notification Fact Sheet (Appendix 12.1) for the appropriate emergency class to the ~~a Control Room Operator, TSC Communicator or EOF Communicator~~.

.2 Notify the LILCO Gas Systems Operator by means of the Emergency Organization Call Phone so that he can notify appropriate corporate personnel in accordance with "Corporate Notifications".

.3 Direct a Control Room Communicator, TSC Communicator or EOF Communicator to call in SNPS personnel for the appropriate emergency class using the SNPS Emergency Call Document ~~located in the Control Room, TSC or EOF~~.

.4 Inform the NRC using a Plant Operator (via the Emergency Notification System, ENS) reading the Initial Notification Fact Sheet. If the TSC is activated, this function can be done at that center. Record the notification on the Offsite Agency Notification Checklist (Appendix 12.2). Use communications guidelines given in step 8.1.2.

NOTE: The NRC will require the ENS line to be continuously manned if they so desire in order to be kept appraised of the emergency situation. Provide all information asked for, if possible. The Plant Operator should ask the NRC if they will speak to a different person so that he can resume his operational duties.

8.1.2 ~~Control Room Operator, TSC Communicator or EOF~~ Communicator, notify the individuals or organizations listed on the Offsite Agency Notification Checklist (Appendix 12.2) using the Initial Notification Fact Sheet as follows:

.1 Call each individual or organization using the primary mode of communication. If the party cannot be contacted using the primary method, use the alternate method.

.2 If a party cannot be contacted, bypass that party and proceed to the next one on the list. After all notifications have been completed, attempt to contact the bypassed parties. If a party still cannot be contacted, consider other methods such as relaying the information through a third party.

.3 When the individual answers, identify yourself and inform the party to obtain the form on which to record the notification. Pause to permit the individual time to obtain the form.

.4 Read the notification, annunciating the information which is to be entered on the form.

.5 After the notification has been completed, ask the individual to read back the notification and, if necessary, correct any errors.

.6 Record the name of the individual and the time of contact on the Offsite Agency Notification Checklist.

.7 Proceed to the next party on the Call List and continue in this manner until all individuals and organizations have been notified.

8.2 Personnel Injury Notification

8.2.1 Emergency Director or designee, provide a completed Personnel Injury Fact Sheet (Appendix 12.3) ~~to a Control Room~~ Communicator, ~~TSC Communicator or EOF Communicator~~.

8.2.2 ~~Control Room, TSC, or EOF~~ Communicator notify the individuals/ organizations listed on the Personnel Injury Call Checklist (Appendix 12.4) using the guidelines given in section 8.1.2 of this procedure.

NOTE: If the personnel injury involves contamination and offsite treatment, do not notify the Suffolk County Emergency Operations Center as this is an emergency event and Suffolk County will be notified by means of the Initial Notifications given in section 8.1.

8.3 Verification

8.3.1 Some calls made by use of dedicated lines may require verification.

8.3.2 All calls made by commercial lines require the individual receiving the notification to call back and verify that he has obtained the necessary information.

NOTE: A telephone number is provided to offsite agencies for this purpose.

8.4 Subsequent and Follow-up Notifications

8.4.1 Emergency Director, fill out the applicable portions of the Follow-up Notification Fact Sheet (Appendix 12.5) and give it to a ~~Control Room, TSC or EOF~~ Communicator for transmission to offsite agencies listed on the Offsite Agency Notification Check List.

8.4.2 Follow-up Information should be given to offsite authorities when:

.1 The emergency classification changes

.2 Plant conditions change substantially

.3 The emergency is terminated and/or recovery starts

8.4.3 ~~Control Room, TSC, or EOF~~ Communicator, repeat section 8.1.2 using the Follow-up Notification Fact Sheet instead of the Initial Notification Fact Sheet.

NOTE: Read only the information on the Follow-up Information Fact Sheet which has been filled out.

9.0 ACCEPTANCE CRITERIA

N/A

10.0 FINAL CONDITIONS

All notifications have been logged on appropriate check lists.

11.0 REFERENCES

11.1 SP 69.007.01, Communications Equipment

12.0 APPENDICES

12.1 Initial Notification Fact Sheet

12.2 Offsite Agency Notification Check List

12.3 Personnel Injury Fact Sheet

12.4 Personnel Injury Call Check List

12.5 Follow-up Notification Fact Sheet

Date and Time of Message _____ _____
Time Date

INITIAL NOTIFICATION FACT SHEET

1. Nuclear Facility providing the initial report:

/A/ Indian Point Unit 2 (ConEd)
/B/ Indian Point Unit 3 (PASNY)
/C/ Ginna Station (RG&E)
/D/ Nine Mile Point Unit 1 (NiMo)
/E/ Fitzpatrick Plant (PASNY)
/F/ Shoreham (LILCO)
/G/ Other _____

2. This /A/ is /B/ is not an exercise.

3. Emergency Classification:

/A/ Unusual Event
/B/ Alert
/C/ Site Area Emergency
/D/ General Emergency
/E/ Transportation Incident
/F/ Other (Describe)

_____

_____

4. Reported by /A/ _____ /B/ _____
Name Title

5. There /A/ has /B/ has not been a release of radioactivity to the /C/ atmosphere /D/ ground (spill only) /E/ body of water _____

6. The release /A/ is continuing /B/ has terminated /C/ not applicable.

7. Need for Protective Action:

A For Information Only. There is no need for protective actions outside the Site Boundary.

B There IS need for Protective Action. (If applicable, affected areas include sectors or ERPAs) _____, _____, _____, _____, _____, _____, _____.

8. Recommended Protective Actions:

/A/ Not applicable
/B/ Shelter within _____ miles
/C/ Evacuation within _____ miles
/D/ Other (or, for additional information) _____

_____

9. /A/ Wind speed _____ miles per hour or _____ meters per second, and
/B/ Direction (from) _____ degrees.
/C/ General weather conditions (sunny, rainy, etc.) _____

10. Means of communication contact, verification and/or additional information if different from pre-arranged communications channels.

OFFSITE AGENCY NOTIFICATION CHECK LIST

INDIVIDUAL/ ORGANIZATION	AGENCY CONTACTED TIME/INITIAL	COMMUNICATIONS MODE PRIMARY ALTERNATES	NAME OF PERSON CONTACTED	MESSAGE RECEIVED AND VERIFIED TIME/INITIAL
1. New York State Emergency Operations Center	___/___	1. Hotline ✓ 2. NAWAS 3. Emerg. Organ. Call Phone	_____	___/___
2. New York State Southern District Office	___/___	1. Hotline 2. Emerg. Organ. Call Phone	_____	___/___
3. Suffolk County Emergency Operations Center	___/___	1. Hotline 2. NAWAS 3. Emerg. Organ. Call Phone	_____	___/___
NOTE: NRC NOTIFICATIONS (#4 AND #5) TO BE PERFORMED BY CONTROL ROOM OPERATOR ONLY.				
4. Nuclear Regulatory Commission, Washington Office, Bethesda	___/___	1. Emerg. Notif. System (ENS) Dedicated Line 2. Emerg. Organ. Call Phone	_____	___/___
5. Nuclear Regulatory Commission, Regional Office, King of Prussia	___/___	1. Emerg. Notif. System (ENS) Dedicated Line 2. Emerg. Organ. Call Phone	_____	___/___
6. U.S. Coast Guard	___/___	1. Emer. Organ. Call Phone	_____	___/___
7. INPO * * DO NOT CALL IF EMERGENCY CLASSIFICATION IS UNUSUAL EVENT.	___/___	1. Emerg. Organ. Call Phone	_____	___/___

OFFSITE AGENCY NOTIFICATION CHECK LIST

INDIVIDUAL/ ORGANIZATION	AGENCY CONTACTED TIME/INITIAL	COMMUNICATIONS MODE PRIMARY / ALTERNATES	NAME OF PERSON CONTACTED	MESSAGE RECEIVED AND VERIFIED TIME/INITIAL
8. Radiation Management Corporation	/	1. Emerg. Organ. Call Phone		/
9. U.S. EPA	/	1. Emerg. Organ. Call Phone		/
10. Dep't. of Energy* R.A.P. Team	/	1. Emerg. Organ. Call Phone 2. Police Radio		/

*CALL ONLY WHEN DIRECTED BY THE RADIATION PROTECTION MANAGER

PERSONNEL INJURY FACT SHEET

Notification for Ambulance Assistance (Usually Wading River Fire Department)

1. This is the Shoreham Nuclear Power Station. An injury involving _____ person(s)
(number)

has occurred onsite which requires ambulance service. The individual(s)

_____ contaminated and will be transported to
(are/are not)

_____
(hospital - usually Central Suffolk Hospital

2. _____
(brief description of injuries)

3. Enter the station through the _____ gate.
(east/west)

Notification to: 1. Receiving Hospital (Usually Central Suffolk Hospital)
2. Suffolk County Emergency Operations Center

This is the Shoreham Nuclear Power Station. An injury involving _____ person(s)
(number)

has occurred onsite which requires medical treatment. The individual(s)

_____ contaminated and are being sent to
(are / are not)

_____ for treatment.
(hospital - usually Central Suffolk Hospital)

2. (Same as Item #2 above)

3. The estimated time of arrival at the hospital is _____ hours.
(time - use 24 hr clock)

PERSONNEL INJURY CALL CHECK LIST

INDIVIDUAL/ ORGANIZATION	AGENCY CONTACTED TIME/INITIAL	COMMUNICATIONS MODE PRIMARY ALTERNATED	NAME OF PERSON CONTACTED	MESSAGE RECEIVED AND VERIFIED TIME/INITIALS
1. Wading River Fire Department	____/____	1. Emerg. Organ. Call Phone 2. Police Radio	_____	____/____
2. Central Suffolk Hospital	____/____	1. Emerg. Organ. Call Phone 2. Police Radio	_____	____/____
3. Suffolk County* Emergency Operations Center	____/____	1. Emerg. Organ. Call Phone	_____	____/____

* DO NOT NOTIFY SUFFOLK COUNTY EOC IF THE INJURY INVOLVES CONTAMINATION AND OFFSITE TREATMENT

9. Type of actual or projected release and estimated duration and impact times:

a) Atmospheric Release

	Actual	Projected
Date and Time Release Started		
Duration of Release	hrs	hrs
Release Rate	cc/sec	cc/sec
Noble Gas Release Rate	Ci/sec	Ci/sec
Radioiodine Release Rate	Ci/sec	Ci/sec
Release Height	m	m
Chemical and Physical Form		
Meteorology Data		
Wind Speed	m/sec	
Wind Direction	(Toward)	
Temperature		
Stability Class		
Precipitation		
Time of Impact (Offsite)		
Sectors Affected		

b) Waterborne Release

Date and Time Release Started		
Duration of Release	hrs	hrs
Volume of Release	gal	gal
Radioactivity Concentration	µci/ml	µci/ml
Total Radioactivity Released	ci	ci
Radio Nuclides in Release		
Chemical or Physical Form		
Meteorology Data		
Wind Speed	m/sec	
Wind Direction	(Toward)	
Time of Impact (Offsite)		
Sectors Affected		

c) Surface Release (Spill)

Date and Time Release Occurred		
Volume of Release		
Radioactivity Concentration		
Total Radioactivity Released		
Radionuclides in Release		
Chemical or Physical Form		
Sectors Affected		

FOLLOW-UP NOTIFICATION FACT SHEET

The following data represent the most current and accurate information, projections and/or prognosis available at this time.

Time _____ Date _____
By _____ Title _____
Telephone Number _____

1. Location of Emergency: Shoreham Nuclear Power Station

2. Emergency declared at _____ on _____
(Time) (Date)

3. Emergency Classification:
/__/Unusual Event /__/Site Area Emergency
/__/Alert /__/General Emergency

4. Description of Initiating Event(s): _____

5. Current Plant Conditions: _____

6. Prognosis for Worsening or Termination of Emergency: _____

7. Emergency Response Actions Underway: _____

8. Request for Offsite Support: _____

10. Dose Measurements and Projections

a) Site Boundary _____

	Actual	Projected
Whole Body Dose Rate	_____ mr/hr	_____ mr/hr
Whole Body Dose		_____ Rem
Thyroid Dose Rate	_____ mr/hr	_____ mr/hr
Thyroid Dose		_____ Rem
Highest Sectors	_____	_____

b) Projected Offsite

	2 Miles	5 Miles	10 Miles
Whole Body Dose Rate (mr/hr)	_____	_____	_____
Whole Body Dose (Rem)	_____	_____	_____
Thyroid Dose Rate (mr/hr)	_____	_____	_____
Thyroid Dose (Rem)	_____	_____	_____
Sectors Affected	_____	_____	_____

11. Recommended Protective Actions: _____

_____

_____

_____

_____ / / _____
Emergency Director Approval Date Time

THIS SECTION INTENTIONALLY LEFT BLANK FOR
FUTURE EXPANSION.

Submitted: _____

Approved: _____
(Plant Manager)

SP Number	69.010.01
Revision	
Date Eff.	
TPC	
TPC	

CLASSIFICATION OF EMERGENCY ACTION LEVELS

See Attachment 1)

Submitted: _____ SP Number 69.Ø13.Ø1

Approved: _____ Revision: A
(Plant Manager)

Date Eff: _____

UNUSUAL EVENT

DRAFT - PRELIMINARY

1.0 CONDITION

1.1 An UNUSUAL EVENT has been declared based on the occurrence of off-normal events which could indicate a potential degradation of the level of safety of the plant, as described in SP 69.010.01, Classification of Emergency Action Levels.

2.0 IMMEDIATE ACTIONS

The Emergency Director (Watch Engineer, until properly relieved by a designated alternate) is responsible for implementation of the actions prescribed in this procedure. The Emergency Director may delegate responsibility for performance of the prescribed tasks to available personnel, except where otherwise specified in this procedure.

2.1 For All Initiating Events

2.1.1 Control Room Operator, implement corrective actions to contend with the situation and to mitigate possible deterioration in plant conditions in accordance with the SNPS Operating Procedures while simultaneously implementing this procedure. Perform any of the following as necessary:

.1 Airborne Release - Step 2.2

.2 Waterborne Release - Step 2.3

.3 Fire/Explosion - Step 2.4

.4 Injury - Step 2.5

.5 Natural Event - Step 2.6

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2.1.2 Control Room Operator, implement appropriate assessment actions. Complete an Unusual Event Initial Notification Fact Sheet, (Appendix 6.1), using data derived from the initial assessment activities.

2.1.3 Control Room Operator, announce over the page/party system the following:

2.1.3.1 "The plant is in an Unusual Event condition" - repeat

2.1.3.2 The location or general area affected

2.1.3.3 Any operations/work to be halted

2.1.3.4 Specific instructions to plant personnel as applicable.

2.1.4 Control Room Operator implement SP 69.009.01, "Notifications" in order to:

.1 Notify offsite agencies

.2 Notify additional station personnel as needed

.3 Notify the LILCO emergency response organization

2.2 For Initiating Event: Radioactivity Release to the Atmosphere

2.2.1 Inplant Radiation Monitoring Technician or designee initiate and continue offsite dose projection activities as necessary in accordance with SP 69.022.01, Determination of Offsite Doses.

2.2.2 In-plant Radiation Monitoring Technician or designee, initiate an emergency onsite radiation survey in accordance with SP 69.021.01, Onsite Surveys.

2.2.3 In-plant Radiation Monitoring Technician or designee, initiate SP 69.026.01, Protective Action Recommendation.

2.3 For Initiating Event: Liquid Radioactivity Release

2.3.1 In-plant Radiation Monitoring Technician determine the activity of the release by effluent monitor reading, or by estimate in accordance with normal station procedure.

2.3.2 In-plant Radiation Monitoring Technician initiate SP 69.024.01, Waterborne Release Dose Projection.

2.3.3 In-plant Radiation Monitoring Technician initiate SP 69.026.01, Protective Action Recommendations.

2.3.4 In-plant Radiation Monitoring Technician obtain and analyze environmental samples, as necessary, in accordance with SP 69.024.01, Environmental Sample Collection During Emergency.

2.4 For Initiating Event: Fire/Explosion

2.4.1 Fire brigade members, perform fire fighting efforts in controlled areas in accordance with the SNPS Fire Plan.

2.5 For Initiating Event: Personnel Injury

2.5.1 First Aid Team, perform emergency measures for personnel injuries requiring offsite medical treatment in accordance with SP 69.040.01, Personnel Injury.

2.6 For Initiating Event: Tornado/Earthquake/Storms/Flooding

2.6.1 Operations personnel, perform emergency measures in accordance with SNPS Emergency Operating Procedures (SP 29.xxx.xx series).

3.0 SUBSEQUENT ACTIONS

3.1 Complete a Follow-up Notification Form using the most current data available at the time the form is completed.

3.2 When offsite agencies call back, provide information from the Follow-up Notification Fact Sheet as applicable to the emergency condition. Accept calls and provide information to only those organizations listed on the notification call-list. Refer all other calls to LILCO public affairs personnel.

3.3 Appoint a records keeper and communication coordinator from available personnel.

3.4 Perform emergency measures in accordance with the appropriate Emergency Plan Implementing Procedures and Emergency Operating Procedures (SP 29.xxx.xx series).

3.5 If plant conditions deteriorate, reclassify the emergency in accordance with SP 69.010.01, Classification of Emergency Action Levels.

3.6 Continue emergency operations, including assessment activities, until such time as plant conditions have stabilized and other termination criteria of SP 69.070.03, Termination and Recovery, have been satisfied.

4.0 FINAL CONDITIONS

4.1 Emergency measures are continuing for the Unusual Event, the emergency condition has been escalated, or the emergency condition has been terminated.

4.2 For initiating events related to Limiting Conditions of Operation (LCOs), the emergency condition can be considered terminated when the appropriate actions specified in the "action" section of the LCO have been taken, and all notifications have been completed.

5.0 DISCUSSION

5.1 Once an Unusual Event condition has been declared at SNPS in accordance with SP 69.010.01, Classification of Emergency Action Levels, this procedure guides the Emergency Director in the performance of major actions and provides reference to other applicable Emergency Plan Implementing Procedures for further actions and more detailed instructions.

5.2 In the event of emergency conditions not adequately covered by this procedure, the Emergency Director has the responsibility and authority to take whatever action he considers required to prevent injury to personnel or damage to the plant or to equipment and to place the plant in a safe condition.

6.0 APPENDICES

6.1 Initial Notification Fact Sheet

6.2 Follow-up Notification Fact Sheet

6.3 Action Checklist - Unusual Event-Gas

6.4 Action Checklist - Unusual Event - Liquid

Date and Time of Message _____ _____
Time Date

INITIAL NOTIFICATION FACT SHEET

1. Nuclear Facility providing the initial report:

   /A/ Indian Point Unit 2 (ConEd)
   /B/ Indian Point Unit 3 (PASNY)
   /C/ Ginna Station (RG&E)
   /D/ Nine Mile Point Unit 1 (NiMo)
   /E/ Fitzpatrick Plant (PASNY)
   /F/ Other _____

2. This /A/ is /B/ is not an exercise.

3. Emergency Classification:

   /A/ Unusual Event
   /B/ Alert
   /C/ Site Area Emergency
   /D/ General Emergency
   /E/ Transportation Incident
   /F/ Other (Describe)

   _____

   _____

4. Reported by /A/ _____ /B/ _____
   Name Title

5. There /A/ has /B/ has not been a release of radioactivity to the /C/ atmosphere /D/ ground (spill only) E body of water _____

6. The release /A/ is continuing /B/ has terminated /C/ not applicable.

7. Need for Protective Action:

   A For Information Only. There is no need for protective actions outside the Site Boundary.

   B There IS need for Protective Action. (If applicable, affected areas include sectors or ERPAs) _____, _____, _____, _____, _____, _____, _____.

8. Recommended Protective Actions:

   /A/ Not applicable
   /B/ Shelter within _____ miles
   /C/ Evacuation within _____ miles
   /D/ Other (or, for additional information) _____

   _____

9. /A/ Wind speed _____ miles per hour or _____ meters per second, and
   /B/ Direction (from) _____ degrees.
   /C/ General weather conditions (sunny, rainy, etc.) _____

10. Means of communication contact, verification and/or additional information if different from pre-arranged communications channels.

    _____
    Telephone Number or Method

FOLLOW-UP NOTIFICATION FACT SHEET

The following data represent the most current and accurate information, projections and/or prognosis available at this time.

Time _____ Date _____
By _____ Title _____
Telephone Number _____

1. Location of Emergency: Shoreham Nuclear Power Station

2. Emergency declared at _____ (Time) on _____ (Date)

3. Emergency Classification:
   - /__/ Unusual Event
   - /__/ Alert
   - /__/ Site Area Emergency
   - /__/ General Emergency

4. Description of Initiating Event(s): _____

5. Current Plant Conditions: _____

6. Prognosis for Worsening or Termination of Emergency: _____

7. Emergency Response Actions Underway: _____

8. Request for Offsite Support: _____

9. Type of actual or projected release and estimated duration and impact times:

a) Atmospheric Release

	Actual	Projected
Date and Time Release Started	_____	_____
Duration of Release	_____ hrs	_____ hrs
Release Rate	_____ cc/sec	_____ cc/sec
Noble Gas Release Rate	_____ Ci/sec	_____ Ci/sec
Radioiodine Release Rate	_____ Ci/sec	_____ Ci/sec
Release Height	_____ m	_____ m
Chemical and Physical Form	_____	_____
Meteorology Data		
Wind Speed	_____ m/sec	
Wind Direction	_____ (Toward)	
Temperature	_____	
Stability Class	_____	
Precipitation	_____	
Time of Impact (Offsite)	_____	_____
Sectors Affected	_____	_____

b) Waterborne Release

Date and Time Release Started	_____	_____
Duration of Release	_____ hrs	_____ hrs
Volume of Release	_____ gal	_____ gal
Radioactivity Concentration	_____ µci/ml	_____ µci/ml
Total Radioactivity Released	_____ ci	_____ ci
Radio Nuclides in Release	_____	_____
	_____	_____
	_____	_____
Chemical or Physical Form	_____	_____
Meteorology Data		
Wind Speed	_____ m/sec	
Wind Direction	_____ (Toward)	
Time of Impact (Offsite)	_____	_____
Sectors Affected	_____	_____

c) Surface Release (Spill)

Date and Time Release Occurred	_____	_____
Volume of Release	_____	_____
Radioactivity Concentration	_____	_____
Total Radioactivity Released	_____	_____
Radionuclides in Release	_____	_____
	_____	_____
	_____	_____
Chemical or Physical Form	_____	_____
Sectors Affected	_____	_____

10. Dose Measurements and Projections

a) Site Boundary _____

	Actual	Projected
Whole Body Dose Rate	_____ mr/hr	_____ mr/hr
Whole Body Dose		_____ Rem
Thyroid Dose Rate	_____ mr/hr	_____ mr/hr
Thyroid Dose		_____ Rem
Highest Sectors	_____	_____

b) Projected Offsite

	2 Miles	5 Miles	10 Miles
Whole Body Dose Rate (mr/hr)	_____	_____	_____
Whole Body Dose (Rem)	_____	_____	_____
Thyroid Dose Rate (mr/hr)	_____	_____	_____
Thyroid Dose (Rem)	_____	_____	_____
Sectors Affected	_____	_____	_____

11. Recommended Protective Actions: _____

_____

_____

_____

_____ / / _____

Emergency Director Approval Date Time

CHECKLIST

Note

The use of this checklist is optional. It is provided as a convenience for the Emergency Director. It need not be filled out, nor retained.

UNUSUAL EVENT - GAS

STEP	OUTLINE	INITIAL	TIME
2.1.1	Implement corrective actions (Stop release)	_____	_____
2.2.2	Initiate and continue dose projection (69.022.02)	_____	_____
2.2.3	Initiate radiation survey (69.020.01)	_____	_____
2.1.2	Complete Initial Notification Form	_____	_____
2.1.3	Announce emergency	_____	_____
2.1.4	Notify on-call Emergency Director	_____	_____
2.1.4.2	Notify additional SNPS personnel for assistance	_____	_____
3.5.4	Escalate to Alert if necessary (Alert-Gas checklist)	_____	_____
2.1.4.1	Notify offsite authorities (69.009.01)	_____	_____
3.1,3.2	Complete follow-up notification	_____	_____
3.6	Terminate when termination criteria (69.070.03) have been met	_____	_____

CHECKLIST

Note

The use of this checklist is optional. It is provided as a convenience for the Emergency Director. It need not be filled out, nor retained.

UNUSUAL EVENT - LIQUID

STEP	OUTLINE	INITIAL	TIME
2.1.1	Implement corrective actions (Stop release)	_____	_____
2.3.2	Determine release	_____	_____
2.1.2	Complete Initial Notification Form	_____	_____
2.1.3	Announce emergency	_____	_____
2.1.4	Notify on-call Emergency Director	_____	_____
2.1.4.2	Notify additional SNPS personnel for assistance	_____	_____
2.1.4.1	Notify offsite authorities (69.009.01)	_____	_____
3.1,3.2	Complete follow-up notification	_____	_____
3.6	Terminate when termination criteria (69.070.03) have been met	_____	_____

Submitted: _____ SP Number: 69.014.01

Approved: _____ Revision: A
(Plant Manager)

Date Eff.: _____

ALERT

DRAFT - PRELIMINARY

1.0 CONDITION

1.1 An ALERT has been declared based on the occurrence of events which indicate an actual or potential degradation of the level of safety of the plant, as described in SP 69.010.01, Classification of Emergency Action Levels.

1.2 An UNUSUAL EVENT had been declared and emergency measures are being performed; and on the basis of subsequent information or upon a deterioration in plant conditions, the condition has been reclassified as an ALERT.

2.0 IMMEDIATE ACTIONS

The Emergency Director (Watch Engineer, until properly relieved by a designated alternate) is responsible for implementation of the actions prescribed in this procedure. The Emergency Director may delegate responsibility for performance of the prescribed tasks to available personnel, except where otherwise specified in this instruction.

2.1 For All Initiating Events

2.1.1 Control Room Operator, implement corrective actions to contend with the situation and to mitigate possible deterioration in plant conditions in accordance with Operating Procedures while simultaneously implementing this procedure. Perform any of the following as necessary:

.1 Airborne Release - Step 2.2

.2 Waterborne Release - Step 2.3

.3 Fire/Explosion - Step 2.4

.4 Natural Event - Step 2.5

2.1.2 Control Room Operator implement appropriate assessment actions. Complete an Initial Notification Fact Sheet (Appendix 6.1) using data derived from the initial assessment activities.

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2.1.3 Control Room Operator announce over the page/party system the following:

2.1.3.1 The plant is in an Alert condition

2.1.3.2 The location or general area affected

2.1.3.3 Any operations/work to be halted

2.1.3.4 Specific instructions to plant personnel as applicable

2.1.4 Control Room Operator implement SP 69.009.01 Notifications in order to:

2.1.4.1 Notify offsite agencies

2.1.4.2 Notify additional station personnel as needed

2.1.4.3 Notify the LILCO emergency response organization

2.1.5 Emergency Director or designee, implement the following:

2.1.5.1 Operational Support Center Activation (SP 69.005.03)

2.1.5.2 Technical Support Center Activation (SP 69.005.02)

NOTE: For an emergency situation where plant conditions are expected to deteriorate activate the Emergency Operations Facility (SP 69.005.) and the Emergency News Center (SP 69.005.).

2.2 For Initiating Event: Radioactivity Release

2.2.1 Direct Radiation Manager or designee to initiate and continue offsite dose projection activities as necessary in accordance with SP 69.022.01, Determination of Offsite Doses.

2.2.2 Direct Radiation Manager or designee to initiate an emergency onsite radiation survey in accordance with SP 69.021.01, Downwind Surveys.

2.2.3 If the results of the onsite survey indicate the need, direct Radiation Manager or designee to initiate radiation surveys offsite in accordance with SP 69.021.01, Downwind Surveys, and escalate the emergency classification as warranted.

2.2.4 Based on the results of the downwind dose projection activities, Radiation Protection Manager or designee recommend an appropriate protective action to offsite authorities as part of the initial and/or follow up notifications. Refer to SP 69.024.01, Protective Action Recommendations".

2.2.5 If the results of the radiation surveys or if area radiation monitors indicate the need, Emergency Director or designee, evacuate personnel from affected areas by implementing SP 69.030.01, Evacuations During an Emergency. SP 69.030.01 provides guidance as to when an evacuation should be implemented. If an evacuation is implemented, also perform as applicable:

2.2.5.1 Emergency Director or designee account for personnel by implementing SP 69.030.02, Personnel Accountability.

2.2.5.2 Radiation Protection Manager or designee, direct personnel monitoring efforts in accordance with SP 69.030.03, Monitoring of Personnel/Equipment During an Evacuation.

2.2.5.3 Radiation Protection Manager, direct search and rescue efforts in accordance with SP 69.080.01, Search and Rescue.

2.2.5.4 Radiation Protection Manager or designee, direct re-entry efforts in accordance with SP 69.070.01, Re-entry.

2.2.6 If the results of the onsite survey indicate a dose rate at the site boundary (not the protected area fence) exceeding 20 mrem/hr or a possible accumulative dose of 170 mrem, Emergency Director, reclassify the emergency as a Site Area Emergency and perform emergency measures in accordance with SP 69.015.01, Site Area Emergency. Immediately notify offsite authorities of the reclassification of the emergency.

2.3 For Initiating Event: Liquid Radioactivity Release

2.3.1 Determine the activity of the release by effluent monitor reading, or by estimate in accordance with appropriate station procedures.

2.3.2 Radiation Protection Manager or designee, implement SP 69.024.01, Waterborne Release Dose Projection.

2.3.3 Radiation Protection Manager or designee implement SP 69.026.01, Protective Action Recommendations.

2.4 For Initiating Event: Fire/Explosion

2.4.1 Fire brigade members perform firefighting efforts in controlled areas in accordance with the SNPS Fire Plan.

2.5 For Initiating Event: Tornado/Earthquake/Storms/Flooding

2.5.1 Operations personnel perform emergency measures in accordance with SNPS Emergency Operating Procedures (SP 39.xxx.xx series).

3.0 SUBSEQUENT ACTIONS

3.1 Complete a Follow-up Notification Form using the most current data available at the time the form is completed.

3.2 When offsite agencies call back, provide information from the Follow-up Notification Fact Sheet as applicable to the emergency condition. Accept calls and provide information to only those organizations listed on the notification call-list. Refer all other calls to LILCO public affairs personnel. Provide updated or additional information to the offsite agencies as it becomes available.

3.3 Coordinate emergency response activities in the Technical Support Center and the Operations Support Center, keeping all LILCO support personnel apprised of the emergency situation.

3.4 Perform emergency measures in accordance with the appropriate Emergency Plan Implementing Procedures (SP 69.xxx.xx series) and Emergency Operating Procedures (SP 39.xxx.xx series).

3.5 If plant conditions deteriorate, escalate the emergency classification. Perform actions in accordance with the appropriate procedure.

3.6 Continue emergency operations, including assessment activities, until such time as plant conditions have stabilized and other termination criteria of SP 69.070.03, Termination and Recovery, have been satisfied.

4.0 FINAL CONDITIONS

4.1 Emergency measures are continuing for the Alert, the emergency condition has been escalated/downgraded, or the emergency condition has been temminated.

5.0 DISCUSSION

5.1 Once an Alert condition has been declared at SNPS in accordance with SP 69.010.01, Classification of Emergency Action Levels, this procedure guides the Emergency Director in the performance of major actions and provides reference to other applicable Emergency Plan Implementing Procedures for further actions and more detailed instructions.

5.2 Although this procedure assigns all responsibility to the Emergency Director, the various activities will be performed by the individual emergency managers. Initially, and until the TSC staffing is available, the Emergency Director will perform all functions. As the staffing arrives, the individual emergency managers will be responsible for performing activities assigned in SP 69.001.01, Emergency Organizations. The Emergency Director will coordinate the overall response using this procedure as a guide.

5.3 In the event of emergency conditions not adequately covered by this procedure, the Emergency Director has the responsibility and authority to take whatever action he considers required to prevent injury to personnel or damage to the plant or to equipment and to place the plant in a safe condition.

6.0 APPENDICES

6.1 Initial Notification Fact Sheet

6.2 Follow-up Notification Fact Sheet

6.3 Action Checklist - Alert-Gas

6.4 Action Checklist - Alert-Liquid

Date and Time of Message _____ _____
Time Date

INITIAL NOTIFICATION FACT SHEET

1. Nuclear Facility providing the initial report:

/A/ Indian Point Unit 2 (ConEd)
/B/ Indian Point Unit 3 (PASNY)
/C/ Ginna Station (RG&E)
/D/ Nine Mile Point Unit 1 (NiMo)
/E/ Fitzpatrick Plant (PASNY)
/F/ Shoreham (LILCO)
/G/ Other _____

2. This /A/ is /B/ is not an exercise.

3. Emergency Classification:

/A/ Unusual Event
/B/ Alert
/C/ Site Area Emergency
/D/ General Emergency
/E/ Transportation Incident
/F/ Other (Describe)

_____

_____

4. Reported by /A/ _____ /B/ _____
Name Title

5. There /A/ has /B/ has not been a release of radioactivity to the /C/ atmosphere /D/ ground (spill only) /E/ body of water _____

6. The release /A/ is continuing /B/ has terminated /C/ not applicable.

7. Need for Protective Action:

A For Information Only. There is no need for protective actions outside the Site Boundary.

B There IS need for Protective Action. (If applicable, affected areas include sectors or ERPAs) _____, _____, _____, _____ _____, _____, _____.

8. Recommended Protective Actions:

/A/ Not applicable
/B/ Shelter within _____ miles
/C/ Evacuation within _____ miles
/D/ Other (or, for additional information) _____

_____

9. /A/ Wind speed _____ miles per hour or _____ meters per second, and
/B/ Direction (from) _____ degrees.
/C/ General weather conditions (sunny, rainy, etc.) _____

10. Means of communication contact, verification and/or additional information if different from pre-arranged communications channels.

_____
Telephone Number or Method

FOLLOW-UP NOTIFICATION FACT SHEET

The following data represent the most current and accurate information, projections and/or prognosis available at this time.

Time _____ Date _____
By _____ Title _____
Telephone Number _____

1. Location of Emergency: Shoreham Nuclear Power Station

2. Emergency declared at _____ on _____
(Time) (Date)

3. Emergency Classification:
/___/Unusual Event /___/Site Area Emergency
/___/Alert /___/General Emergency

4. Description of Initiating Event(s): _____

5. Current Plant Conditions: _____

6. Prognosis for Worsening or Termination of Emergency: _____

7. Emergency Response Actions Underway: _____

8. Request for Offsite Support: _____

9. Type of actual or projected release and estimated duration and impact times:

a) Atmospheric Release

	Actual	Projected
Date and Time Release Started	_____	_____
Duration of Release	_____ hrs	_____ hrs
Release Rate	_____ cc/sec	_____ cc/sec
Noble Gas Release Rate	_____ Ci/sec	_____ Ci/sec
Radioiodine Release Rate	_____ Ci/sec	_____ Ci/sec
Release Height	_____ m	_____ m
Chemical and Physical Form	_____	_____
Meteorology Data		
Wind Speed	_____ m/sec	
Wind Direction	_____ (Toward)	
Temperature	_____	
Stability Class	_____	
Precipitation	_____	
Time of Impact (Offsite)	_____	_____
Sectors Affected	_____	_____

b) Waterborne Release

Date and Time Release Started	_____	_____
Duration of Release	_____ hrs	_____ hrs
Volume of Release	_____ gal	_____ gal
Radioactivity Concentration	_____ µci/ml	_____ µci/ml
Total Radioactivity Released	_____ ci	_____ ci
Radio Nuclides in Release	_____	_____
	_____	_____
	_____	_____
Chemical or Physical Form	_____	_____
Meteorology Data		
Wind Speed	_____ m/sec	
Wind Direction	_____ (Toward)	
Time of Impact (Offsite)	_____	_____
Sectors Affected	_____	_____

c) Surface Release (Spill)

Date and Time Release Occurred	_____	_____
Volume of Release	_____	_____
Radioactivity Concentration	_____	_____
Total Radioactivity Released	_____	_____
Radionuclides in Release	_____	_____
	_____	_____
	_____	_____
Chemical or Physical Form	_____	_____
Sectors Affected	_____	_____

10. Dose Measurements and Projections

a) Site Boundary _____

	Actual	Projected
Whole Body Dose Rate	_____ mr/hr	_____ mr/hr
Whole Body Dose		_____ Rem
Thyroid Dose Rate	_____ mr/hr	_____ mr/hr
Thyroid Dose		_____ Rem
Highest Sectors	_____	_____

b) Projected Offsite

	2 Miles	5 Miles	10 Miles
Whole Body Dose Rate (mr/hr)	_____	_____	_____
Whole Body Dose (Rem)	_____	_____	_____
Thyroid Dose Rate (mr/hr)	_____	_____	_____
Thyroid Dose (Rem)	_____	_____	_____
Sectors Affected	_____	_____	_____

11. Recommended Protective Actions: _____

_____

_____

_____

_____ / / _____
Emergency Director Approval Date Time

CHECKLIST

Note

The use of this checklist is optional. It is provided as a convenience for the Emergency Director. It need not be filled out, nor retained.

Alert-Gas

STEP	OUTLINE	INITIAL	TIME
2.1.1	Implement corrective actions (Stop release)	_____	_____
2.2.1	Initiate and continue dose projections (69.022.01)	_____	_____
2.1.2	Complete Initial Notification Form	_____	_____
2.1.3	Announce emergency	_____	_____
2.2.2	Initiate onsite radiation survey (69.020.02)	_____	_____
2.2.5	Evacuate personnel if necessary (69.030.01)	_____	_____
2.1.4	Notify on-call Emergency Director	_____	_____
2.1.4	Notify offsite authorities (69.009.01)	_____	_____
2.2.6	If dose rate at site boundary > 20 mrem/hr or possible accumulative dose of 170 mrem classify as Site Area Emergency		
2.1.5	Activate Technical Support Center, Operations Support Center. Place Emergency Operations Facility and Emergency News Center on standby	_____	_____
3.1,3.2	Complete follow-up notification	_____	_____
3.6	Terminate when termination criteria (69.070.01) have been met	_____	_____

CHECKLIST

Note

The use of this checklist is optional. It is provided as a convenience for the Emergency Director. It need not be filled out, nor retained.

Alert - Liquid

STEP	OUTLINE	INITIAL	TIME
2.1.1	Implement corrective actions (Stop release)	____	____
2.3.1	Determine release (69.xxx.xx)	____	____
2.1.2	Complete Initial Notification Form	____	____
2.1.3	Announce emergency	____	____
2.1.4	Notify on-call Emergency Director	____	____
2.1.4	Notify offsite authorities (69.009.01)	____	____
2.1.5	Activate Technical Support Center, Operations Support Center. Place Emergency Operations Center and Emergency News Center on standby	____	____
3.1,3.2	Complete follow-up notification	____	____
3.6	Terminate when termination criteria (69.070.03) have been met	____	____

Submitted: _____ SP Number: 69.015.01

Approved: _____ Revision: A
(Plant Manager)

Date Eff: _____

SITE AREA EMERGENCY

DRAFT - PRELIMINARY

1.0 CONDITIONS

1.1 A SITE AREA EMERGENCY has been declared based on the occurrence of events which involve actual or likely failures of plant functions needed for the protection of the public, as described in SP 69.010.01, Classification of Emergency Action Levels.

1.2 An ALERT or UNUSUAL EVENT had been declared and emergency measures are being performed; and on the basis of subsequent information or upon a deterioration in plant conditions, the condition has been reclassified as a SITE AREA EMERGENCY.

2.0 IMMEDIATE ACTIONS

The Emergency Director (Watch Engineer, until properly relieved by a designated alternate) is responsible for implementation of the actions prescribed in this procedure. The Emergency Director may delegate responsibility for performance of the prescribed tasks to available personnel, except where otherwise specified in this instruction.

2.1 For All Initiating Events

2.1.1 Control Room Operator, implement corrective actions to contend with the situation and to mitigate possible deterioration in plant conditions in accordance with the SNPS Operating Procedures while simultaneously implementing this procedure. Perform any of the following as necessary:

.1 Airborne Release - Step 2.2

.2 Waterborne Release - Step 2.3

.3 Fire/Explosion - Step 2.4

.4 Natural Event - Step 2.5

2.1.2 Control Room Operator implement appropriate assessment actions. Complete an Initial Notification Fact Sheet (Appendix 6.1) using data derived from the initial assessment activities.

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2.1.3 Control Room Operator, announce over the page/party system the following:

2.1.3.1 The plant is in a Site Area Emergency condition - Repeat

2.1.3.2 The location or general area affected

2.1.3.3 Any operations/work to be halted

2.1.3.4 Specific instructions to plant personnel as applicable

2.1.4 Control Room Operator, implement SP 69.009.01, "Notifications" in order to:

2.1.4.1 Notify offsite agencies

2.1.4.2 Notify additional station personnel as needed

2.1.4.3 Notify the LILCO emergency response organization

2.1.5 Emergency Director or designee, implement the following:

2.1.5.1 OSC Activation, SP 69.005.03 Operational Support Center

2.1.5.2 TSC Activation, SP 69.00 .0 Emergency Operations Facility Activation

2.1.5.3 EOF Activation, SP 69.00 .0 Emergency Operations Facility Activation

2.1.5.4 ENC Activation, SP 69.00 .0 Emergency News Center Activation

2.1.6 Emergency Director or designee, assemble station personnel for possible evacuation by implementing a Plant Evacuation in accordance with:

2.1.6.1 SP 69.030.01, Evacuations During an Emergency

2.1.6.2 SP 69.030.02, Personnel Accountability

2.1.6.3 SP 69.030.03, Contamination Control During Emergencies

2.1.6.4 If personnel are found to be missing from accountability Emergency Director or designee implement SP 69.080.01, Search and Rescue.

2.1.7 Radiation Protection Manager or designee, direct Health Physics personnel to perform radiation and airborne radioactivity surveys at the designated assembly areas. If the results of the radiation surveys at the primary assembly areas indicate radiation levels in excess of 10 mrem/hr or gross airborne radioactivity (less noble gases) in excess of 1E-9 μCi/cc, or if continued occupancy is expected to result in excess of 40 MPC-hours for the isotopic mix less noble gases, relocate to another assembly area, or if necessary, implement a site evacuation in accordance with SP 69.030.01, Evacuations During an Emergency.

2.2 For Initiating Event: Radioactivity Release to the Atmosphere

2.2.1 Radiation Protection Manager or designee, initiate and continue offsite dose projection activities as necessary in accordance with SP 69.022.01, Determination of Offsite Doses.

2.2.2 Radiation Protection Manager or designee, initiate an emergency onsite radiation survey in accordance with SP 69.021.01, Onsite Surveys.

2.2.3 If the results of the onsite survey indicate the need, Radiation Protection Manager or designee, initiate radiation surveys offsite in accordance with SP 69.020.01, Downwind Surveys, and escalate the emergency classification as warranted.

2.2.4 Based on the results of the downwind dose projection activities, Radiation Protection Manager or designee recommend an appropriate protective action to offsite authorities as part of the initial and/or subsequent follow-up notifications. Refer to SP 69.026.01, Protective Action Recommendations.

2.2.5 If the results of the onsite survey indicate a dose rate at the site boundary (not the protected area fence) exceeding 600 mrem/hr or a possible accumulative dose of 5 rem (25 rem thyroid), Emergency Director reclassify the emergency as a General Emergency and perform emergency measures in accordance with SP 69.016.01, General Emergency. Immediately notify offsite authorities of the reclassification of the emergency.

2.3 For Initiating Event: Liquid Radioactivity Release

2.3.1 Liquid releases are not identified as initiating events for a Site Area Emergency since it is unlikely to have offsite doses in excess of 170 mrem (any organ) due to the release. A liquid release could occur, however, concurrent with the events which initiated the Site Area Emergency. Corrective and assessment measures for liquid releases are provided in Section 2.3 of SP 69.014.01, Alert.

2.4 For Initiating Event: Fire/Explosion

2.4.1 Fire brigade members perform firefighting efforts in accordance with the SNPS Fire Plan.

2.5 For Initiating Event: Tornado/Earthquake/Storms/Flooding

2.5.1 Operations personnel perform emergency measures in accordance with SNPS Emergency Operating Procedures (SP xxx.xx series).

3.0 SUBSEQUENT ACTIONS

3.1 Complete a Follow-up Notification Form using the most current data available at the time the form is completed.

3.2 When offsite agencies call back, provide information from the Follow-up Notification Fact Sheet as applicable to the emergency condition. Accept calls and provide information to only those organizations listed on the notification call-list. Refer all other calls to LILCO public affairs personnel.

3.3 Appoint a records keeper and communications coordinator from available personnel if one has not already been assigned.

3.4 Perform emergency measures in accordance with the appropriate Emergency Plan Implementing Procedures and Emergency Operating Procedures (SP 29.xxx.xx series).

3.5 Periodically disseminate information on the status of the onsite operations and conditions to the offsite authorities and to LILCO personnel in the emergency response centers. In particular:

3.5.1 Notify offsite authorities of any significant (>100 mrem) change in dose projections, or other significant changes in plant status.

3.5.2 Periodically (about once an hour) provide a situation report to the LILCO representatives at the Emergency Operations Facility, and to the LILCO public affairs staff at the Emergency News Center.

3.6 Coordinate emergency response activities in the LILCO emergency response facilities, keeping all LILCO support personnel apprised of the emergency situation.

3.7 If plant conditions deteriorate, reclassify the emergency in accordance with SP 69.010.01, Classification of Emergency Action Levels.

3.8 Continue emergency operations, including assessment activities, until such time as plant conditions have stabilized and other termination criteria of SP 69.070.03, Termination and Recovery, have been satisfied.

4.0 FINAL CONDITIONS

4.1 Emergency measures are continuing for the Site Area Emergency, the emergency condition has been escalated/downgraded, or the emergency condition has been terminated.

5.0 DISCUSSION

5.1 Once a Site Area Emergency condition has been declared at SNPS in accordance with SP 69.010.01, Classification of Emergency Action Levels, this procedure guides the Emergency Director in the performance of major actions and provides reference to other applicable Emergency Plan Implementing Procedures for further actions and more detailed instructions.

5.2 Although this procedure assigns all responsibility to the Emergency Director, the various activities will be performed by the individual emergency managers. Initially, and until the TSC staffing is available, the Emergency Director will perform all functions. As the staffing arrives, the individual emergency managers will be responsible for performing activities assigned in SP 69.001.01, Emergency Organizations. The Emergency Director will coordinate the overall response, using this procedure as a guide.

5.3 The Emergency Director is the only individual authorized to determine and recommend a protective action to offsite authorities (directly or via Communications Coordinator). Therefore, the Emergency Director shall approve all initial and follow-up notification messages for Site Area Emergency and General Emergency.

5.4 In the event of emergency conditions not adequately covered by this procedure, the Emergency Director has the responsibility and authority to take whatever action he considers required to prevent injury to personnel or damage to the plant or to equipment and to place the plant in a safe condition.

6.0 APPENDICES

6.1 Initial Notification Fact Sheet

6.2 Follow-up Notification Fact Sheet

6.3 Action Checklist - Site-Release

Date and Time of Message _____ _____
Time Date

INITIAL NOTIFICATION FACT SHEET

1. Nuclear Facility providing the initial report:

/A/ Indian Point Unit 2 (ConEd)
/B/ Indian Point Unit 3 (PASNY)
/C/ Ginna Station (RG&E)
/D/ Nine Mile Point Unit 1 (NiMo)
/E/ Fitzpatrick Plant (PASNY)
/F/ Shoreham (LILCO)
/G/ Other _____

2. This /A/ is /B/ is not an exercise.

3. Emergency Classification:

/A/ Unusual Event
/B/ Alert
/C/ Site Area Emergency
/D/ General Emergency
/E/ Transportation Incident
/F/ Other (Describe)

_____

_____

4. Reported by /A/ _____ /B/ _____
Name Title

5. There /A/ has /B/ has not been a release of radioactivity to the /C/ atmosphere /D/ ground (spill only) /E/ body of water _____

6. The release /A/ is continuing /B/ has terminated /C/ not applicable.

7. Need for Protective Action:

A For Information Only. There is no need for protective actions outside the Site Boundary.

B There IS need for Protective Action. (If applicable, affected areas include sectors or EPPAs) _____, _____, _____, _____, _____, _____, _____.

8. Recommended Protective Actions:

/A/ Not applicable
/B/ Shelter within _____ miles
/C/ Evacuation within _____ miles
/D/ Other (or, for additional information) _____

_____

9. /A/ Wind speed _____ miles per hour or _____ meters per second, and
/B/ Direction (from) _____ degrees.
/C/ General weather conditions (sunny, rainy, etc.) _____

10. Means of communication contact, verification and/or additional information if different from pre-arranged communications channels.

_____
Telephone Number or Method

FOLLOW-UP NOTIFICATION FACT SHEET

The following data represent the most current and accurate information, projections and/or prognosis available at this time.

Time _____ Date _____
By _____ Title _____
Telephone Number _____

1. Location of Emergency: Shoreham Nuclear Power Station

2. Emergency declared at _____ (Time) on _____ (Date)

3. Emergency Classification:
   - /__/ Unusual Event
   - /__/ Alert
   - /__/ Site Area Emergency
   - /__/ General Emergency

4. Description of Initiating Event(s): _____

5. Current Plant Conditions: _____

6. Prognosis for Worsening or Termination of Emergency: _____

7. Emergency Response Actions Underway: _____

8. Request for Offsite Support: _____

9. Type of actual or projected release and estimated duration and impact times:

a) Atmospheric Release

	Actual	Projected
Date and Time Release Started	_____	_____
Duration of Release	_____ hrs	_____ hrs
Release Rate	_____ cc/sec	_____ cc/sec
Noble Gas Release Rate	_____ Ci/sec	_____ Ci/sec
Radioiodine Release Rate	_____ Ci/sec	_____ Ci/sec
Release Height	_____ m	_____ m
Chemical and Physical Form	_____	_____
Meteorology Data		
Wind Speed	_____ m/sec	
Wind Direction	_____ (Toward)	
Temperature	_____	
Stability Class	_____	
Precipitation	_____	
Time of Impact (Offsite)	_____	_____
Sectors Affected	_____	_____

b) Waterborne Release

	Actual	Projected
Date and Time Release Started	_____	_____
Duration of Release	_____ hrs	_____ hrs
Volume of Release	_____ gal	_____ gal
Radioactivity Concentration	_____ µci/ml	_____ µci/ml
Total Radioactivity Released	_____ ci	_____ ci
Radio Nuclides in Release	_____	_____
	_____	_____
	_____	_____
Chemical or Physical Form	_____	_____
Meteorology Data		
Wind Speed	_____ m/sec	
Wind Direction	_____ (Toward)	
Time of Impact (Offsite)	_____	_____
Sectors Affected	_____	_____

c) Surface Release (Spill)

Date and Time Release Occurred	_____	_____
Volume of Release	_____	_____
Radioactivity Concentration	_____	_____
Total Radioactivity Released	_____	_____
Radionuclides in Release	_____	_____
	_____	_____
	_____	_____
Chemical or Physical Form	_____	_____
Sectors Affected	_____	_____

10. Dose Measurements and Projections

a) Site Boundary _____

	Actual	Projected
Whole Body Dose Rate	_____ mr/hr	_____ mr/hr
Whole Body Dose		_____ Rem
Thyroid Dose Rate	_____ mr/hr	_____ mr/hr
Thyroid Dose		_____ Rem
Highest Sectors	_____	_____

b) Projected Offsite

	2 Miles	5 Miles	10 Miles
Whole Body Dose Rate (mr/hr)	_____	_____	_____
Whole Body Dose (Rem)	_____	_____	_____
Thyroid Dose Rate (mr/hr)	_____	_____	_____
Thyroid Dose (Rem)	_____	_____	_____
Sectors Affected	_____	_____	_____

11. Recommended Protective Actions: _____

_____

_____

_____

_____ / / _____
Emergency Director Approval Date Time

CHECKLIST

Note

The use of this checklist is optional. It is provided as a convenience for the Emergency Director. It need not be filled out, nor retained.

Site Area Emergency

STEP	OUTLINE	INITIAL	TIME
2.1.1	Implement corrective actions	_____	_____
2.2.1	Initiate and continue dose projections (69.022.01)	_____	_____
2.1.2	Complete Initial Notification Form	_____	_____
2.1.3	Announce Emergency	_____	_____
2.2.2	Initiate onsite radiation survey (69.020.01)	_____	_____
2.2.3	Initiate Offsite radiation survey (69.020.02)	_____	_____
2.2.4	Recommend protective actions (69.xxx.xx) (to be included in all subsequent notifications)	_____	_____
2.1.4	Notify on-call Emergency Director	_____	_____
2.1.4	Notify offsite authorities (69.009.01)	_____	_____
2.1.5	Activate Technical Support Center, Operations Support Center, Emergency Operations Center, and Emergency News Center	_____	_____
2.2.5	Reclassify if necessary	_____	_____
3.1,3.2	Complete follow-up notification	_____	_____
2.1.7	Implement station evacuation (69.030.01) (69.030.02) (69.030.03)	_____	_____
3.5	Periodically disseminate info to offsite authorities	_____	_____
3.7	If plant conditions deterioriate, escalate classification	_____	_____
3.8	Terminate when termination criteria (69.070.03) have been met	_____	_____

Submitted: _____ SP Number 69.Ø16.Ø1

Approved: _____ Revision: C
(Plant Manager)

Date Eff.: _____

DRAFT - PRELIMINARY GENERAL EMERGENCY

DRAFT

1.0 CONDITION

DRAFT - PRELIMINARY

1.1 A GENERAL EMERGENCY has been declared based on the occurrence of events which involve actual or imminent substantial core degradation or melting with potential for loss of containment integrity, as described in SP69.Ø1Ø.Ø1, Classification of Emergency Action Levels.

1.2 A lower classification emergency condition had been declared and emergency measures are being performed; and on the basis of subsequent information or upon a deterioration in plant conditions, the condition has been reclassified as a GENERAL EMERGENCY.

2.0 IMMEDIATE ACTIONS

That individual charged with Overall Direction and Control (Response Manager or Emergency Director) is responsible for implementation of the actions prescribed in this procedure. That individual may delegate responsibility for performance of the prescribed tasks to available personnel, except where otherwise specified in this instruction.

2.1 For All Initiating Events

2.1.1 Control Room Operator implement corrective actions to contend with the situation and to mitigate possible deterioration in plant conditions in accordance with Operating Procedures while simultaneously implementing this procedure. Perform any of the following as necessary:

.1 Airborne Release - Step 2.2

.2 Waterborne Release - Step 2.3

.3 Fire/Explosion - Step 2.4

.4 Natural Event - Step 2.5

2.1.2 Control Room Operator implement appropriate assessment. Complete an Initial Notification Fact Sheet (Appendix 6.1) using data derived from the initial assessment activities.

NOTE: For those general emergency situations protective actions are pre-determined and located in Appendix 6.4 where

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neither time nor adequate information exists to perform offsite dose assessment calculations.

2.1.3 Control Room Operator, announce over the page/party system the following:

.1 The plant is in a General Emergency condition - repeat

.2 The location or general area affected

.3 Any operations/work to be halted.

.4 Specific instructions to plant personnel as applicable.

2.1.4 Control Room Operator, implement SP 69.ØØ9.Ø1, "Notifications" in order to:

.1 Notify offsite agencies

.2 Notify additional station personnel as needed

.3 Notify the LILCO emergency response organization

2.1.5 Emergency Director or designee, implement the following:

.1 OSC Activation, SP 69.ØØ5.Ø3, Operational Support Center Activation

.2 TSC Activation, SP 69.ØØ5.Ø2, Technical Support Center Activation

.3 EOF Activation, Emergency Operations Facility Activation

.4 ENC Activation, Emergency News Center Activation

2.1.6 Emergency Director or designee, assemble station personnel for possible evacuation by implementing a Plant Evacuation in accordance with:

.1 SP 69.Ø3Ø.Ø1, Evacuation During a Emergency

.2 SP 69.Ø2Ø.Ø2, Personnel Accountability

.3 SP 69.Ø3Ø.Ø3, Contamination Control During Emergencies

.4 If personnel are found to be missing form accountability Emergency Director or designee implement SP 69.Ø8Ø.Ø1, Search and Rescue.

2.1.7 Radiation Protection Manager or designee, direct Health Physics personnel to perform radiation and airborne radioactivity surveys at the designated assembly areas. If the results of the radiation

surveys at the primary assembly areas indicate radiation levels in excess of 10 mrem/hr or gross airborne radioactivity (less noble gases) in excess of 1E-9 uCi/cc, or if continued occupancy is expected to result in excess of 40 MPC-hours for the isotopic mix less noble gases, relocate to another assembly area, or if necessary, implement a site evacuation in accordance with SP 69.Ø3Ø.Ø1, Evacuations During an Emergency.

2.2 For Initiating Event: Radioactivity Release to the Atmosphere

2.2.1 Radiation Protection Manager or designee, initiate and continue offsite dose projection activities as necessary in accordance with SP 69.Ø22.Ø1, Determination of Offsite Dose.

2.2.3 Radiation Protection Manager or designee, if the results of the onsite survey indicate the need, initiate radiation surveys offsite in accordance with SP 69.Ø2Ø.Ø1, Downwind Surveys.

2.2.4 Based on the results of the downwind dose projection activities, Radiation Protection Manager or designee, recommend an appropriate protective action to offsite authorities as part of the initial and/or subsequent follow-up notifications. Refer to SP 69.Ø24.Ø1, Protective Action Recommendations.

2.3 For Initiating Event: Liquid Radioactivity Release

2.3.1 Liquid releases are not identified as initiating events for a General Emergency since it is unlikely to have offsite doses in excess of 170 mrem (any organ) due to the release. A liquid release could occur, however, concurrent with the events which initiated the General Emergency. Corrective and assessment measures for liquid releases are provided in Section 2.3 of SP69.Ø14.Ø1, Alert.

2.4 For Initiating Event: Fire/Explosion

2.4.1 Fire brigade members perform firefighting efforts in accordance with the SNPS Fire Plan.

2.5 For Initiating Event: Tornado/Earthquake/Storms/Flooding

2.5.1 Operations personnel perform emergency measures in accordance with SNPS Emergency Operating Procedures (SP 29.XXX.XX series).

3.0 SUBSEQUENT ACTIONS

3.1 Complete a Follow-up Notification Form using the most current data available at the time the form is completed.

3.2 Provide information to offsite agencies from the Follow-up Notification Fact Sheet as applicable to the emergency condition when sheet has been completed and time permit. Update the Follow-up Notification Fact Sheet in

a timely manner and continue to provide information to offsite agencies as needed. Accept calls and provide information to only those organizations listed on the notification call-list. Refer all other calls to LILCO public affairs personnel.

3.3 Periodically disseminate information on the status of the onsite operations and conditions to the offsite authorities and to LILCO personnel in the emergency response centers. In particular:

3.3.1 Notify offsite authorities of any significant (>1ØØ mrem) change in dose projections, or other significant changes in plant status.

3.3.2 Periodically (about one an hour) provide a situation report to the LILCO respresentatives at the Emergency Operations Facility.

3.4 Coordinate emergency response activities in the LILCO emergency response facilities, keeping all LILCO support personnel apprised of the emergency situation.

3.5 Perform emergency measures in accordance with the appropriate Emergency Plant Implementing Procedures (SP 69.XXX.XX series) and Emergency Operating Procedures (SP 29.XXX.XX series).

3.6 Continue emergency operations, including assessment activities, until such time as plant conditions have stablized and other termination criteria of SP 69.Ø7Ø.Ø3, Termination of the Emergency and Recovery, have been satisfied.

4.0 FINAL CONDITIONS

4.1 Emergency measures are continuing for the General Emergency, or the emergency condition has been downgraded or terminated.

5.0 DISCUSSION

5.1 Once a General Emergency condition has been declared at SNPS in accordance with SP 69.Ø1Ø.Ø1, Classification of Emergency Action Levels, this procedure guides the Emergency Director in the performance of major actions and provides reference to other applicable Emergency Plan Implementing Procedures for further actions and more detailed instructions.

5.2 Although this procedure assigns all responsibility to the Emergency Director, the various activities will be performed by the individual emergency managers. Initially, and until the TSC staffing is available, the Emergency Director will perform all functions. As the staffing arrives, the individual emergency managers will be responsible for performing activities assigned in SP 69.ØØ1.Ø1, Emergency Organizations. The Emergency Director will coordinate the overall onsite response, using this procedure as a guide.

5.3 That individual charged with Overall Direction and Control (Response Manager or Emergency Director) is the only individual authorized to

determine and recommend a protective action to offsite authorities (directly or via Communications Coordinator). Therefore, that individual shall approve all initial and follow-up notification messages for Site Area Emergency and General Emergency.

5.4 In the event of emergency conditions not adequately covered by this procedure, the Emergency Director has the responsibility and authority to take whatever action he considers required to prevent injury to personnel or damage to the plant or to equipment and to place the plant in a safe condition.

6.0 APPENDICES

6.1 Initial Notification Fact Sheet

6.2 Follow-up Notification Fact Sheet

6.3 Action Checklist - General - Release

Date and Time of Message _____ _____
Time Date

INITIAL NOTIFICATION FACT SHHET - IN NOTIFICATION PROCEDURE

1. Nuclear Facility providing the initial report:

   [F] Shoreham (LILCO)

2. This [A] is [B] is not an exercise.

3. Emergency Classification:

   [A] Unusual Event [C] Site Area Emergency [E] Transportation Incident
   [B] Alert [D] General Emergency [F] Other (Describe)

   _____

   _____

4. Reported by [A] _____ Name [B] _____ Title

5. There [A] has [B] has not been a release of radioactivity to the [C] atmosphere [D] ground (spill only) [E] body of water_____

6. The release [A] is continuing [B] has terminated [C] not applicable.

7. Need for Protective Action:

   A For Information Only. There is no need for protective actions outside the Site Boundary.

   B There IS need for Protective Action. (If applicable, affected areas include sectors or ERPAs) _____, _____, _____, _____, _____, _____, _____.

8. Recommended Protective Actions:

   [A] Not applicable [C] Evacuation within _____ miles
   [B] Shelter within _____ miles [D] Other (or, for additional information)_____

   _____

9. [A] Wind speed _____ miles per hour or _____ meters per second, and
   [B] Direction (from) _____ degrees.
   [C] General weather conditions (sunny, rainy, etc.)_____

10. Means of communication contact, verification and/or additional information if different from pre-arranged communications channels.

FOLLOW-UP NOTIFICATION FACT SHEET

The following data represent the most current and accurate information, projections and/or prognosis available at this time.

Time_____ Date_____
By_____ Title_____
Telephone Number_____

1. Location of Emergency: Shoreham Nuclear Power Station

2. Emergency declared at_____ on _____
(Time) (Date)

3. Emergency Classification:

☐ Unusual Event ☐ Site Area Emergency
☐ Alert ☐ General Emergency

4. Description of Initiating Event(s):_____

5. Current Plant Conditions:_____

6. Prognosis for Worsening or Termination of Emergency:_____

7. Emergency Response Actions Underway:_____

8. Request for Offsite Support:_____

9. Type of actual or projected release and estimated duration and impact times:

a) Atmospheric Release

	Actual	Projected
Date and Time Release Started	_____	_____
Duration of Release	_____ hrs	_____ hrs
Release Rate	_____ cc/sec	_____ cc/sec
Noble Gas Release Rate	_____ Ci/sec	_____ Ci/sec
Radioiodine Release Rate	_____ Ci/sec	_____ Ci/sec
Release Height	_____ m	_____ m
Chemical and Physical Form	_____	_____
Meteorology Data		
Wind Speed	_____ m/sec	
Wind Direction	_____ (Toward)	
Temperature	_____	
Stability Class	_____	
Precipitation	_____	
Time of Impact (Offsite)	_____	
Sectors Affected	_____	_____

b) Waterborne Release

Date and Time Release Started	_____	_____
Duration of Release	_____ hrs	_____ hrs
Volume of Release	_____ gal	_____ gal
Radioactivity Concentration	_____ µci/ml	_____ µci/ml
Total Radioactivity Release	_____ ci	_____ ci
Radio Nuclides in Release	_____	_____
	_____	_____
	_____	_____
Chemical or Physical Form	_____	_____
Meteorology Data		
Wind Speed	_____ m/sec	
Wind Direction	_____ (Toward)	
Time of Impact (Offsite)	_____	_____
Sectors Affected	_____	_____

c) Surface Release (Spill)

Date and Time Release Occurred	_____	_____
Volume of Release	_____	_____
Radioactivity Concentration	_____	_____
Total Radioactivity Release	_____	_____
Radionuclides in Release	_____	_____
	_____	_____
	_____	_____
Chemical or Physical Form	_____	_____
Sectors Affected	_____	_____

10. Dose Measurements and Projections

a) Site Boundary _____

	Actual	Projected
Whole Body Dose Rate	_____ mr/hr	_____ mr/hr
Whole Body Dose	_____ mr/hr	_____ Rem
Thyroid Dose Rate		_____ Rem
Highest Sectors	_____	_____

b) Projected Offsite

	2 Miles	5 Miles	10 Miles
Whole Body Dose Rate (mr/hr)	_____	_____	_____
Whole Body Dose (Rem)	_____	_____	_____
Thyroid Dose Rate (mr/hr)	_____	_____	_____
Thyroid Dose (Rem)	_____	_____	_____
Sectors Affected	_____	_____	_____

11. Recommended Protective Actions: _____

_____

_____

_____

_____ / / _____
Emergency Director Approval Date Time
or Response Manager Approval

CHECKLIST

NOTE

The use of this checklist is optional. It is provided as a convenience for the Emergency Director and/or the Response Manager. It need not be filled out, nor retained.

General Emergency

STEP	OUTLINE	Initial	Time
2.1.1	Implement corrective actions	_____	_____
2.1.2	Complete Initial Notification Form	_____	_____
2.1.3	Announce Emergency	_____	_____
2.1.4	Notify offsite authorities (69.ØØ9.Ø1)	_____	_____
2.1.5	Activate Technical Support Center, Operations Support Center, Emergency Operations Center, and Emergency News Center	_____	_____
3.1,3.2	Complete follow-up notification	_____	_____
2.1.7	Implement site evacuation if a release is or is about to occur (69.Ø3Ø.Ø1, .Ø2, .Ø3)	_____	_____
2.2.1	Initiate and continue dose projections (69.Ø22.Ø1)	_____	_____
2.2.2	Initiate onsite radiation survey (69.Ø2Ø.Ø1)	_____	_____
2.2.3	Initiate offsite radiation survey (69.Ø2Ø.Ø1)	_____	_____
2.2.4	Recommend protective actions (69.XXX.XX)	_____	_____
2.16	Use respirators if necessary	_____	_____
3.3	Periodically disseminate info to offsite authorities	_____	_____
3.6	Terminate when termination criteria (69.Ø7Ø.Ø3) have been met	_____	_____

THIS SECTION INTENTIONALLY LEFT BLANK FOR
FUTURE EXPANSION.

Submitted: _____

Approved: _____
(Plant Manager)

DRAFT - PRELIMINARY

SP Number 69.020.61
Revision 0
Date Eff. _____
TPC _____
TPC _____
TPC _____

DOWN WIND SURVEYS

1.0 PURPOSE

To describe the procedures used by the Offsite Radiological Monitoring (ORM) Teams to conduct downwind radiological surveys and samplings during a radiological emergency.

2.0 RESPONSIBILITY

2.1 Overall - RPM/RCM or designees
2.2 Manpower Assignment - OSC Coordinator
2.3 Briefing - RPM/RCM or designees at TSC/EOF
2.4 Dispatching & Communication - Dose Assessment Staff #1 at TSC/EOF

3.0 DISCUSSION

3.1 There are five major objectives that any one or a combination of them, may become the reason of sending out an ORM team. They are:

(1) To provide or confirm radiological EAL data at the appropriate site boundary;

(2) To track down or verify the location, size and direction of a radioactive plume if there has been an airborne release;

(3) To provide or confirm dose or exposure rates inside the plume exposure zone, which are needed or projected by the Dose Assessment Group for protective action recommendations;

Such dose concerns include whole-body and inhalation (thyroid), at the plume centerline and the plume boundaries;

(4) To provide samples (air, soil, vegetation, etc.) taken from within the plume exposure zone, which will enable the Rad/Chem Lab staff to determine the plume composition and hence aid them in the further analysis of the release characteristics;

(5) To check surface contamination, if any, that are above acceptable limits, due to fallouts or precipitation from the plume within the plume exposure zone, for exposure control and recovery planning.

3.2 Staffing and emergency organization are such that one ORM team will be available at ALERT level and two more will be available at SITE or GENERAL level.

3.3 Timing on when and locations of where, to send an ORM team, are important. Selection of survey and sampling locations should consider the prevailing wind speed, and the estimated time of plume arrival over the selected area vs. ORM team travel time under the circumstances.

Routes planned for the team should avoid those saved for evacuation if it is in effect or soon to be.

3.4 If extended duty cycle is anticipated, the Dispatcher should consider and coordinate efforts to relieve field teams at reasonable time periods. He may also exercise his judgment to send special dispatch to meet a team in the field to:

3.4.1 Retrieve air or other environmental samples for detailed lab isotopic analysis to be performed timely, and/or

3.4.2 To replenish the team with needed fresh supplies, while keeping the team in a mobile, field position.

3.5 <u>Summary of Overall Sequence of Actions</u>:

3.5.1 RPM/RCM/designee issues an ORM request to the Dispatcher;

3.5.2 The Dispatcher calls the OSC Coordinator for manpower/team assignment;

3.5.3 Team report to the TSC (or EOF) for briefing;

3.5.4 After briefing, team members pick up equipment and radio at the Main Security Bldg. (or EOF) and perform pre-deployment checks of equipment and vehicle;

3.5.5 Before departure, team establishes radio communication with the Dispatcher and then proceeds according to preplanned routes to the survey area;

3.5.6 Upon termination of an ORM mission, team returns to the site (or EOF) to submit survey records to the Dispatcher (the Dose Assessment Group) and turn in samples to the Rad/Chem Lab, check for equipment contamination and take note of individual exposure records.

4.0 PRECAUTIONS

N/A

5.0 PREREQUISITES

5.1 An ALERT or higher Emergency Classification has been reached and an ORM request has been issued by the RCM/RPM or their designees to a designated dispatcher.

5.2 The dispatcher, or the RPM/RCM/designee himself, has gathered the necessary information to brief the team (see Attachment 1, ORM Briefing Form).

5.3 Emergency ORM Kit and proper communication means are available to the team.

6.0 LIMITATION AND ACTIONS

6.1 Site-responsible ORM activities are generally limited to within the 10-mile EPZ zone.

6.2 For SITE and GENERAL emergencies, at least one ORM team must be deployed within 60 minutes of the first classification of such emergencies.

7.0 MATERIAL AND EQUIPMENT

See Attachemtn 2, Offsite Downwind Survey (ORM) Kit Inventory.

8.0 PROCEDURE

8.1 RPM/RCM/Designee

8.1.1 Check that Prerequisites 5.1 and 5.2 are met. If no dispatcher has been on duty, assign one. Dose Assessment Staff #1 normally will be designated as the Dispatcher.

8.1.2 Contact OSC Coordinator (Ext. _____) for formation of an ORM team, and have team members assemble at the TSC (or EOF) for briefing.

8.2 RPM/RCM/Designee or ORM Dispatcher

8.2.1 Complete Attachment 1 to the fullest extent possible. (See 3.1, 3.3, 8.2.4, 8.2.5 and 8.2.6).

8.2.2 On Attachment 4, outline a route leading out from the site (or EOF) to the intended ORM/Survey area to be followed by the team.

8.2.3 Brief the team according to Attachment 1. Describe the release situation and types of survey/sampling desired over the survey area.

8.2.4 Protective Equipment

A. Instruct team members to put on Full-face Mask when projected I-131 concentrations at downwind survey sites exceed 3×10^{-7} Ci/m^3. Obtain an estimate of this concentration by the product of I-131 release rate in Ci/sec from the stack and the appropriate X/Q in units of sec/m^3 for the survey area.

For ORM activities near the site boundary, use Full-face mask protection for all emergencies where an airborne release is known to have happened or is impending.

B. For additional protection against thyroid exposure to radioiodines, execute SP #69-051, "Thyroid Blocking," when either one of the following conditions is met, to determine whether there is a need for KI:

a. when In-plant Radiological EAL's indicate GENERAL EMERGENCY release level, or

b. when projected downwind survey area I-131 concentration is 3×10^{-6} Ci/m^3 or greater.

C. Require donning of Hoods, Booties, Coveralls, and Gloves when airborne release occurs and precipitations prevail. Use judgment in other cases.

8.2.5 Exposure and Personnel Dose Limits

A. The following 10CFR20 limits apply to the ORM Teams for their survey/sampling activities:

W.B. Quarterly:	3 rems
W.B. Annual:	5 rems

provided that Form NRC-4 and the 5 x (N-18) criteria are satisfied; otherwise, use 1.25 rems as the W.B. Quarterly limit.

B. If for any reason the above limits must be raised, refer to SP #69.050, "Radiation Doses During An Emergency," for authorization and limits.

8.2.6 Communications

A. Assign each team a radio channel.

B. Remind team to radio in prior to departure to report team color code ID (from the Survey Kit).

C. ORM Dispatcher, use the following in radio communication to identify self:

At TSC: "Shoreham Dispatcher TSC"
At EOF: "Shoreham Dispatcher EOF"

8.2.7 After the briefing, designate a Company vehicle for the team and hand over the key.

8.3 ORM Team Members

8.3.1 ORM Tech. (Team Leader)

- ORM Tech. has the responsibility of operating the Survey and Sampling equipment to obtain required results.

8.3.2 ORM Asst. (Team Member)

ORM Asst. has the responsibility of driving, logging results, and radio communication. Give assistance to the ORM Tech. when situation requires.

8.3.3 Make sure at this point that survey points and routes to be taken are marked on Attachment 4, and that all needed information on Attachment 1 are filled out.

8.3.4 Proceed to the Main Security Building to sign out an Emergency Downwind Survey Kit and perform:

A. Inventory Check
B. Operations Check

8.3.5 Replenish any missing items from the inventory list. Install batteries if necessary. Perform source

checks to observe proper meter response. Check equipment calibration stickers.

8.3.6 Use an AC source to check the TCS EAS-1 Air Sampler motor. Do not put on the filter canister.

8.3.7 Log pre-survey pocket dosimeter readings on Attachment 1.

8.3.8 Don protective clothing and dosimeters as required.

8.3.9 Proceed to the survey vehicle. Check for gas, cigarette lighter socket, lights (if after dark) and operability. Start the engine and with it on, plug the TCS EAS-1 Air Sampler (w/o the filter) cable into the cigarette lighter and observe proper running (it should sound like a small vacuum cleaner).

8.3.10 ORM Asst., establish radio communication with the Dispatcher, report the Team's ID (color code on the Survey Kit picked up) and that the team is ready to roll out.

8.4 Survey - ORM Team

8.4.1 Proceed to the survey point following marked routes on Attachment 4.

8.4.2 While enroute: keep a survey instrument on and begin recording periodic open-window readings of 1 mR/hr or greater on Attachment 3. (Assign a number to such non-fixed points sequentially, mark the location and exposure rate reading on the map, then enter the point number assigned and the exposure rate onto Attachment 3).

Report any abnormal events or conditions to the Dispatcher via radio.

8.4.3 At the survey point, report arrival to the Dispatcher with time and survey point number.

8.4.4 If plume tracking is not required, proceed to step 8.4.7.

8.4.5 If "Plume Center Exp/Dose Rates & Location" (item 10.(1) on Attachment 1) is checked, continue driving until the dose rate (open-window) appears to peak and begin to decrease. Return to the peak concentration area.

8.4.6 Report the maximum plume W.B. dose rate measured at 4 feet above the ground and the measurement location to the Dispatcher immediately, and mark this location on the map as well.

8.4.7 At the first survey location, obtain gamma measurements (closed-window) at 3 inches and 4 feet above the ground, and record these readings on Attachment 3.

A. If the 4' reading is noticeably higher than the 3" reading, it should be assumed that the predominant gamma source is the airborne plume.

B. If readings increase with decreasing height above the ground, assume that source is on the surface. In this case, take several smear samples (with gloves) over a 4" x 4" area of the ground, and/or a soil sample when condition permits.

Use a plastic bag for the soil sample and fill out a label to tag the bag. Label the coin envelopes for the smears with proper ID information.

C. Periodically check beta reading at 3" and 4' above ground with probe window open. Record any readings significantly different from the window-closed readings.

8.5 Air Sampling - ORM Team

8.5.1 Obtain air sample in plume center or at the fixed survey point as required (Attachment 1, item 10).

8.5.2 Leave car engine running, plug in the TCS EAS-1 Air Sampler to run it for a 1 min. warm-up period without the filter canister.

8.5.3 Use a quarter or equivalent, pry open the quart can containing the canister, turn off the warmed up sampler and center the canister over the suction opening on the side of the sampler. Stretch the elastic retainer over the outer end of the canister and make sure the fit is tight.

8.5.4 Sampler should be placed or held about 4 feet above the ground. Use top of vehicle away from its exhaust pipe side if desired.

8.5.5 Set the timer for 5 minutes (rotate dial past the 5 min. mark then turn back), turn on the sampler, and adjust the flow rate to 5 CFM. Use a wrist watch to verify run time is 5 min $\pm$ 6 seconds.

8.5.6 When the air sample is completed, carefully remove the canister from the sampler and put it in a plastic bag. Avoid contacting the white filter cloth outside around the bare filter. Record start/stop times and flow rates on Attachment 3.

8.5.7 Connect the brass-shell GM-1 probe with a cable to the RM-14 count rate meter "DETECTOR" input BNC. Switch "RESPONSE" to "SLOW". At this position, allow 20 seconds meter response time at each measurement.

8.5.8 Use the above setup, measure the background at 4 feet above the ground and inside the vehicle. Use the spot with lower background for the following measurements. Record this lower background cpm on Attachment 3.

8.5.9 Insert the GM-1 probe into the center hole of the canister and downscale the RM-14 as necessary. Record the stabilized cpm reading on Attachment 3.

8.5.10 Carefully remove the white fiber cloth which is wrapped around the canister by pulling the red tape on the top rims of the canister. Hold the canister in the plastic bag while doing this to avoid contacting the cloth, and to prevent silver gel crystal bits from falling out after the cloth wrapping is removed.

8.5.11 Return the fiber cloth to the quart can. Repeat step 8.5.9 on the bare canister and record the reading on Attachment 3.

8.5.12 Replace the bare canister with the plastic bag into the quart can. Put a label marked with the proper time, date, sample # and location, flow rate information on the sealed can. Air sample #'s should be assigned sequentially.

8.5.13 Report the three cpm readings measured with the GM-1 probe : the background, the filter/canister cpm, and the bare canister cpm, to the Dispatcher by radio.

8.5.14 If plume tracking is not required, go to step 8.6.1 below. Otherwise, continue to drive through the plume and identify the other boundary of the plume (exposure rate, window open, at approximately

1 mR/hr). At this boundary, record and report the exposure or dose rate measured with the location to the Dispatcher.

8.6 Continuation - ORM Team

8.6.1 Check personnel pocket dosimeters readings and number of canisters remaining before continuing on. Report any overexposure or shortage.

8.6.2 Continue on to the next survey point as preplanned and repeat steps 8.4 through 8.6 or as otherwise directed by the Dispatcher.

8.7 Conclusion of Survey - ORM Team

8.7.1 When all survey and sampling activities are completed and the team receives no further ORM request through the Dispatcher, or the team is relieved by a second team, conclude the mission and return to the station unless instructed otherwise by the Dispatcher.

8.7.2 Upon arrival, notify the Dispatcher and take the site access road near the LILCO 69KV substation. Stop before the substation and perform a contamination check of the vehicle (inside and outside) using the RM-14/HP-210.

8.7.3 If gross beta and gamma counts exceed 50 cpm above the background, call in and wait for decontamination or other instructions/assistance from the Dispatcher (Reference SP #69.030, "Contamination Control During Emergencies").

8.7.4 If vehicle checks out clean, return to the Main Security Building.

8.7.5 Remove protective clothing. Bag clothing, used masks and equipment suspected or being contaminated. Replenish Survey Kit items and return it in ready-to-use condition.

8.7.6 Frisk out each other using the RM-14/HP-210. Frisk samples brought back to check for unusually high deposits before transporting to Rad/Chem Lab area for analysis.

8.7.7 Send all samples and bagged items in 8.7.5 to the Rad/Chem Lab.

8.7.8 Record post-survey dosimeter readings on Attachment 1, and send all records and data sheet to the Dispatcher (Dose Assesment Group).

8.7.9 Report back to the OSC Coordinator. Mission completed.

8.7.10 If team is to return to EOF, request suitable locations to perform steps 8.7.2 through 8.7.7.

9.0 ACCEPTANCE CRITERIA

N/A

10.0 FINAL CONDITIONS

10.1 The Dispatcher shall examine all records and data sheets turned in by the team, make copies of those needed for dose assessment activities and forward all records to the Administrative Section for filing in accordance with permanent plant procedures.

10.2 Rad/Chem Lab and Health Physcis: All field samples, contaminated clothing and equipment should be disposed or decontaminated according to regular plant procedures.

11.0 REFERENCE

1. LILCO Shoreham Nuclear Power Station Emergency Plan, Rev. 1, 1/11/1982.

2. Code of Federal Regulations, Title 10, Part 20, Revised as of 1/1/1981.

3. LILCO Shoreham Procedure SP #69.050, "Radiation Dose During An Emergency."

4. LILCO Shoreham Procedure SP #69.030, "Contamination Control During Emergencies."

5. LILCO Shoreham Procedure SP #69.051, "Thyroid Blocking."

6. Eberline Health Physics Catalog, 1981 edition.

7. TCS Industries Instruction Manual for Emergency air Sampling System, 1981 edition.

12.0 ATTACHMENTS

1. Offsite Radiological Monitoring (ORM) Briefing Form

2. Offsite Downwind Survey (ORM) Kit Inventory

3. Offsite Emergency Survey Data Sheet

4. Offsite Downwind Survey (ORM) Map (Later)

ATTACHMENT 1

OFFSITE RADIOLOGICAL MONITORING (ORM) BRIEFING FORM

1. Date: _____ Time: _____ Briefing at: _____

2. Survey requested by: _____ Briefed by: _____

3. ORM Dispatcher: _____ Back-up Tel #: _____

4. Team Radio Ch. _____ Team ID: "Shoreham _____"

5. Alternate Communication Tel/#:
   RPM-TSC: _____ RCM-EOF: _____ C.Rm: _____

6. a. Primary dw Sector (letter): _____ Adjacent Sectors: ____, _____

   b. ORM/Survey Locations/Points: _____
   _____

7. Projected WB dose rates at survey area (if available):

   At ORM Pt _____ Sector _____ Dist _____ mi, D/R _____ mr/hr
   At ORM Pt _____ Sector _____ Dist _____ mi, D/R _____ mr/hr
   At ORM Pt _____ Sector _____ Dist _____ mi, D/R _____ mr/hr

8. Team member names & authorized doses (rem):

   ORM Tech. _____, dose _____ rem
   ORM Asst. _____, dose _____ rem

9. Protective Equipment (check applicable):

   (1) _____ Dosimeters (200 mR & 5R) (5) _____ Glove Other _____
   (2) _____ TLD (WB) (6) _____ Bootie _____
   (3) _____ F.F. Mask W I/P Canister (7) _____ KI _____
   (4) _____ Coverall (8) _____ Hood _____

10. ORM data to be collected:

    (1) _____ Plume Center Exp./Dose Rates & Location
    (2) _____ Plume Center Air I/P Sample
    (3) _____ Plume Boundaries down to 1 mR/hr
    (4) _____ Other (Specify) _____

11. Team dosimeter readings (Before/After Mission):

    ORM Tech. (200 mR Scale) _____/_____; (5R Scale) _____/_____
    ORM Asst. (200 mR Scale) _____/_____; (5R Scale) _____/_____

12. Special instructions: _____
    _____
    _____

ATTACHMENT 2

OFFSITE DOWNWIND SURVEY (ORM) KIT INVENTORY

1. (1) Eberline RO-2A
2. (1) Victoreen 496 w/HP-270 Probe
3. (1) Eberline RM-14 w/HP-210 Probe
4. (1) TCS EAS-1 Air Sampler w/one GM-1 Probe & 3 Canisters
5. (6) Spare TCS Air Sampling Cansiters
6. (1) Shield Assy w/SH-4 Sample Holder
7. (100) Smears & Envelopes
8. (50) Plastic Sample Bags with Labels
9. (1) Check Source
10. (2) Flashlight w/Spare Bulb
11. (1) Portable 2-Way Radio
12. (1) Roll of Dimes, 50 per Roll
13. (1) Roll of Masking Tape
14. (1) Clipboard with;
    a. This Survey Procedure
    b. Completed ORM Briefing Form
    c. Survey Locations Diagram (Map)
    d. (5) Survey Data Sheets (Blank)
    e. (2) Writing/Marking Pens
15. Protective Equipment
    a. (2) 0-200 mR, (2) 0-5R Pocket Dosimeters
    b. (2) Personnel TLD, (1) Control TLD
    c. (1) DRD Dosimeter Charger
    d. (2) F.F. Ultraview Mask w I/P Filter Canister
    e. (1) Vial of KI
    f. Protective Clothing, 2 each, of
       - Coveralls
       - Pairs of Gloves w/Liners
       - Pairs of Booties
       - Hoods
16. Environmental Station
    - (1) Key
    - (2) Replacement TLD
    - (2) Replacement Silver Zeolite Filters
    - (2) Replacement Particulate Filters
17. Spare Batteries, 4 each, of
    - AA Size
    - A Size
    - B Size
    - C Size
    - D Size

OFF-SITE EMERGENCY SURVEY DATA SHEET

1. Team Members: ____________, ____________ Date: ________

2. ________ Time Survey Started ________ Time Survey Completed

3. Air Sample Data

AIR SAMPLE #: ____________

Location (mark map) ____________

Canister # ________

Time: Start/Stop ______/______

Flow Rate: Start/Stop ______/______

Area Background (cpm) ____________ *

Filter/Canister Reading (cpm) ____________ *

Bare Canister Reading (cpm) ____________ *

*REPORT THE LAST THREE VALUES TO THE Dispatcher

AIR SAMPLE #: ____________

Location (mark map) ____________

Canister # ________

Time: Start/Stop ______/______

Flow Rate: Start/Stop ______/______

Area Background (cpm) ____________ *

Filter/Canister Reading (cpm) ____________ *

Bare Canister Reading (cpm) ____________ *

*REPORT THE LAST THREE VALUES TO THE DISPATCHFR

AIR SAMPLE #: ____________

Location (mark map) ____________

Canister # ________

Time: Start/Stop ______/______

Flow Rate: Start/Stop ______/______

Area Background (cpm) ____________ *

Filter/Canister Reading (cpm) ____________ *

Bare Canister Reading (cpm) ____________ *

*REPORT THE LAST THREE VALUES TO THE DISPATCHER

4. Dose Rate Measurements

	OW	CW	HT.
SURVEY POINT	EXP. RATE (mR/hr)	EXP. RATE (mR/hr)	ABOVE GRND

Attachment 3

Sub 'tted: _____

Approved: _____ _____
(Plant Manager)

DRAFT - PRELIMINARY

SP Number 69.Ø22.Ø1
Revision: A
Date Eff.: _____
TPC _____
TPC _____
TPC _____

DETERMINATION OF OFFSITE DOSES

1.0 PURPOSE

The purpose of this procedure is describe the method to determine offsite doses.

2.0 RESPONSIBILITY

The RPM/RCM shall be responsible for the implementation of this procedure.

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3.0 DISCUSSION

3.1 This procedure is used to determine offsite doses based upon short term, abnormal release conditions. The dose calculations are based upon finite cloud analyses.

3.2 There are two methods described in this procedure. One makes use of the computerized radiation monitoring system (RMS), while the other is a manual method to be used in cases of RMS failure.

3.3 The computerized RMS method described in the procedure assumes that the software is running in the ACCIDENT mode. This mode is selected either manually or automatically by the RMS. It is important to note that initial dose assessment, prior to grab sample analyses, is based upon an assumed inventory mixture of nuclides (i.e. LOCA, fuel handling).

3.4 The manual method described in this procedure employs the use of nomograms for dose assessment. There are ten (10) nomograms from which to select. Each nomogram is based upon assumed LOCA nuclide release mixtures. When using this method, it is important to understand the bases and assumptions described on each nomogram.

3.4.1 Only whole body dose calculations are provided for the normal station ventilation exhaust monitor. These doses assume 100% noble gas LOCA mixtures.

3.4.2 Both whole body and thyroid dose calculations are provided for the reactor building standby ventilation system monitor. These doses assume 100% noble gas LOCA mixtures for the whole body, and 25% halogen LOCA mixtures with 99% filtration for thyroid doses.

3.5 Topics covered in this procedure:

4.0 PRECAUTIONS

N/A

5.0 PREREQUISITES

N/A

6.0 LIMITATIONS AND ACTIONS

6.1 Personnel using this procedure should be aware of the bases for the assumed nuclide mixtures used in the dose calculations.

7.0 MATERIALS AND EQUIPMENT

7.1 Radiation Monitoring System

8.0 PROCEDURE

8.1 Determination of offsite doses using the computerized radiation monitoring system. (RMS)

(LATER)

8.2 Determination of offsite doses using the nomograms.

8.2.1 To calculate the gross release rates of radioactive isotopes from the station vent or the RBSVS exhaust and/or the doses resulting from such releases, proceed as follows, using a copy of the worksheet (Appendix 12.1) to record the results of each step:

Step 1

Record the current date

Step 2

Record the current time

Step 3

Record the wind speed u (mph) at the upper (150-ft) and the lower (33-ft) tower levels. Convert their values to (m/sec) according to

$$u\ (m/sec) = 0.447 \times u\ (mph)$$

Step 4

Record the 33-ft and the 150-ft indicated wind directions and determine the affected downwind sectors as follows:

Indicated Wind Direction	Affected Downwind Sector
0 to 11.25	S
11.25 to 33.75	SSW
33.75 to 56.25	SW
56.25 to 78.75	WSW
78.75 to 101.25	W
101.25 to 123.75	WNW
123.75 to 146.25	NW
146.25 to 168.75	NNW
168.75 to 191.25	N
191.25 to 213.75	NNE
213.75 to 236.25	NE
236.25 to 258.75	ENE

Indicated Wind Direction	Affected Downwind Sector
258.75 to 281.25	E
281.25 to 303.75	ESE
303.75 to 326.25	SE
326.25 to 348.75	SSE
348.75 to 371.25	S
371.25 to 393.75	SSW
393.75 to 416.25	SW
416.25 to 438.75	WSW
438.75 to 461.25	W
461.25 to 483.75	WNW
483.75 to 506.25	NW
506.25 to 528.75	NNW
528.75 to 540.00	N

Step 5

Determine and record on the worksheet the current atmospheric stability class as follows:

a) Record the current 33-150 ft. temperature difference (delta-T) on the meteorological tower (data available directly from the tower or the control room). Choose the correct stability class from the following list:

Delta-T (°F) 33-150 ft	Stability Class	Atmospheric Condition
Less than -1.22	A	Extremely Unstable
-1.22 to -1.09	B	Moderately Unstable
-1.09 to -0.96	C	Slightly Unstable
-0.96 to 0.32	D	Neutral
0.32 to 0.96	E	Slightly Stable
0.96 to 2.57	F	Moderately Stable
Greater than 2.57	G	Extremely Stable

NOTE: For borderline cases, choose the class with higher stability (e.g., if delta-T = 0.32, choose stability Class E).

b) If the delta-T between the 33-ft. and 150-ft. levels is not available, record the standard deviation of wind direction fluctuation (σ_θ) from either the 33-ft. level of the primary tower or the backup tower, and choose the correct stability class from the following list.

σ_θ (degrees) 33-ft. Level	Stability Class	Atmospheric Condition
Greater than 22.5	A	Extremely Unstable
17.5 to 22.5	B	Moderately Unstable
12.5 to 17.5	C	Slightly Unstable
7.5 to 12.5	D	Neutral
3.8 to 7.5	E	Slightly Stable
2.1 to 3.8	F	Moderately Stable
Less than 2.1	G	Extremely Stable

c) If no delta-T or σ_θ, data is available choose the stability class using the wind speed from Step 3 and the following table:

33-ft Wind Speed (mph)	Day: Incoming Solar Radiation Strong	Day: Incoming Solar Radiation Moderate	Day: Incoming Solar Radiation Slight	Night: Degree of Cloudiness >50%	Night: Degree of Cloudiness <50%
< 4	A	A-B	B		
4-7	A-B	B	C	E	F
7-11	B	B-C	C	D	E
11-14	C	C-D	D	D	D
>14	C	D	D	D	D

The degree of cloudiness is defined as that fraction of the sky above the local apparent horizon that is covered by clouds. The neutral Class D, should be assumed for heavy overcast conditions during day or night.

Step 6

Determine the type of release (ground-level or elevated) as follows:

a) Record the station vent average flow rate F (cfm)

b) Compute the vent exit velocity W_o (m/sec)

$$W_o(\text{m/sec}) = 8.47 \times 10^{-5} F(\text{cfm})$$

c) Compute the velocity ratio R_v according to the formula:

$$R_v = \frac{\text{Vent Exit Velocity } W_o(\text{m/sec})}{\text{Prevailing Wind Speed at 150 ft (m/sec)}}$$

d) If R_v is less than 5, the release is to be assumed to be at ground level; if R_v is greater than or equal to 5 the release is elevated.

Step 7

Record the distance X to the subject receptor in miles. Use 0.19 mile for the nearest sit boundary.

Step 8

For elevated releases only, use the tabulated terrain heights Appendix 12.2 to determine the receptor elevation (h_t) (in meters above MSL). Set $h_t = \emptyset$ for gound-level releases.

Step 9

For elevated releases only, carry out the following calculations to determine the plume rise h_{pr}(m). Set $h_{pr} = \emptyset$ for ground-level releases. Compute the following for all atmospheric stability classes (using the velocity ratio R_v and the vent exit velocity

W_o(m/sec) from Step 6 and the distance X (miles) from Step 7):

$$h_{pr}(1) = 32.4\ R_v^{2/3}\ X^{1/3}$$

$$h_{pr}(2) = 7.68\ R_v$$

Compute the following for atmospheric stabilities E, F and G

$$h_{pr}(3) = 30(W_o)^{1/2} \text{ for stability E}$$

$$= 24\ (W_o)^{1/2} \text{ for stability F}$$

$$= 21\ (W_o)^{1/2} \text{ for stability G}$$

$$h_{pr}(4) = 6.4(R_v\ W_o)^{1/3} \text{ for stability E}$$

$$= 5.5(R_v\ W_o)^{1/3} \text{ for stability F}$$

$$= 4.9(R_v\ W_o)^{1/3} \text{ for stability G}$$

The final plume rise value to be used is as follows:

For stabilities A, B, C and D:

h_{pr} = lesser of h_{pr} (1) and h_{pr} (2)

For stabilities E, F and G:

h_{pr} = lesser of h_{pr} (1), h_{pr} (2), h_{pr} (3) and h_{pr} (4)

Step 10

For elevated releases only, compute the effective height of the plume above the receptor:

$$h_e = 75.9 + h_{pr} - h_t \text{ (meters)}$$

For ground-level releases h_e = Ø.Ø

Step 11

Record the atmospheric dispersion factor of interest according to the following procedure:

a) Select the "concentration Xu/Q" tables (Appendix 12.3) for thyroid dose exposures or the "Gamma Xu/Q" tables (Appendix 12.4) for the computation of wholebody dose rate.

b) Choose the proper atmospheric dispersion factor (Xu/Q) from the attached tables using the following information:

- Release mode (ground-level or elevated with H = 35, 70, 105m or 140m, whichever is closer to the plume effective height h_e computed in Step 10).
- The distance to the subject receptor (from Step 7)

(interplate if need be).

Step 12

Select the radiation monitor point of interest:

a) Station ventilation exhaust

b) RBSVS exhaust

Step 13

Select the type of exposure of interest

a) Whole body gamma (station vent and RBSVS)

b) Thyroid (RBSVS only)

Step 14

Based on your selections in Steps 12 and 13 choose the proper nomogram for the release point and the nuclide composition of interest from the list which follows. Record the nomogram number on the worksheet and get a copy of the nomogram.

Nomogram No.	Description
1	Station vent routine effluent monitor . noble gas release . wholebody gamma dose
2	Station vent high-range monitor . noble gas release . wholebody gamma dose
3	RBSVS low-range monitor . noble gas release . wholebody gamma dose
4	RBSVS low-range monitor . potential halogen release rate . potential thyroid dose rate
5	RBSVS intermediate-range monitor . noble gas release . wholebody gamma dose
6	RBSVS intermediate-range monitor . potential halogen release rate . potential thyroid dose
7	RBSVS high-range monitor . noble gas release . wholebody gamma dose
8	RBSVS high-range monitor . potential halogen release rate . potential thyroid dose rate

Step 15

Record:

a) The radiation reading (rad/hr or cpm) at the selected monitor, or

b) The Xe-133 or I-131 dose-equivalent concentration (Ci/cc) as determned from grab-sample analysis for the release point.

Step 16

Record the air flow at the duct sampled or monitored (in cfm).

Step 17

Record the time since reactor scram on the worksheet (hours). THis time may be Ø if the reactor is not yet shutdown. In this case use the smallest time marked on the nomogram.

Step 18

Use the selected nomogram and the following information to compute the radioactivity release rate and the dose rate at the receptor of interest:

- Monitor reading or grab sample concentration (from Step 15)
- Vent flow (from Step 16)
- Time since reactor scram (from Step 17)
- Prevailing wind speed (from Step 3 in mph; use the 33-ft data for a ground-level release and the 150-ft data for an elevated release as determined in Step 6)
- The Xu/Q value (from Step 11)

Each nomogram consists of 5 distinct sections, as follows:

Section	Y-axis	Variable
1	Monitor Reading or grab-sample concentration	Flow rate
2	Effluent Radioactivity	Parameter Z (time dep.)
3	None	Parameter Y (time dep.)
4	None	Prevailing Wind Speed
5	Offsite Dose Rate	Atmospheric Dispersion (Xu/Q) or $(Xu/Q)_r$

The nomogram procedure is presented graphically in the "Sample Nomogram Procedure" attached as Appendix 12.5 and is as follows:

a) Locate either of the following parameters on the left-hand Y-axis

. Monitor reading (Point A_1), or
. Grab sample concentration (Point A_2)

b) Move horizontally to the right until you intercept the slanted line corresponding to the flow rate (Point B); interpolate if need be.

c) At Point B reflect vertically down until you intercept the slanted line corresponding to either (a) the number of hours elapsed since reactor scram if your starting point is A_1 or (b) the line marked "I-131 equivalent" or "Xe-133 equivalent" if your starting point is A_2 (point C).

d) From Point C move horizontally to the left and intercept the Y-axis at Point D. The reading at Point D corresponds to the radioactivity release rate to the atmosphere. The Y-axis label identifies the isotopic mix (halogens or noble gases, in gross uCi/sec if your starting point is A_1, or dose-equivalent uCi/sec if your starting point is A_2.

e) Return to Point A, move to Point B, and reflect vertically up until you intercept the slanted line corresponding to either (a) the elapsed time after reactor scram if your starting point is A_1, or (b) the line marked "I-131 dose-equivalent" or "Xe-133 dose-equivalent" if your starting point is A_2 (Point E).

f) From Point E reflect horizontally until you intercept the line corresponding to the prevailing wind speed (Point F).

g) From Point F move vertically down to Point G which corresponds to the current atmospheric dispersion factor as established in Step 11.

h) From Point G move horizontally to the right until you intercept the Y-axis (Point H). The reading at Point H corresponds to the dose rate at the downhill location of interest. Record this dose rate on the worksheet.

SHOREHAM NUCLEAR POWER STATION

WORKSHEET
RADIOACTIVE EFFLUENT MONITOR NOMOGRAM

Your Name:_____

1. Date:_____ 2. Time:_____

3. Wind speed: u(33-ft level)____mph; X Ø.447 = _____m/sec
u(150-ft level)____mph; X Ø.447 = _____m/sec

4. Wind direction: 33-ft level_____degrees; _____sector
150-ft level_____degrees; _____sector

5. Delta Temperature: 33-150 ft_____degrees; _____stability
(Sigma Theta if not available, see procedure for instructions)

6. Station vent flow: F_____cfm

Exit velocity : W_o = F(cfm) X 8.47 X 10^{-5} = _____m/sec

Velocity ratio : R_v = W_o(m/sec) / u(150-ft; m/sec) = _____

If R_v is less than 5 circle "ground level release"

If R_v is greater than or equal to 5 circle "elevated release"

7. Distance to downwind receptor: X = _____miles

8. Receptor elevation: h_t_____m above MSL
(from tables; set h_t - Ø for ground-level releases)

9. For ground-level releases set h_{pr} = Ø and go to Step 10. For elevated releases compute the following for all stablilities:

h_{pr} (1) = 32.3 $R_v^{2/3}$ X $^{1/3}$ = _____m

h_{pr} (2) = 7.98 R_v = _____m

For stabilities E, F, and G only:

h_{pr} (3) = 31 $W_o^{1/2}$ = _____m (stability E)

= 25 $W_o^{1/2}$ = _____m (stability F)

= 21 $W_o^{1/2}$ = _____m (stability G)

h_{pr} (4) = 6.6 R_v $W_o^{1/3}$ = _____m (stability E)

= 5.57 R_v $W_o^{1/3}$ = _____m (stability F)

= 4.92 R_v $W_o^{1/3}$ = _____m (stability G)

Choose the final plume rise as follows:

Stabilities A, B, C and D

h_{pr} = lesser of h_{pr} (1) and h_{pr} (2) = _____m

Stabilities E, F, and G

h_{pr} = lesser of h_{pr} (1) through h_{pr} (4) = _____m

10. Height of plume above receptor (h_e - Ø) for ground-level releases)

$h_e = 75.9 + h_{pr} - h_t$ = _____m

Tabulated plume height in (xu/Q) tables closest to h_e is

H (choose 35, 70, 105 or 140) = _____m

11. Atmospheric dispersion factor: _____($1/m^2$) (from tables)

Circle one: concentration (xu/Q) for thyroid dose

gamma (xu/Q) for finite-cloud wholebody gamma dose

12. Release point (circle one): Station Vent; RBSVS

13. Release composition (circle one): noble gases and halogen;
noble gases

14. Number of nomogram selected: _____

15. Radiation monitor reading:_____rad/hr, or _____cps

16. Air flow at the duct sampled or monitored: _____cfm

17. Time since reactor scram:_____hours

18. Radioactivity release rate:_____uCi/sec (n.g. and/or hal.)

Offsite dose rate:_____mr/hr thyroid or wholebody gam.

SHOREHAM STATION - TERRAIN HEIGHTS (METERS ABOVE MSL)

MILES	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
.19																
.25																
.50																
.75																
1.0																
1.5																
2.0																
2.5																
3.0																
3.5																
4.0																
4.5																
5.0																
7.5																
10.																
15.																
20.																
25.																
30.																
35.																
40.																
45.																
50.																

L A T E R

SHOREHAM STATION - PLUME-CENTERLINE CONCENTRATION (X*U/Q) (1/M2)

GROUND-LEVEL RELEASE - DIVIDE RESULTS BY ONE MILLION

MILES	A	B	C	D	E	F	G
.19	73.824	142.587	218.895	451.874	733.325	1526.773	3529.499
.25	48.552	93.988	155.855	307.503	517.204	1038.091	2177.300
.50	8.336	25.814	56.855	134.300	203.135	426.991	848.132
.75	2.669	10.212	28.689	80.633	132.640	244.169	499.947
1.0	2.089	4.932	18.422	55.140	94.347	165.540	336.834
1.5	1.488	2.004	9.447	31.746	55.471	106.474	195.837
2.0	1.147	1.561	5.844	20.616	38.311	74.644	137.574
2.5	.945	1.295	4.019	14.791	28.672	57.294	106.706
3.0	.816	1.089	2.959	11.342	22.585	47.484	89.414
3.5	.720	.944	2.283	9.080	18.490	40.239	76.541
4.0	.644	.838	1.825	7.503	15.572	34.709	66.653
4.5	.585	.758	1.495	6.342	13.396	30.134	58.595
5.0	.536	.693	1.258	5.469	11.722	26.607	52.261
7.5	.368	.497	.713	3.206	7.151	17.112	34.340
10.0	.286	.390	.524	2.164	5.020	12.609	25.580
15.0	.214	.274	.360	1.204	3.036	8.089	16.872
20.0	.166	.215	.291	.811	2.185	5.861	12.691
25.0	.138	.179	.245	.603	1.709	4.592	10.209
30.0	.120	.155	.213	.478	1.415	3.793	8.580
35.0	.106	.136	.188	.393	1.203	3.225	7.408
40.0	.096	.122	.168	.333	1.044	2.800	6.526
45.0	.087	.110	.148	.291	.927	2.482	5.853
50.0	.080	.100	.135	.258	.829	2.222	5.302

SHOREHAM STATION - PLUME-CENTERLINE CONCENTRATION (X*U/Q) (1/M2)

ELEVATED RELEASE (H = 35 M) - DIVIDE RESULTS BY ONE MILLION

MILES	A	B	C	D	E	F	G
.19	88.928	108.063	113.557	26.242	1.460	.000	.000
.25	39.736	81.890	109.985	59.158	12.023	.006	.000
.50	5.352	25.347	52.257	85.824	75.274	9.315	.021
.75	2.678	10.179	28.570	63.928	79.719	36.060	1.999
1.0	1.094	4.932	17.998	47.501	68.012	53.482	9.535
1.5	1.490	2.007	9.336	29.294	46.335	57.480	25.584
2.0	1.148	1.563	5.803	19.517	33.868	49.653	31.496
2.5	.945	1.296	4.000	14.198	26.067	42.113	34.222
3.0	.817	1.089	2.948	10.984	20.847	36.862	35.929
3.5	.720	.945	2.277	8.843	17.257	32.380	35.481
4.0	.644	.838	1.821	7.337	14.657	28.644	34.054
4.5	.585	.758	1.492	6.220	12.700	25.335	31.933
5.0	.536	.693	1.256	5.375	11.174	22.693	29.973
7.5	.368	.497	.713	3.169	6.917	15.173	23.013
10.0	.288	.390	.524	2.146	4.888	11.407	18.379
15.0	.214	.274	.360	1.197	2.976	7.488	12.914
20.0	.166	.215	.291	.808	2.149	5.495	10.097
25.0	.138	.179	.245	.601	1.685	4.338	8.305
30.0	.120	.155	.213	.476	1.397	3.601	7.063
35.0	.106	.136	.186	.392	1.189	3.073	6.159
40.0	.096	.122	.168	.332	1.033	2.678	5.470
45.0	.087	.110	.149	.291	.917	2.380	4.841
50.0	.080	.100	.135	.257	.821	2.137	4.503

BATREHAM STATION - PLUME-CENTERLINE CONCENTRATION (X*U/Q) (1/M2)

ELEVATED RELEASE (H = 70 M) - DIVIDE RESULTS BY ONE MILLION

MILES	A	B	C	D	E	F	G
.19	38.107	17.438	3.011	.000	.000	0.000	0.000
.25	29.950	29.170	12.598	.048	.000	.000	0.000
.50	6.220	20.704	27.534	7.216	.625	.000	.000
.75	2.678	9.557	20.869	15.801	5.276	.017	.000
1.0	2.094	4.811	14.825	18.538	10.678	.306	.000
1.5	1.490	2.005	8.453	17.158	15.615	2.668	.009
2.0	1.148	1.563	5.464	13.491	15.683	5.811	.065
2.5	.945	1.296	3.838	10.754	14.247	7.869	.218
3.0	.817	1.089	2.859	8.824	12.511	8.982	.548
3.5	.720	.945	2.223	7.383	11.092	9.449	.957
4.0	.644	.838	1.787	6.292	9.929	9.519	1.366
4.5	.585	.758	1.470	5.442	8.993	9.296	1.679
5.0	.536	.693	1.240	4.774	8.187	8.979	1.956
7.5	.368	.497	.711	2.928	5.563	7.417	2.955
10.0	.288	.390	.524	2.025	4.105	6.240	3.237
15.0	.214	.274	.360	1.155	2.611	4.668	3.058
20.0	.166	.215	.291	.786	1.930	3.687	2.878
25.0	.138	.179	.245	.588	1.535	3.046	2.639
30.0	.120	.155	.213	.468	1.283	2.600	2.382
35.0	.106	.136	.188	.386	1.100	2.272	2.181
40.0	.096	.122	.168	.328	.961	2.021	2.019
45.0	.087	.110	.149	.288	.857	1.829	1.891
50.0	.080	.100	.135	.255	.770	1.668	1.778

SHOREHAM STATION - PLUME-CENTERLINE CONCENTRATION (X*U/Q) (1/M2)

ELEVATED RELEASE (H = 105 M) - DIVIDE RESULTS BY ONE MILLION

MILES	A	B	C	D	E	F	G
.10	12.281	.834	.007	.000	.000	0.000	0.000
.25	18.696	5.221	.340	.000	.000	0.000	0.000
.50	5.996	14.777	9.464	.116	.000	.000	0.000
.75	2.678	8.602	12.364	1.538	.057	.000	.000
1.0	2.094	4.617	10.730	3.864	.488	.000	.000
1.5	1.490	2.001	7.162	7.036	2.548	.016	.000
2.0	1.148	1.563	4.943	7.291	4.347	.163	.000
2.5	.945	1.296	3.583	6.768	5.205	.481	.000
3.0	.817	1.089	2.717	6.125	5.342	.854	.001
3.5	.720	.945	2.137	5.464	5.310	1.213	.002
4.0	.644	.838	1.731	4.871	5.188	1.518	.006
4.5	.585	.758	1.432	4.355	5.059	1.743	.012
5.0	.536	.693	1.215	3.919	4.876	1.915	.021
7.5	.368	.497	.707	2.566	3.869	2.250	.097
10.0	.288	.390	.523	1.837	3.070	2.283	.179
15.0	.214	.274	.360	1.087	2.100	2.124	.277
20.0	.166	.215	.291	.752	1.614	1.896	.355
25.0	.138	.179	.245	.567	1.313	1.690	.390
30.0	.120	.155	.213	.454	1.115	1.511	.389
35.0	.106	.136	.188	.377	.967	1.374	.387
40.0	.096	.122	.168	.321	.852	1.264	.383
45.0	.087	.110	.149	.282	.765	1.179	.381
50.0	.080	.100	.135	.251	.691	1.104	.378

SHOREHAM STATION - PLUME-CENTERLINE CONCENTRATION (X*U/Q) (1/M2)

ELEVATED RELEASE (H = 140 M) - DIVIDE RESULTS BY ONE MILLION

MILES	A	B	C	D	E	F	G
.19	2.719	.012	.000	.000	0.000	0.000	0.000
.25	8.666	.470	.002	.000	.000	0.000	0.000
.50	5.696	9.216	2.122	.000	.000	.000	0.000
.75	2.678	7.424	5.942	.059	.000	.000	0.000
1.0	2.094	4.358	6.824	.430	.006	.000	.000
1.5	1.490	1.995	5.679	2.020	.201	.000	.000
2.0	1.148	1.563	4.295	3.080	.721	.001	.000
2.5	.945	1.296	3.254	3.539	1.271	.010	.000
3.0	.817	1.089	2.530	3.674	1.623	.032	.000
3.5	.720	.945	2.021	3.586	1.893	.069	.000
4.0	.644	.838	1.656	3.404	2.091	.116	.000
4.5	.585	.758	1.382	3.188	2.261	.168	.000
5.0	.536	.693	1.181	2.972	2.360	.220	.000
7.5	.368	.497	.702	2.134	2.327	.424	.001
10.0	.288	.390	.522	1.604	2.043	.559	.003
15.0	.214	.274	.360	1.000	1.548	.705	.010
20.0	.166	.215	.291	.706	1.256	.747	.019
25.0	.138	.179	.245	.540	1.056	.741	.027
30.0	.120	.155	.213	.435	.915	.707	.031
35.0	.106	.136	.188	.363	.806	.679	.034
40.0	.096	.122	.168	.312	.720	.655	.037
45.0	.087	.110	.149	.275	.652	.638	.041
50.0	.080	.100	.135	.246	.594	.618	.043

SHOREHAM STATION - GAUSSIAN PUFF GAMMA (X*U/Q) (1/M2)

GROUND-LEVEL RELEASE - DIVIDE RESULTS BY ONE MILLION

MILES	A	B	C	D	E	F	G
.10	39.619	60.088	77.110	113.774	144.884	205.687	302.182
.25	26.073	46.390	63.374	92.961	121.875	171.481	242.415
.50	5.648	18.542	33.169	57.965	73.915	110.505	155.705
.75	1.285	8.629	20.653	42.003	57.529	81.965	118.798
1.0	.374	4.483	14.175	32.469	46.510	65.668	97.599
1.5	.697	1.597	8.063	21.733	32.606	50.222	72.387
2.0	.539	.788	5.250	15.523	25.008	39.911	58.816
2.5	.445	.608	3.716	11.829	20.109	33.347	50.291
3.0	.384	.512	2.785	9.448	16.694	29.220	44.929
3.5	.339	.444	2.174	7.787	14.217	25.926	40.582
4.0	.304	.394	1.751	6.577	12.347	23.241	36.990
4.5	.276	.357	1.439	5.655	10.886	20.889	33.869
5.0	.253	.327	1.209	4.941	9.718	18.882	31.273
7.5	.174	.235	.630	3.005	6.301	13.346	23.056
10.0	.136	.184	.400	2.065	4.568	10.342	18.410
15.0	.101	.129	.217	1.168	2.854	7.032	13.192
20.0	.079	.102	.151	.793	2.084	5.264	10.399
25.0	.065	.084	.116	.591	1.644	4.206	8.627
30.0	.057	.073	.101	.469	1.368	3.520	7.409
35.0	.050	.064	.089	.385	1.168	3.022	6.503
40.0	.045	.058	.079	.326	1.016	2.643	5.803
45.0	.041	.052	.071	.283	.904	2.355	5.257
50.0	.038	.047	.064	.249	.810	2.118	4.803

SHOREHAM STATION - GAUSSIAN PUFF GAMMA (X*U/Q) (1/M2)

ELEVATED RELEASE (H = 35 M) - DIVIDE RESULTS BY ONE MILLION

MILES	A	B	C	D	E	F	G
.19	33.247	58.930	72.641	80.560	77.465	73.502	72.221
.25	25.949	46.090	61.984	79.208	80.137	75.124	72.785
.50	5.664	18.565	33.349	58.622	72.219	80.618	77.128
.75	1.290	8.651	20.805	43.178	58.763	75.802	80.544
1.0	.977	4.505	14.285	33.443	48.144	68.050	79.403
1.5	.699	1.601	8.119	22.309	33.933	53.806	71.608
2.0	.540	.789	5.280	15.910	25.994	43.099	63.938
2.5	.445	.609	3.734	12.098	20.879	36.032	57.228
3.0	.385	.512	2.797	9.639	17.331	31.518	51.451
3.5	.339	.445	2.182	7.931	14.744	27.932	46.651
4.0	.304	.395	1.757	6.688	12.788	25.018	42.635
4.5	.276	.357	1.443	5.743	11.254	22.482	39.179
5.0	.253	.327	1.212	5.014	10.032	20.422	36.256
7.5	.174	.235	.632	3.040	6.471	14.320	26.714
10.0	.136	.184	.400	2.085	4.678	11.060	21.300
15.0	.101	.130	.217	1.176	2.912	7.472	15.242
20.0	.079	.102	.151	.797	2.121	5.564	11.951
25.0	.065	.085	.116	.594	1.671	4.430	9.880
30.0	.057	.073	.101	.471	1.389	3.699	8.474
35.0	.050	.064	.089	.387	1.184	3.167	7.427
40.0	.045	.058	.078	.327	1.030	2.764	6.615
45.0	.041	.052	.071	.284	.916	2.458	5.981
50.0	.038	.047	.064	.250	.820	2.206	5.454

SHOREHAM STATION - GAUSSIAN PUFF GAMMA (X*U/Q) (1/M2)

ELEVATED RELEASE (H = 70 M) - DIVIDE RESULTS BY ONE MILLION

MILES	A	B	C	D	E	F	G
.19	29.871	33.441	32.128	28.762	27.885	27.372	27.171
.25	21.688	31.315	33.466	30.080	28.482	27.582	27.265
.50	5.481	16.452	26.065	33.428	32.223	29.097	27.838
.75	1.282	8.211	18.126	30.384	33.434	31.300	28.744
1.0	.973	4.391	13.055	26.114	31.873	32.973	29.989
1.5	.697	1.589	7.732	19.209	26.371	32.984	32.354
2.0	.539	.787	5.121	14.374	21.718	30.356	33.385
2.5	.445	.607	3.657	11.223	18.181	27.419	33.347
3.0	.384	.512	2.755	9.090	15.488	25.068	32.599
3.5	.339	.444	2.158	7.563	13.431	22.950	31.476
4.0	.304	.395	1.741	6.429	11.807	21.074	30.192
4.5	.276	.357	1.434	5.554	10.500	19.332	28.842
5.0	.253	.327	1.206	4.871	9.436	17.845	27.526
7.5	.174	.235	.630	2.990	6.229	13.083	22.183
10.0	.136	.184	.400	2.063	4.554	10.332	18.487
15.0	.101	.130	.217	1.170	2.867	7.146	13.836
20.0	.079	.102	.151	.794	2.098	5.387	11.098
25.0	.065	.085	.116	.593	1.657	4.320	9.302
30.0	.057	.073	.101	.470	1.380	3.623	8.053
35.0	.050	.064	.089	.386	1.178	3.113	7.105
40.0	.045	.058	.079	.326	1.025	2.723	6.362
45.0	.041	.052	.071	.284	.912	2.426	5.775
50.0	.038	.047	.064	.250	.817	2.181	5.284

SHOREHAM STATION - GAUSSIAN PUFF GAMMA (X*U/Q) (1/M2)

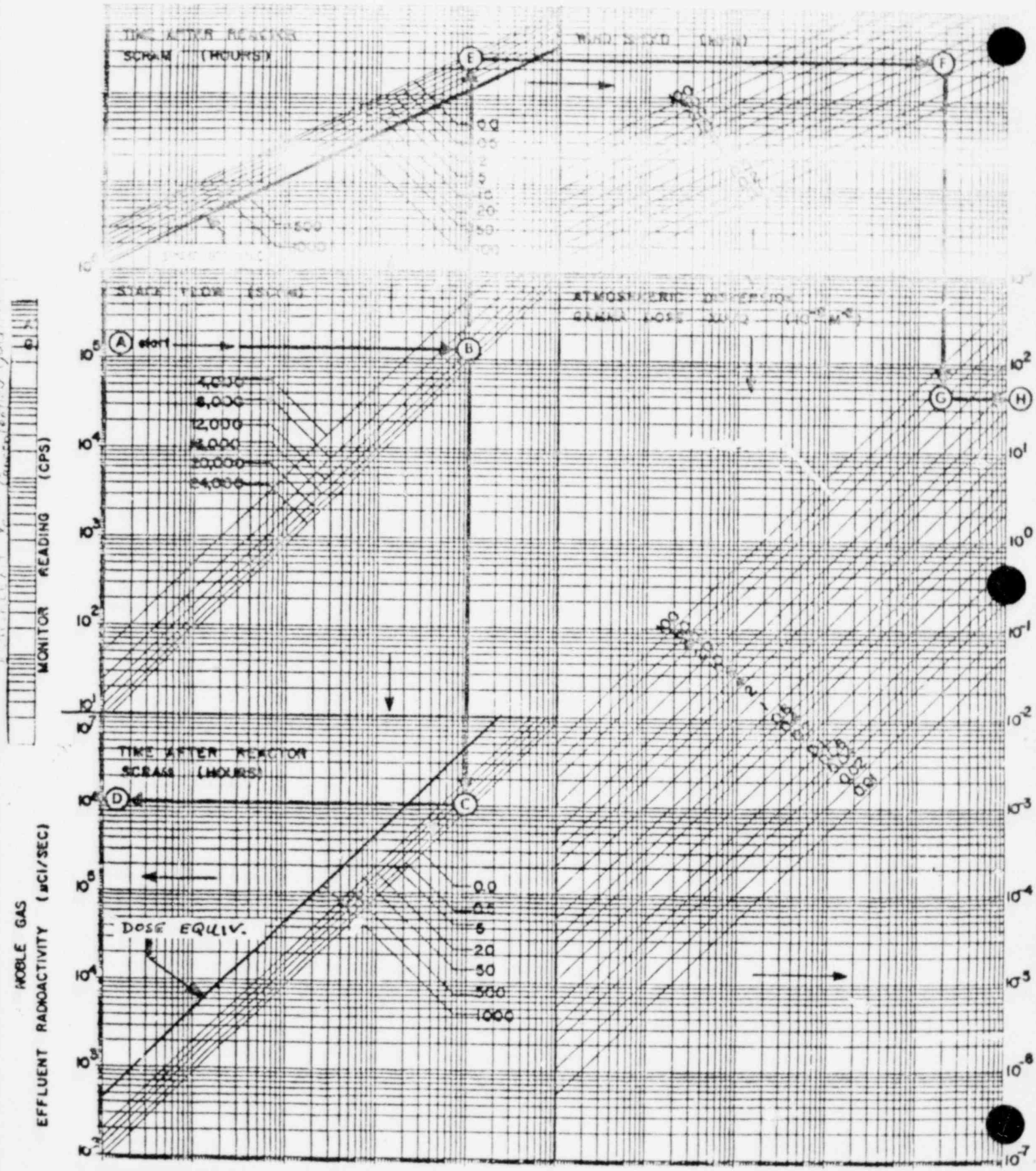
ELEVATED RELEASE (H = 105 M) - DIVIDE RESULTS BY ONE MILLION

MILES	A	B	C	D	E	F	G
.19	17.321	15.998	14.109	12.907	12.618	12.432	12.357
.25	18.204	17.623	15.546	13.309	12.818	12.509	12.393
.50	5.177	13.490	17.600	16.043	14.160	13.009	12.601
.75	1.267	7.521	14.463	17.823	16.022	13.734	12.901
1.0	.964	4.198	11.250	17.611	17.430	14.691	13.280
1.5	.693	1.565	7.122	15.042	17.661	16.737	14.235
2.0	.537	.781	4.857	12.160	16.216	17.827	15.262
2.5	.443	.604	3.524	9.909	14.493	17.823	16.249
3.0	.383	.510	2.681	8.240	12.896	17.367	17.048
3.5	.338	.443	2.113	6.980	11.515	16.699	17.574
4.0	.303	.393	1.712	6.010	10.347	15.938	17.849
4.5	.276	.353	1.414	5.243	9.356	15.105	17.920
5.0	.253	.326	1.192	4.632	8.518	14.306	17.836
7.5	.174	.234	.627	2.902	5.836	11.271	16.406
10.0	.136	.184	.399	2.022	4.346	9.226	14.660
15.0	.101	.129	.216	1.157	2.785	6.626	11.795
20.0	.079	.102	.151	.789	2.056	5.094	9.814
25.0	.065	.085	.116	.590	1.631	4.132	8.411
30.0	.057	.073	.101	.468	1.362	3.492	7.390
35.0	.050	.064	.088	.385	1.165	3.017	6.591
40.0	.045	.058	.078	.326	1.016	2.650	5.951
45.0	.041	.052	.071	.283	.905	2.369	5.438
50.0	.038	.047	.064	.249	.812	2.135	5.003

SHOREHAM STATION - GAUSSIAN PUFF GAMMA (X*U/Q) (1/M2)

ELEVATED RELEASE (H = 140 M) - DIVIDE RESULTS BY ONE MILLION

MILES	A	B	C	D	E	F	G
.19	9.881	7.641	6.784	6.286	6.158	6.074	6.041
.25	10.931	8.996	7.408	6.460	6.247	6.109	6.057
.50	4.785	10.263	10.556	7.667	6.805	6.331	6.150
.75	1.245	6.662	10.612	9.371	7.655	6.634	6.283
1.0	.952	3.942	9.158	10.547	8.741	7.024	6.448
1.5	.886	1.530	6.357	10.770	10.499	8.109	6.835
2.0	.533	.773	4.512	9.651	10.931	9.381	7.274
2.5	.441	.600	3.345	8.341	10.621	10.273	7.786
3.0	.382	.506	2.578	7.195	10.007	10.714	8.358
3.5	.337	.440	2.050	6.247	9.307	10.908	8.925
4.0	.302	.392	1.671	5.475	8.619	10.917	9.442
4.5	.275	.355	1.387	4.840	7.976	10.784	9.890
5.0	.252	.325	1.173	4.320	7.395	10.562	10.247
7.5	.173	.234	.622	2.781	5.333	9.170	10.931
10.0	.136	.184	.397	1.964	4.072	7.888	10.670
15.0	.101	.129	.216	1.139	2.674	5.970	9.460
20.0	.079	.102	.151	.781	1.996	4.714	8.280
25.0	.065	.084	.116	.585	1.594	3.885	7.318
30.0	.057	.073	.101	.466	1.336	3.317	6.563
35.0	.050	.064	.089	.384	1.147	2.886	5.942
40.0	.045	.058	.079	.324	1.002	2.550	5.427
45.0	.041	.052	.071	.283	.894	2.289	5.003
50.0	.038	.047	.064	.246	.803	2.070	4.637


TIME AFTER REACTOR SCRAM (HOURS)
WIND SPEED (KNOTS)
STACK FLOW (SCFM)
ATMOSPHERIC DISPERSION GAMMA LOSS
A
B
C
D
E
F
G
H
4,000
8,000
12,000
16,000
20,000
24,000
0.0
0.5
5
20
50
500
1000
MONITOR READING (CPS)
TIME AFTER REACTOR SCRAM (HOURS)
DOSE EQUIV.
NOBLE GAS
EFFLUENT RADIOACTIVITY (μCI/SEC)

Submitted:_____

Approved:_____
(Plant Manager)

DRAFT - PRELIMINARY

SP Number 69.Ø24.Ø1
Revision A
Date Eff._____
TPC_____
TPC_____
TPC_____

WATERBORNE RELEASE DOSE PROJECTION

1.0 PURPOSE

This procedure provides instructions for the calculation of projected whole body and skin doses received while swimming in or boating upon Long Island Sound water contaminated by a radioactive release from the Shoreham Nuclear Power Station.

2.0 RESPONSIBILITY

The Radiation Protection Manager is responsible for ensuring compliance with this procedure.

MAR 19 1982

ORIGINAL COPY

3.0 DISCUSSION

3.1 These projected whole body and skin doses:

3.1.1 Identify locations where it is appropriate to initiate water sampling efforts in the Long Island Sound.

3.1.2 Provide a basis for initial selection of a protective actions recommendation by comparison with Environmental Protection Agency (EPC) Protective Action Guides (PAGs).

4.0 PRECAUTIONS

N/A

5.0 PREREQUISITES

An inadvertent release of radioactivity has occurred as indicated by the Liquid Radwaste Effluent Monitor or Reactor Building Salt Water Drain Tank Monitor.

6.0 LIMITATIONS AND ACTIONS

Terminate the release.

7.0 MATERIALS AND EQUIPMENT

N/A

8.0 PROCEDURE

8.1 Radiation Protection Manager or Designee, Perform the Following:

8.1.1 Determine release concentration (μCi/ml) from the Liquid Radwaste Effluent Monitor or the Reactor Building Salt Water Drain Tank Monitor.

8.1.2 Determine projected duration of exposure. This may be conservatively estimated to be equal to the projected duration of release. The projected duration of release is calculated from the beginning of the release until the release is expected to be terminated by either corrective action or depletion of source.

8.1.3 Calculate projected swimming whole body and skin doses and boating whole body projected dose on the Liquid Release Worksheet (Attachment 12.1) using the following equation:

Projected Dose (mRem) = Q(μCi/ml) x T(hrs) x CF(mRem-ml/μCi-hr)

where Q = concentration of radioactivity in release (μCi/ml)
T = projected duration of exposure (hrs)
CF = conversion factors of dose rate per radioactive concentration in water (mRem-ml/μCi-hr) for swimming, whole body or skin, and boating, whole body only

8.1.4 Determine waterborne protective actions by initiating Emergency Plan Implementing Procedure SP 69.026.01 "Protective Action

Recommendations."

9.0 ACCEPTANCE CRITERIA

N/A

10.0 FINAL CONDITIONS

Waterborne projected dose has been calculated.

11.0 REFERENCES

11.1 Final Environmental Statement Concerning Proposed Rule Making Action: Numerical Guides for Design Objectives and Limiting Conditions for Operation to Meet the Criterion "As Low As Practicable" for Radioactive Material in Light-Water Cooled Nuclear Power Reactor Effluents Volume 2 Analytical Models and Calculations, Directorate of Regulatory Standards, U.S. Atomic Energy Commission July 1973 Table A-4, pgs 4-6, NUCLIDE MASTER LIST - MASTER LIST OF ADULT DOSE FACTORS

11.2 Final Safety Analysis Report, Shoreham Nuclear Power Station Unit 1, Long Island Lighting Company, Revision 7, August 1977

11.2.1 Part 11.6.2.1 LIQUID EFFLUENT PATHWAYS - Used to Determine Dilution of Release

11.2.2 Table 11.2.6.1 ESTIMATED LIQUID EFFLUENT RELEASES

12.0 APPENDICES

12.1 Liquid Release Worksheet

LIQUID RELEASE WORKSHEET

ACTIVITY	RELEASE CONCENTRATION (μCi/ML) Q	PROJECTED DURATION OF EXPOSURE (HR) T	CONVERSION FACTOR (MREM-ML/μCi ML) CF*	PROJECTED DOSE (MREM)
SWIMMING			9.64×10^1	WHOLE BODY (SWIMMING)
			1.33×10^2	SKIN (SWIMMING)
BOATING			6.67×10^1	WHOLE BODY (BOATING)

*CF (MREM-ML/μCi -HR = G X M X DCF (MREM-ML/μCi -HR)

G= GEOMETRY OF EXPOSURE (UNITLESS)= 1.0 FOR SWIMMING. 0.5 FOR BOATING

M= DILUTION OF RELEASE=1/8.85= .113 (UNITLESS) REFERENCE-2A

DCF(WHOLE BODY)=8.53×10^2 (MREM-ML/μCi -HR) REFERENCES 1.2B

DCF (SKIN)=1.18×10^3 (MREM-ML/μCi -HR) REFERENCES 1.2B

CF(SWIMMING. WHOLE BODY)= $1.0 \times .113 \times 8.53 \times 10^2$ (MREM-ML/μCi -HR)
= 9.64×10^1 (MREM-ML/μCi -HR)

CF(SWIMMING. SKIN) = $1.0 \times .113 \times 1.18^3 \times 10$ (MREM-ML/μCi -HR)
= 1.33×10^2 (MREM-ML/μCi -HR)

CF(BOATING. WHOLE BODY) = $0.5 \times .113 \times 1.18 \times 10^3$ (MREM-ML/μCi -HR)
= 6.67×10^1 (MREM-ML/μCi -HR)

Submitted: _____

Approved: _____
(Plant Manager)

DRAFT

DRAFT - PRELIMINARY

SP Number 69.Ø26.Ø1
Revision: A
Date Eff.: _____
TPC _____
TPC _____
TPC _____

PROTECTIVE ACTION RECOMMENDATIONS

1.0 PURPOSE

This procedure provides guidelines for determining protective action recommendations to be given to state and local officials.

2.0 RESPONSIBILITY

The Radiological Control Manager, Radiation Protection Manager or In-plant Radiation Monitoring Technician is responsible for ensuring compliance with this procedure.

PPF 1021.6ØØ-6.421

MAR 19 1982

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Disc #12, jw
3/18/82

3.0 DISCUSSION

3.1 The decision process used in determining a recommended protective action is based upon a number of factors. These factors are release duration, magnitude of release, plume travel time, evacuation time estimates, dilution factors, shelter factors, dose limits, and dose savings.

3.2 After examining a protective action, the Response Manager or Emergency Director will give approval to such an action before it is recommended to offsite authorities.

3.3 Because protective action recommendations could be influenced by factors not considered here, use this procedure with common sense and judgement.

3.4 Topics covered in this procedure include:

4.0 PRECAUTIONS

N/A

5.0 PREREQUISITES

Emergency Plan Implementing Procedure SP69.Ø22.Ø1, "Determination of Offsite Doses and/or SP69.Ø24.Ø1, Waterborne Release Dose Projection have been initiated.

6.0 LIMITATIONS AND ACTIONS

N/A

7.0 MATERIALS

N/A

8.0 PROCEDURE

Waterborne Protective Actions

8.1 Radiation Protection Manager or Designee, perform the following:

8.1.1 Compare projected swimming (whole body and skin) and boating doses obtained from SP 69.Ø24.Ø1 Waterborne Release Dose Projection with the Waterborne Protective Action Guidance Chart (Appendix 12.1).

8.1.2 Take the recommended protective action and report it to the Response Manager or Emergency Director for approval and inform the appropriate agencies (e.g., Coast Guard) in accordance with Emergency Plan Implementing Procedure SP 69.ØØ9.Ø1 Notifications.

Airborne Protective Actions

8.2 Radiological Control Manager, Radiation Protection Manager, In-plant Radiation Monitoring Technician, or applicable designee, perform the following:

8.2.1 Complete whole body and thyroid calculations, recording the following information in the appropriate items of the Airborne Protective Action Guide Worksheet (Appendix 12.2).

8.2.1.1 Obtain area of concern (Item 1), expected release duration (Item 2), windspeed (Item 3), and projected thyroid and whole body doses (Item 11) from SP 69.Ø22.Ø1 Determination of Offsite Doses.

8.2.1.2 Calculate Item 4 and 5 of Appendix 12.2.

8.2.1.3 Determine weather condition and evacuation time (Items 6 and 7). Determine the prevailing weather conditions and record this in Item 6. Adverse weather consists of conditions which will significantly reduce traffic speeds, such as rain and light show. If severe weather (e.g. flooding or blizzard) conditions exist, a separate evacuation time will have to be estimated.

8.2.1.4 Complete Item 8-14 to determine projected, shelter, and evacuation doses.

8.2.1.5 Complete Item 15 to determine whole body and thyroid indicated actions.

8.2.2 Based upon the results of Step 8.2.1.5 above, take the higher indicated action as the protective action recommendation (Item 16) and record this on the Protective Action Map (Appendix 12.6).

8.2.3 Repeat this procedure for 1, 3, and 5 center line values.

8.2.3.1 Consider recommending the same protective action for adjacent zones.

8.2.3.2 Consider recommending the same protective action for adjacent zone as distance from the plant increases.

8.2.4 Transmit worksheet and the Protective Action Map to the Emergency Director or Recovery Manager for approval.

WATERBORNE PROTECTIVE ACTION GUIDANCE CHART

IF	THEN
Projected whole body or skin dose due to swimming is equal to or greater than 1 rem.	Instruct the U.S. Coast Guard to remove all swimmers within a 1 mile distance of the plant
Projected whole body dose due to boating is equal to or greater than 1 rem.	Instruct the U.S. Coast Guard to evacuate all boats and vessels within a 1 mile distance of the plant

AIRBORNE PROTECTION ACTION GUIDE WORKSHEET

1. Area of Concern (_____) — Location

   a. Distance _____ miles — 1a. _____ miles
   b. Direction _____ (degrees)
   c. Zone _____

2. Expected release duration — 2. _____ hours

3. Windspeed = _____ meter/sec X 2.24 — 3. _____ miles/hr.

4. Plume travel time = item 1a ÷ item 3 — 4. _____ hours

   = _____ - _____

5. Time unitl exposure begins (a or b) — 5. _____ hours (a or b)

   a. If release has begun:

      Time = item 4 - time release has been in progress

      Time = _____ - _____

      NOTE: If item 5a is a negative number, enter zero hours for item 5

   b. If release will begin later:

      Time = item 4 + time until release

      Time = _____ + _____

6. Weather condition and season (circle one for a,b and c):

   a. Normal Adverse Severe
   b. Seasonal Non-Seasonal
   c. Day Night

7. Evacuation time: — 7. _____ hours

   Use Appendix 12.3 along with information recorded in items 1 and 6 to determine the time.

8. Exposure time = item 7 - item 5 — 8. _____ hours

   = _____ - _____

9. Evacuation Exposure Period: Smaller of item 8 or item 2 — 9. _____ hours

AIRBORNE PROTECTION ACTION GUIDE WORKSHEET (CONT'D)

		THYROID	WHOLE BODY
10.	Projected Dose (from SP69.Ø22.Ø1)	10._____rem	10._____rem
11.	Measured dose from field monitoring teams (if applicable):		
	Monitoring Team Dose Rate X item 2		
	_____rem/hr Thyroid X _____hrs.	11._____rem	
	_____rem/hr Whole Body X ____hrs.		11._____rem
12.	Most reliable projected dose (item 10 or 11)	12._____rem	12._____rem
13.	Evacuation Dose		
	= item 9 X item 12 ÷ item 2		
	_____ X _____ ÷ _____(Thyroid)	13._____rem	
	_____ X _____ ÷ _____(Whole Body)		13._____rem
14.	Shelter Dose		
	Thyroid (a or b)		
	a. For item 2 less than or equal to 2 hours		
	item 12 X 0.33 = _____ X 0.33 = _____		
	b. For item 2 greater than 2 hours		
	item 12 X (item 2 - 1.33) ÷ item 2		
	_____ X (_____ - 1.33) ÷ _____ = _____	14._____rem (a or b)	
	Whole Body		
	Item 12 X Structural Shielding Factor (Appendix 12.5)		
	_____ X _____		14._____rem

AIRBORNE PROTECTIVE ACTION GUIDE WORKSHEET (CONT'D)

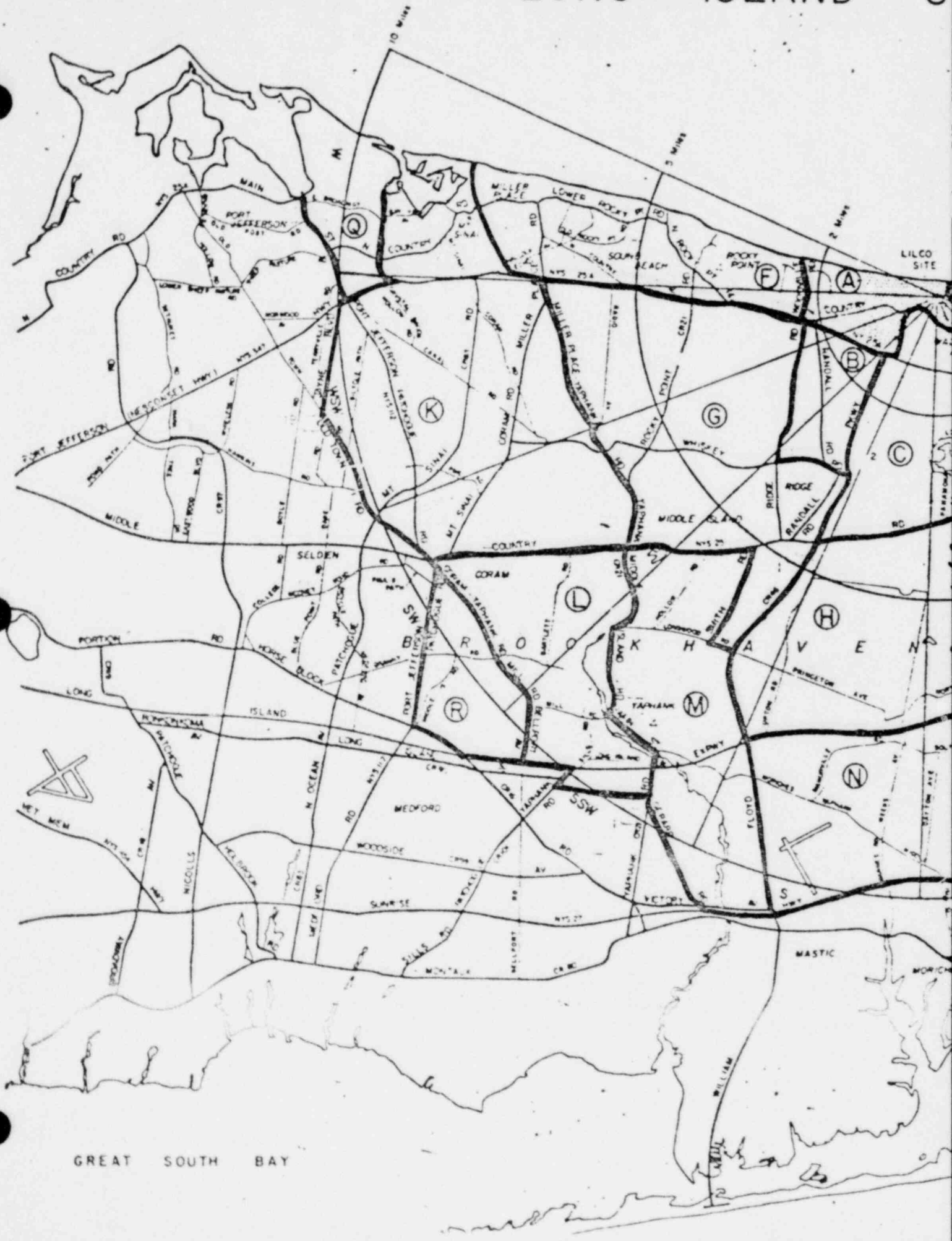
		THYROID	WHOLE BODY
15.	Refer to the thyroid and whole Body Guidance charts (Appendix 12.6) and Circle the appropriate action for each	No Action	No Action
		Shelter	Shelter
		Evacuate	Evacuate

16. Protective Action Recommendation (Circle One)

No Action Shelter Evacuate

17. Indicate item 16 on the Protective Action Map (Appendix 12.6) for the area of concern

LONG ISLAND S



DUND


N
LEGEND
ZONE BOUNDARIES
LILCO PLANT PROPERTY
0 1 2 3
Scale in Miles
2 Miles
5 Miles
10 Miles
E
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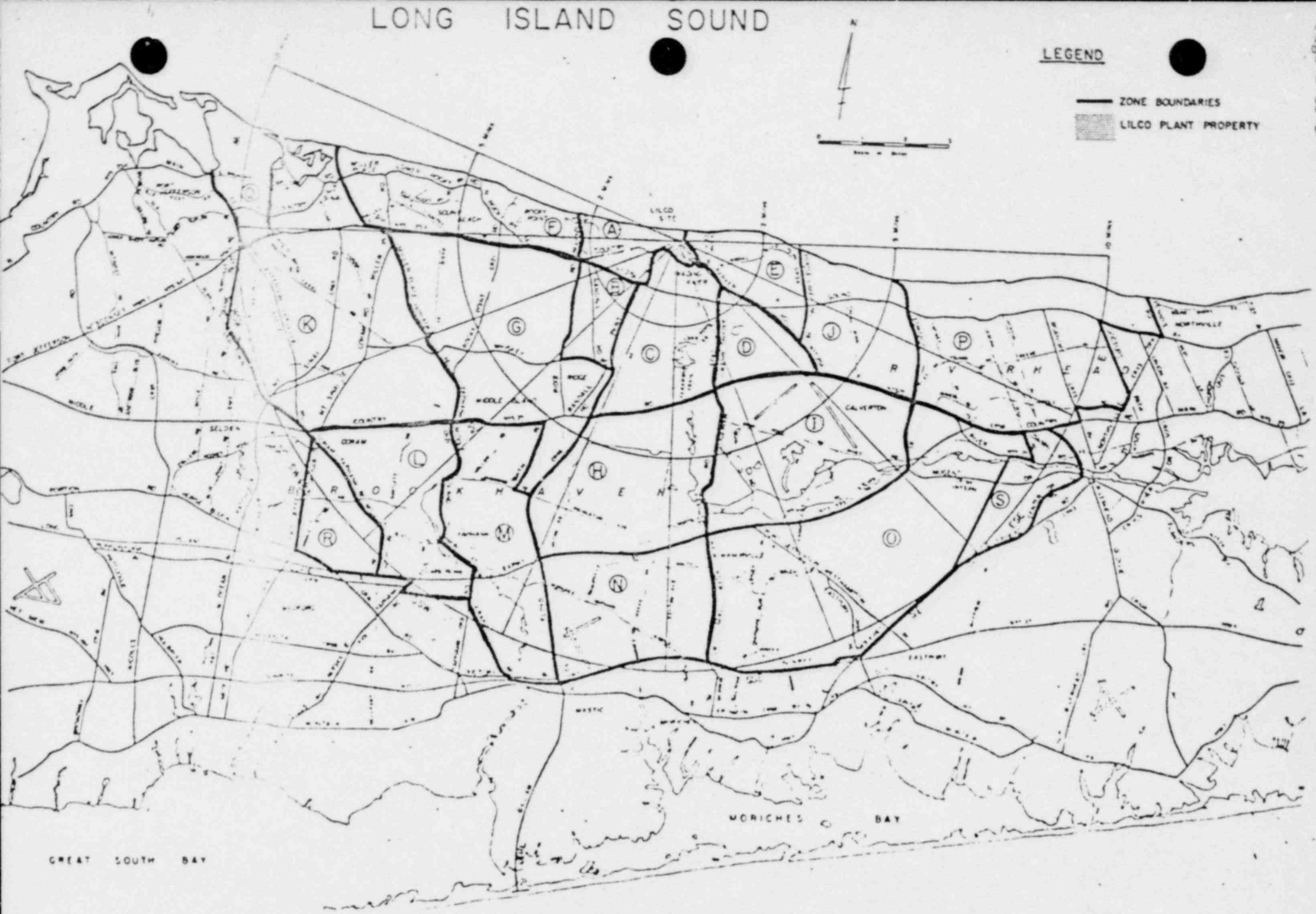
O
R I V E R H E A D
CALVERTON
NORTHVILLE
MANORVILLE
EASTPORT
SUNRISE
MORICHES BAY


LONG ISLAND SOUND
LEGEND
ZONE BOUNDARIES
LILCO PLANT PROPERTY
LILCO SITE
MORICHES BAY
GREAT SOUTH BAY

EVACUATION TIMES BY WIND DIRECTION

SEASONAL (IDEAL CONDITIONS)

WIND DIRECTION (towards)	0-2 MILES ZONE(S)	0-2 MILES WEEK DAY	0-2 MILES WEEK NIGHT	0-5 MILES ZONES	0-5 MILES WEEK DAY	0-5 MILES WEEK NIGHT	0-10 MILES ZONES	0-10 MILES WEEK DAY	0-10 MILES WEEK NIGHT
W by WNW	A	2.25	2.25	AF	5.08	5.08	AFKQ	5.58	5.58
W	A	2.25	2.25	AFG	5.08	5.08	AFGKQ	5.58	5.58
W by WSW	AB	2.50	2.50	ABFG	5.08	5.08	ABFGKQ	5.58	5.58
WSW	AB	2.50	2.50	ABFG	5.08	5.08	ABFGKQ	5.58	5.58
WSW by SW	AB	2.50	2.50	ABFG	5.08	5.08	ABFGKRL	5.17	5.17
SW	AB	2.50	2.50	ABG	3.00	3.00	ABGKRLM	4.33	4.33
SW by SSW	ABC	2.50	2.50	ABCGH	4.83	4.83	ABCGHKRLM	4.67	4.67
SSW	ABC	2.50	2.50	ABCGH	3.17	4.83	ABCGHRLMN	5.00	5.00
SSW by S	BC	2.42	2.42	BCGH	3.17	3.17	BCGHLMN	3.17	3.17
S	BC	2.42	2.42	BCGHI	3.17	3.17	BCGHIMNO	3.67	3.17
S by SSE	CD	2.17	2.17	CDHI	3.17	2.67	CDHIMNO	3.67	2.75
SSE	CD	2.17	2.17	CDHI	3.17	2.67	CDHINO	3.67	2.75
SSE by SE	CD	2.17	2.17	CDHI	3.17	2.67	CDHINO	3.67	2.75
SE	CDE	2.25	2.25	CDEIJ	4.67	4.08	CDEIJOS	4.67	3.83
SE by ESE	CDE	2.25	2.25	CDEIJ	4.67	4.08	CDEIJOPS	4.67	3.83
ESE	CDE	2.25	2.25	CDEIJ	4.67	4.08	CDEIJOPS	4.67	3.83
ESE by E	DE	2.17	2.17	DEIJ	4.67	4.08	DEIJOPS	4.67	3.83
E	E	2.00	2.00	EJ	4.00	3.33	EJOPS	4.08	3.33
E by ENE	E	2.00	2.00	EJ	4.00	3.33	EJP	4.08	3.33
NO WIND	ABCDE	2.50	2.50	N/A			N/A		

TIMES ARE EXPRESSED IN HOURS AND INCLUDE 20 MIN. FOR MOBILIZATION

EVACUATION TIMES BY WIND DIRECTION

NON-SEASONAL (IDEAL CONDITIONS)

WIND DIRECTION (toward)	0-2 MILES ZONE(S)	WEEK DAY	WEEK NIGHT	0-5 MILES ZONES	WEEK DAY	WEEK NIGHT	0-10 MILES ZONES	WEEK DAY	WEEK NIGHT
W by WNW	A	1.83	1.83	AF	4.75	4.75	AFKQ	5.33	5.33
W	A	1.83	1.83	AFG	4.75	4.75	AFGKQ	5.33	5.33
W by WSW	AB	2.50	2.50	ABFG	4.75	4.75	ABFGKQ	5.33	5.33
WSW	AB	2.50	2.50	ABFG	4.75	4.75	ABFGKQL	5.33	5.33
WSW by SW	AB	2.50	2.50	ABFG	4.75	4.75	ABFGKRL	4.92	4.92
SW	AB	2.50	2.50	ABG	3.00	3.00	ABGKRLM	3.92	3.92
SW by SSW	ABC	2.50	2.50	ABCGH	4.58	4.33	ABCGHKRLM	4.17	4.17
SSW	ABC	2.50	2.50	ABCGH	4.58	4.33	ABCGHRLMN	4.58	4.58
SSW by S	BC	2.42	2.42	BCGH	3.17	3.17	BCGHLMN	3.17	3.17
S	BC	2.42	2.42	BCGHI	3.17	3.17	BCGHIMNO	3.17	3.17
S by SSE	CD	1.33	1.33	CDHI	2.33	1.75	CDHIMNO	2.83	2.25
SSE	CD	1.33	1.33	CDHI	2.33	1.75	CDHINO	2.83	2.25
SSE by SE	CD	1.33	1.33	CDHI	2.33	1.75	CDHINO	2.83	2.25
SE	CDE	1.67	1.67	CDEIJ	2.83	2.83	CDEIJOS	2.83	2.83
SE by ESE	CDE	1.67	1.67	CDEIJ	2.83	2.83	CDEIJOPS	2.83	2.83
ESE	CDE	1.67	1.67	CDEIJ	2.83	2.83	CDEIJOPS	2.83	2.83
ESE by E	DE	1.67	1.67	DEIJ	2.83	2.83	DEIJOPS	2.83	2.83
E	E	1.50	1.50	EJ	2.33	2.33	EJOPS	2.33	2.33
E by ENE	E	1.50	1.50	EJ	2.33	2.33	EJP	2.33	2.33
NO WIND	ABCDE	2.50	2.50	N/A			N/A		

TIMES ARE EXPRESSED IN HOURS AND INCLUDE 20 MIN. FOR MOBILIZATION

EVACUATION TIMES BY WIND DIRECTION

SEASONAL (ADVERSE CONDITION)

WIND DIRECTION (toward)	0-2 MILES ZONE(S)	0-2 MILES WEEK DAY	0-2 MILES WEEK NIGHT	0-5 MILES ZONES	0-5 MILES WEEK DAY	0-5 MILES WEEK NIGHT	0-10 MILES ZONES	0-10 MILES WEEK DAY	0-10 MILES WEEK NIGHT
W by WNW	A	2.67	2.67	AF	6.08	6.08	AFKQ	6.67	6.67
W	A	2.67	2.67	AFG	6.08	6.08	AFGKQ	6.67	6.67
W by WSW	AB	3.00	3.00	ABFG	6.08	6.08	ABFGKQ	6.67	6.67
WSW	AB	3.00	3.00	ABFG	6.08	6.08	ABFGKQL	6.67	6.67
WSW by SW	AB	3.00	3.00	ABFG	6.08	6.08	ABFGKRL	6.17	6.17
SW	AB	3.00	3.00	ABG	3.58	3.58	ABGKRLM	5.17	5.17
SW by SSW	ABC	3.00	3.00	ABCGH	5.75	5.75	ABCGHKRLM	5.58	5.58
SSW	ABC	3.00	3.00	ABCGH	5.75	5.75	ABCGHRLMN	6.00	6.00
SSW by S	BC	2.83	2.83	BCGH	3.75	3.75	BCGHLMN	3.75	3.75
S	BC	2.83	2.83	BCGHI	3.75	3.75	BCGHIMNO	4.33	3.75
S by SSE	CD	2.58	2.58	CDHI	3.75	3.17	CDHIMNO	4.33	3.25
SSE	CD	2.58	2.58	CDHI	3.75	3.17	CDHINO	4.33	3.25
SSE by SE	CD	2.58	2.58	CDHI	3.75	3.17	CDHINO	4.33	3.25
SE	CDE	2.67	2.67	CDEIJ	5.58	4.83	CDEIJOS	5.58	4.58
SE by ESE	CDE	2.67	2.67	CDEIJ	5.58	4.83	CDEIJOPS	5.58	4.58
ESE	CDE	2.67	2.67	CDEIJ	5.58	4.83	CDEIJOPS	5.58	4.58
ESE by E	DE	2.58	2.58	DEIJ	5.58	4.83	DEIJOPS	5.58	4.58
E	E	2.33	2.33	EJ	4.75	4.00	EJOPS	4.83	4.00
E by ENE	E	2.33	2.33	EJ	4.75	4.00	EJP	4.83	4.00
NO WIND	ABCDE	3.00	3.00	N/A			N/A		

TIMES ARE EXPRESSED IN HOURS AND INCLUDE 20 MIN. FOR MOBILIZATION

EVACUATION TIMES BY WIND DIRECTION

NON SEASONAL (ADVERSE CONDITIONS)

WIND DIRECTION (toward)	0-2 MILES ZONE(S)	0-2 MILES WEEK DAY	0-2 MILES WEEK NIGHT	0-5 MILES ZONES	0-5 MILES WEEK DAY	0-5 MILES WEEK NIGHT	0-10 MILES ZONES	0-10 MILES WEEK DAY	0-10 MILES WEEK NIGHT
W by WSW	A	2.17	2.17	AF	5.67	5.67	AFKQ	6.33	6.33
W	A	2.17	2.17	AFG	5.67	5.67	AFGKQ	6.33	6.33
W by WSW	AB	3.00	3.00	ABFG	5.67	5.67	ABFGKQ	6.33	6.33
WSW	AB	3.00	3.00	ABFG	5.67	5.67	ABFGKQL	6.33	6.33
WSW by SW	AB	3.00	3.00	ABFG	5.67	5.67	ABFGKRL	5.83	5.83
SW	AB	3.00	3.00	ABG	3.58	3.[illegible]	ABGKRLM	4.67	4.67
SW by SSW	ABC	3.00	3.00	ABCGH	5.58	5.17	ABCGHKRLM	5.00	5.00
SSW	ABC	3.00	3.00	ABCGH	5.58	5.17	ABCGHRLMN	5.58	5.58
SSW by S	BC	2.83	2.83	BCGH	3.75	3.75	BCGHLMN	3.75	3.75
S	BC	2.83	2.83	BCGHI	3.75	3.75	BCGHIMNO	3.75	3.75
S by SSE	CD	1.58	1.58	CDHI	2.75	2.08	CDHIMNO	3.33	2.67
SSE	CD	1.58	1.58	CDHI	2.75	2.08	CDHINO	3.33	2.67
SSE by SE	CD	1.58	1.58	CDHI	2.75	2.08	CDHINO	3.33	2.67
SE	CDE	2.00	2.00	CDEIJ	3.33	3.33	CDEIJOS	3.33	3.33
SE by ESE	CDE	2.00	2.00	CDEIJ	3.33	3.33	CDEIJOPS	3.33	3.33
ESE	CDE	2.00	2.00	CDEIJ	3.33	3.33	CDEIJOPS	3.33	3.33
ESE by E	DE	2.00	2.00	DEIJ	3.33	3.33	DEIJOPS	3.33	3.33
E	E	1.75	1.75	EJ	2.75	2.75	EJOPS	2.75	2.75
E by ENE	E	1.75	1.75	EJ	2.75	2.75	EJP	2.75	2.75
NO WIND	ABCDE	3.00	3.00	N/A			N/A		

TIMES ARE EXPRESSED IN HOURS AND INCLUDE 20 MIN. FOR MOBILIZATION

REPRESENTATIVE SHIELDING FACTORS FROM GAMMA CLOUD SOURCE (1)

STRUCTURE OR LOCATION	SHIELDING FACTOR (a)	REPRESENTATIVE RANGE
Outside	1.0	---
Vehicles	1.0	---
Wood-frame house (b) (no basement)	0.9	---
Basement of wood house	0.6	0.1 to 0.7 (c)
Masonry house (no basement)	0.6	0.4 to 0.7 (c)
Basement of masonry house	0.4	0.1 to 0.5 (c)
Large office or industrial building	0.2	0.1 to 0.3 (c), (d)

(a) The ratio of the dose received inside the structure to the dose that would be received outside the structure.

(b) A wood frame house with brick or tone veneer is approximately equivalent to a masonry house for shielding purposes.

(c) This range is mainly due to different wall materials and different geometries.

(d) The shielding factor depends on where personnel are located within the building (e.g. the basement or an inside room).

(1) Ref: Sand 77-1725 (Unlimited Release)

THYROID GUIDANCE CHART

IF	THEN
Projected dose (Item 12) is less than 5 rem	No action
Shelter dose (Item 14) is less than 25 rem	Shelter* for children and women of childbearing age.
Shelter dose (Item 14) equal to or greater than 25 rem and evacuation dose (Item 13) equal to or greater than shelter dose.	Shelter*
Sheltr dose (Item 14) equal to or greater than 25 rem and evacuation dose (Item 13) less than shelter dose.	Evacuate

Shelter is to be with ventilation control. Ventilation control means turning off air conditioners or fans, closing doors and windows thus preventing access of outside air.

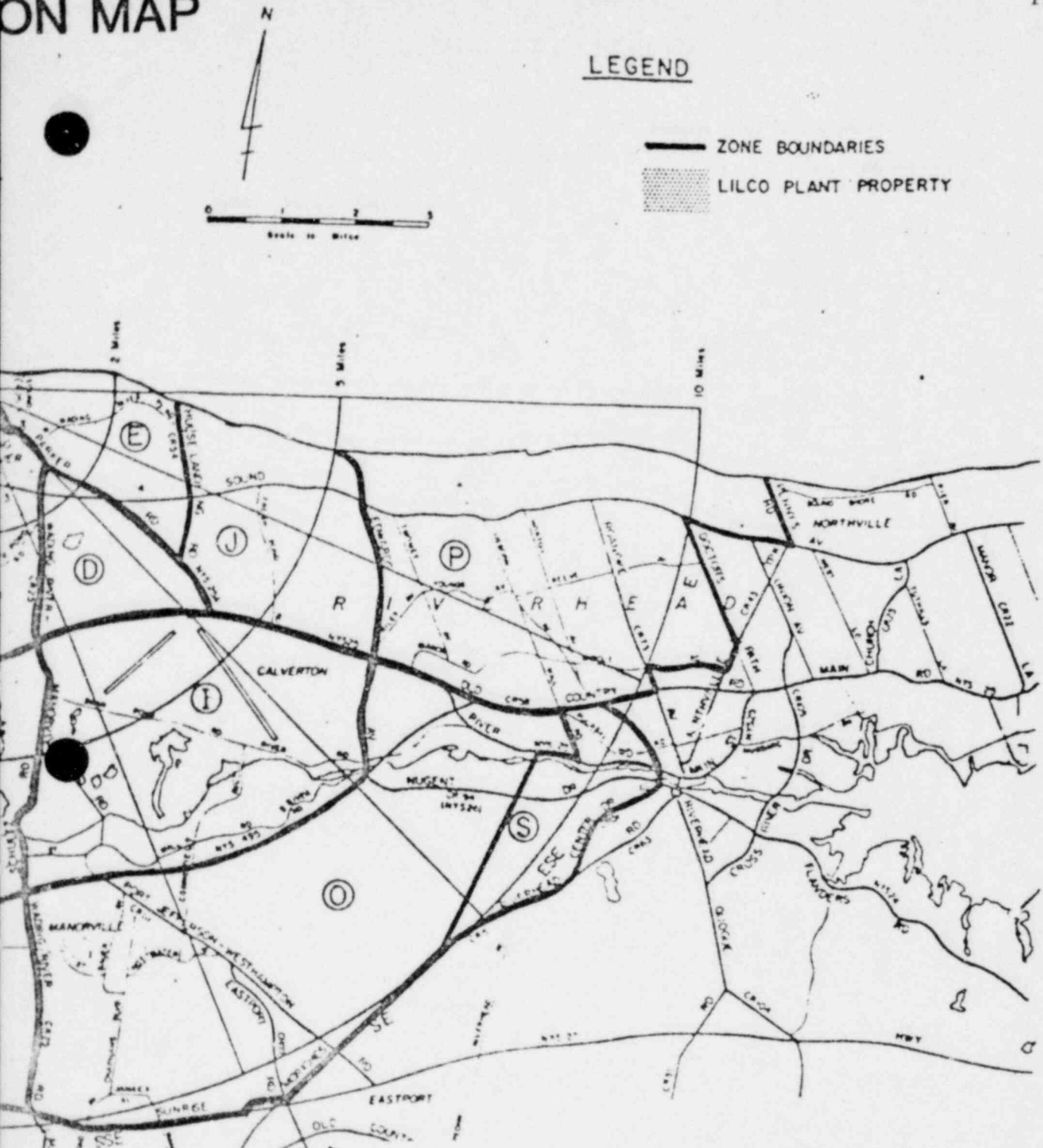
WHOLE BODY GUIDANCE CHART

IF	THEN
Projected dose (Item 12) less than 1 rem	No Action
Shelter dose (Item 14) less than 5 rem	Shelter*
Shelter dose (Item 14) equal to or greater than 5 rem and evacuation dose (Item 13) equal to or greater than shelter dose.	Shelter*
Shelter dose (Item 14) equal to or greater than 5 rem and evacuation dose (Item 13) less than shelter dose.	Evacuate

*Shelter is to be with ventilation control. Ventilation control means turning off air conditioners or fans, closing doors and windows thus preventing access of outside air.

PROTECTIVE ACT

ON MAP



DESIGNATE AREAS WITH RECOMMENDED PROTECTIVE ACTION SYMBOLS AS FOLLOWS:

N-NO ACTION

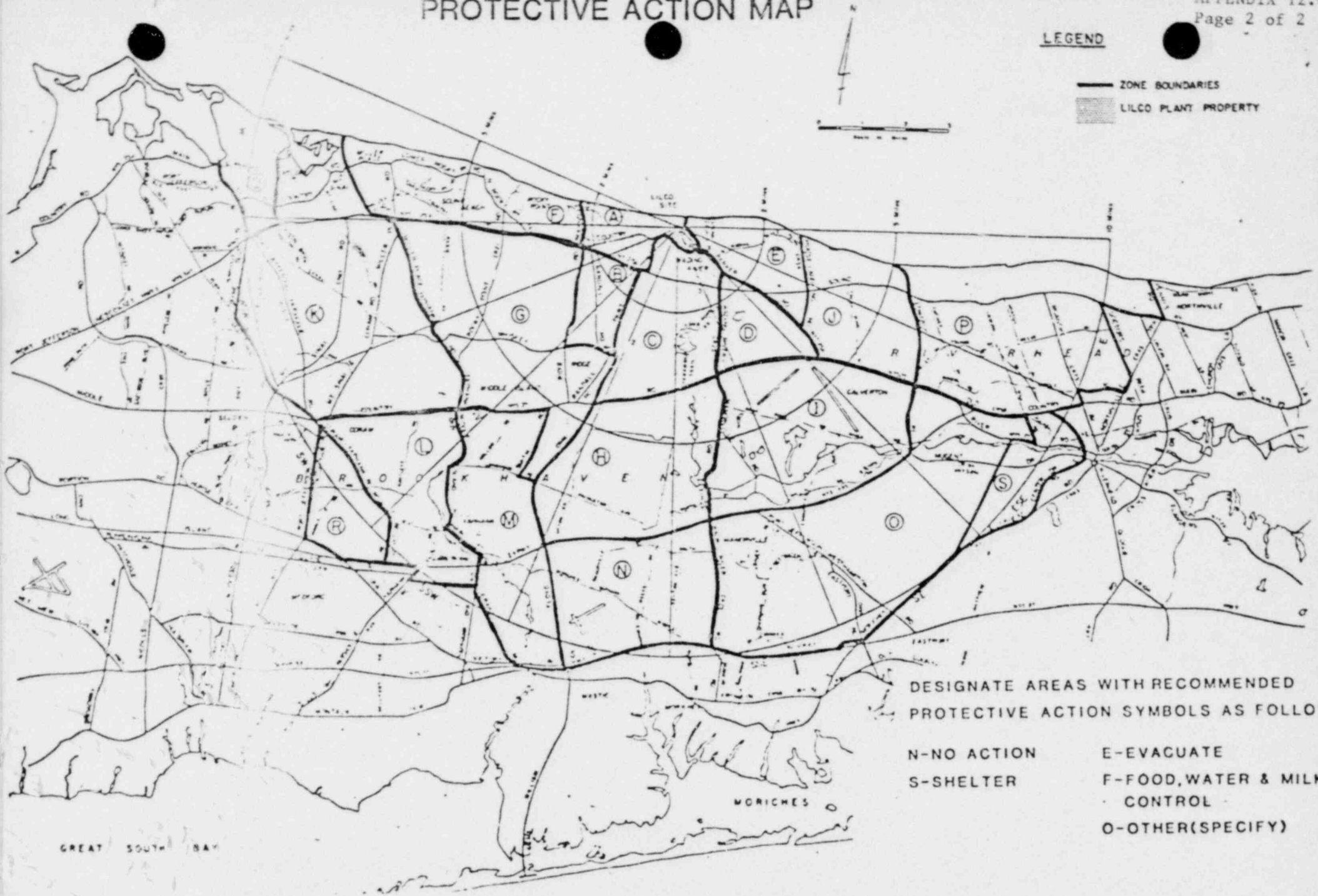
S-SHELTER

E-EVACUATE

F-FOOD, WATER & MILK CONTROL

O-OTHER(SPECIFY)

PROTECTIVE ACTION MAP



DESIGNATE AREAS WITH RECOMMENDED PROTECTIVE ACTION SYMBOLS AS FOLLOW

N-NO ACTION
E-EVACUATE
S-SHELTER
F-FOOD, WATER & MILK CONTROL
O-OTHER(SPECIFY)

Submitted: _____

Approved: _____
(Plant Manager)

DRAFT - PRELIMINARY

SP Number 69.Ø3Ø.Ø1
Revision B
Date Eff. _____
TPC _____
TPC _____
TPC _____

EVACUATIONS DURING AN EMERGENCY

1.0 PURPOSE

This procedure provides instructions for implementing an emergency evacuation of areas within the Shoreham Nuclear Power Station and adjacent areas onsite. This procedure does not apply to the evacuation of members of the general public from affected areas offsite, as this is described in the emergency response plans of the risk jurisdictions.

2.0 RESPONSIBILITY

The Emergency Director (Watch Engineer, until relieved) is responsible to ensure that an appropriate evacuation is implemented when conditions warrant such action.

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3.0 DISCUSSION

3.1 This procedure is primarily directed at evacuations initiated by actual or imminent radiological conditions. The basic actions described herein also apply, where appropriate, to evacuations related to other habitability hazards such as toxic gases or fire.

3.2 An evacuation is the orderly, accelerated relocation of non-essential personnel from a plant area as a means of reducing their exposure to radiation or another health hazard. An evacuation may be implemented in response to already existing condition(s), or in preparation of imminent conditions, which are described in the protective action guides which follow. The following types of evacuation are discussed in this procedure:

3.2.1 Local Evacuation - a localized condition affects a small area, such as a room or cubicle. Evacuation is to the nearest unaffected location.

3.2.2 Local Evacuation Reactor Drywell - Similar to local, but involves the reactor drywell. Applicable during shutdown periods.

3.2.3 Restricted Area Evacuation - A widespread condition affects several areas within the restricted area. Evacuation is to a designated assembly area within the protected area, but outside the restricted area.

3.2.4 Site Evacuation - a widespread condition has affected, or could affect, areas outside of the restricted area. Evacuation is to an onsite assembly area, with subsequent dismissal to an offsite location.

3.2.5 Immediate Site Evacuation - widespread conditions have resulted in radiological conditions onsite, which mandate immediate evacuation to an offsite, remote assembly area. The primary difference between the site evacuation and an immediate site evacuation is the location where personnel and vehicle monitoring will be performed.

3.3 Contractor/vendor organizations with more than 20 employees onsite are responsible for developing and maintaining an evacuation plan applicable to their employees, and in the event of a restricted area or site evacuation are responsible for implementing that plan. In particular, contractor organizations are responsible for personnel accountability for their own personnel. Such plans shall be submitted to the Emergency Planning Coordinator and the Review of Operations Committee for approval. Contractor organizations with less than 20 persons onsite will be treated as station personnel for the purposes of evacuation.

3.4 Topics covered in this procedure:

4.0 PRECAUTIONS

4.1 The implementation of an evacuation must be based on the protective action which will result in the lowest personnel exposure. Site evacuations should be initiated either before or after the passage of the release, and evacuation routes should be chosen to lead personnel away from the path of the plume. The Emergency Director should consider the dose rates at the personnel assembly area, dose rates onsite, dose rates along evacuation routes, number of personnel onsite, and whether or not the emergency can be mitigated prior to personnel receiving significant exposures in making an evacuation decision.

4.2 The evacuation criteria of Appendix 12.1 are based on the recommendations of the National Council on Radiation Protection (NCRP), and apply only to emergency situations in which the increased personnel exposure is necessary to mitigate the consequences of an accident. Such exposures, although technically justifiable, are in excess of Federal radiation exposure standards and are therefore not applicable to non-emergency situations, or to most recovery operations following an emergency. Evacuation or any other appropriate protective actions should be implemented to maintain personnel exposure as low as reasonably achievable and with normal station radiation exposure guidelines and limits.

5.0 PREREQUISITES

5.1 A local evacuation (section 8.1) shall occur if any of the following limits are exceeded:

5.1.1 General access area radiation monitor alarm (>5 mr/hr)

5.1.2 Building airborne monitor indicates airborne activity in excess of 1×10^{-9} μCi/cc unidentified mix or in excess of IMPC for identified mixes in areas not posted as Airborne Radioactivity Area.

5.1.3 Alarms on continuous air monitors (CAMs)

5.1.4 Results of surveys with portable survey equipment indicate significant unexpected increases in area radiation levels.

5.1.5 Commencement of a plant operation which is known or projected to cause significant increases in radiation levels in occupied areas (eg: movement of traversing incore probes (TIPs), starting Engineered Safeguards Feature (ESF) equipment under core damage conditions, etc.)

5.1.6 Fire in any occupied area

5.1.7 Toxic or flammable gases or heavy smoke observed or reported in any occupied area.

5.2 A local evacuation of the Control Room should be implemented upon the decision of the Watch Engineer that the Control Room is no longer habitable. Respiratory equipment and other protective measure should be implemented as the primary protective action, with evacuation used only in the event of:

5.2.1 Uncontrollable fire in the Control Room

5.2.2 Heavy smoke or toxic or flammable gases in the Control Room

5.2.3 Any other severe condition, which in the judgement of the Watch Engineer, warrants controlling the plant from the remote shutdown panel.

NOTE: A Control Room evacuation is implemented in accordance with emergency operating procedure SP 29.022.01.

5.3 A local evacuation of the reactor drywell (during shutdown periods) may be implemented in response to the existence of one or more conditions identified below:

5.3.1 Criticality accident/fuel handling accident

5.3.2 One or more of the conditions identified in section 8.1.1 of this procedure.

6.0 LIMITATIONS AND ACTIONS

N/A

7.0 MATERIALS AND TEST EQUIPMENT

N/A

8.0 PROCEDURE

8.1 Local Evacuation - Except Reactor Drywell

NOTE: A local evacuation may be initiated by personnel in the affected area in response to observed conditions, portable survey instrument

readings, or locally alarming radiation monitors. The procedure steps below assume that the evacuation is initiated by indications alarms observed in the Control Room. As a result, some steps may not be applicable to all local evacuations.

8.1.1 Based on reported conditions, the Watch Engineer or designee shall select an assembly area for personnel in the affected area. This assembly area should be located just beyond the affected area, but should be in a low radiation area.

8.1.2 The Watch Engineer or designee shall announce over the page party system:

"Attention, all station personnel. There is a high radiation level (or other hazard) indicated in the ___(specify area)___. Personnel in the area should evacuate to ___(specify location___."

Continue with additional instructions as necessary.

8.1.3 Repeat the announcement three times at approximately one-minute intervals.

8.1.4 Personnel evacuating an affected area should proceed to the assigned assembly area and standby for personnel monitoring as determined by Health Physics personnel sent to the scene.

8.1.5 The work crew foreman/leadman, the senior individual present, or the Health Physics technician assigned to the area (if applicable) will ensure that all personnel have evacuated the affected area and report this fact to the Control Room.

8.1.6 If reports indicate the need, search and rescue measures shall be initiated as provided in SP 69.080.01, Search and Rescue.

8.1.7 The Watch Engineer (Emergency Director, if applicable) or designee shall direct Health Physics personnel to conduct air sampling and radiation surveys in the affected areas to identify the extent, nature, and if possible, the source of the problem. Direct Health Physics personnel to perform radiological surveys in the assembly areas also.

8.1.8 If the results of radiation surveys at the designated assembly area indicates the need, personnel should relocate to another assembly area. Radiation Protection Manager or designee evaluate the need for a Restricted Area Evacuation.

8.1.9 On the basis of surveys performed in the affected area, Radiation Protection Manager shall allow personnel to return to the area, or have health physics personnel establish appropriate access control provisions in accordance with the health physics procedures until radiological conditions permit relaxing access controls.

8.2 Local Evacuation of the Reactor Drywell

NOTE: A local evacuation of the reactor drywell may be initiated by personnel in the reactor drywell area in response to observed conditions, portable survey instrument readings, or locally alarming radiation monitors.

8.2.1 Based on reported conditions, the Watch Engineer (Emergency Director if applicable) or designee shall select an assembly area for personnel vacating the reactor drywell. This assembly area should be in a low radiation area. An announcement of the following shall then be made over the page-party system:

"Attention all station personnel in the reactor drywell. There is a high radiation level (or other hazard) indicated in the reactor drywell. Personnel in the reactor drywell should evacuate to the drywell access control point."

Continue with additional instructions as necessary.

8.2.2 Repeat the announcement three times at approximately one-minute intervals.

8.2.3 Personnel in the drywell should stop work, and immediately proceed to the drywell access control point. At the drywell access control they should remove all protective clothing, unless otherwise directed by Health Physics personnel, and clear the access control point, signing out on the appropriate radiation work permit.

8.2.4 The Watch Engineer or Health Physics Engineer (Emergency Director or Radiation Protection Manager if applicable) shall direct health physics personnel at the check point to review radiation work permit sign-in sheets to determine if all personnel have exited the drywell.

8.2.5 If necessary, search and rescue measures shall be initiated as provided in SP 69.080.01, Search and Rescue.

8.2.6 Health physics personnel at the drywell access control point shall conduct air sampling and radiation surveys in the drywell to identify the extent, nature, and if possible, the source of the problem. In addition, appropriate surveys will be performed in the vicinity of the access control point.

8.2.7 If the results of the radiation surveys at the access control point indicate the need, personnel should relocate to another assembly area. Radiation Protection Manager or designee, evaluate the need for a Restricted Area evacuation.

8.2.8 On the basis of surveys performed in the affected area, Radiation Protection Manager, allow personnel to return to the area, or have Health Physics personnel establish appropriate access control provitions in accordance with the health physics procedures until radiological conditions permit relaxing access controls.

8.3 Restricted Area Evacuation Guidelines

8.3.1 A restricted area evacuation shall be implemented upon occurrence of one or more of the following abnormal conditions:

8.3.1.1 Multiple valid area radiation monitor or ventilation monitor alarms indicate a widespread, unlocalized problem. In the event area radiation monitor alarms occur in two out of three plant buildings (reactor building, radwaste building, turbine building), a Restricted Area evacuation should be implemented within the times specified in Appendix 12.1 for each range of dose rates or radioiodine concentrations prevailing in the affected area.

8.3.1.2 Other safety hazards, such as toxic gases, fire, flammable gases, uncontrolled live steam, affect widespread areas.

8.3.1.3 On-going security compromise.

8.3.2 Any condition which makes a site evacuation likely. A Restricted Area evacuation may be implemented first, if time permits, to facilitate accountability and to minimize confusion.

8.4 Restricted Area Evacuation

8.4.1 The Emergency Director or his designee shall sound the "PULSE" evacuation tone using the multitone generator and announce the following over the page party system:

"Attention all personnel. A high radiation level (or other hazard) exists in the (specify location). All personnel evacuate the Restricted Area and proceed to your designated assembly area and await instructions. Personnel with emergency assignments at the Technical Support Center or the Operations Support Center proceed to your assigned location".

8.4.2 Repeat the alarm and announcement three times at approximately one minute intervals.

8.4.3 Implement appropriate personnel accountability measures as provided in section 8.2 of SP 69.030.02, Personnel Accountability.

8.4.4 Personnel within the Restricted Area shall proceed directly to the Health Physics Access Control Point, removing protective clothing and performing appropriate personal contamination monitoring at the local control points in accordance with the Shoreham Health Physics procedures. If conditions at the local control points make timely evacuation necessary, or preclude personnel monitoring, monitoring shall be performed at the Health Physics Access Control Point. Health Physics personnel at the local control points will direct personnel appropriately.

8.4.5 Once clear of the control point, personnel will proceed to their designated assembly area.

8.4.6 If necessary, based on the outcome of the accountability efforts or other reports, search and rescue measures shall be initiated as provided in SP 69.080.01, Search and Rescue.

8.4.7 If a radiological hazard exists, the Emergency Director or the Radiological Protection Manager shall direct Health Physics personnel to perform radiological surveys in the affected areas to identify the extent, nature, and if possible, the source of the problem (health physics personnel shall also perform radiological surveys in the designated assembly areas).

8.4.8 If the results of the radiation surveys at the designated assembly area(s) indicate radiation levels in excess of 5 mrem/hr., or gross airborne radioactivity (less noble gases) in excess of 1E-9 µCi/cc, or if continued occupancy is expected to exceed 10 MPC hour for isotopic mix less noble gases; relocate to another assembly area, or if radiological conditions are widespread, initiate a site evacuation.

8.4.9 On the basis of radiation surveys performed in the affected area, Radiation Protection Manager or designee, shall allow personnel to return to their normal work stations (Section 8.5.11), effect an orderly early dismissal (Section 8.4.11) or implement a Site Evacuation as described in section 8.6.

8.4.10 If personnel are to be allowed to return to their normal work stations (with the exception of those areas still affected, if applicable), Control Room Operator shall announce three times:

"Attention, all station personnel, all personnel may return to their normal work locations and resume their work. Access to the following areas ___(specify areas)___, is restricted. All personnel stay clear of these areas."

8.4.11 If non-essential personnel are to be released early, and no significant release has occurred, the Emergency Director shall direct craft foremen/supervisors to release their crews in an orderly manner. If an early dismissal is desired, but significant airborne releases have occurred such that monitoring of personal vehicles is necessary, implement a site evacuation as described in Section 8.6.

8.5 Site Evacuation Guidelines

8.5.1 A site evacuation shall be implemented upon occurrence of one or more of the following abnormal conditions:

.1 Radiological conditions in any previously Unrestricted Area, (including areas onsite but outside of plant buildings), which will result in personnel dose rates in excess of 5 mrem/hr or a projected dose in excess of 100 mrem whole body

and/or airborne radioactivity in excess of 1 MPC or 40 MPC-hrs/week from uncontrolled sources of radiation.

.2 Significant ground level atmospheric releases have occurred or are projected to occur.

.3 Other safety hazards, such as toxic gases, flammable gases, and/or fire affect widespread areas onsite and, in particular, the primary assembly area.

.4 Adverse weather conditions such as floods, hurricanes, or tornadoes are present or are expected to occur. Normally in the case of adverse weather, advance weather warnings will provide adequate time for an orderly dismissal of station personnel without the need for evacuation.

8.6 Site Evacuation

8.6.1 Control Room Operator sound the "WARBLE" evacuation tone using the multitone generator.

8.6.2 Control Room Operator announce the following over the page party system (including all buildings and area within the exclusion area):

"Attention all station personnel. All personnel except those with emergency assignments shall evacuate the site promptly and orderly. Proceed to the guardhouse, turn-in your security badge and dosimetry, pass through the portal monitor, proceed to the employee parking lot, and await further instructions. Do not leave the parking lot until directed to".

If the secondary guardhouse is in operation, add the following:

"Contractor and vendor personnel who entered the site via the secondary guardhouse, should use that guardhouse, and proceed to the warehouse to await further instructions."

Continue with additional instructions as necessary.

8.6.3 Repeat the alarm and the announcement three additional times at one minute intervals.

8.6.4 Implement appropriate personnel accountability measures as provided in SP 69.030.02, Personnel Accountability.

8.6.5 Personnel within the Restricted Area should proceed to the designated assembly area, without delaying at the Health Physics Access Control Point for monitoring. If personnel suspect excessive contamination on their protective clothing, they should don a clean pair of coveralls over their contaminated clothing. Otherwise, personnel should proceed to the designated assembly area.

8.6.6 Personnel monitoring of station personnel will be accomplished by passage through the guardhouse portal monitors. If the guardhouse portal monitors are not functioning, or if background levels render them unusable, direct Health Physics personnel to the assembly area with portable friskers. Personnel found to be contaminated should be returned to the station for decontamination, if conditions permit.

8.6.7 If necessary, based on the outcome of accountability efforts or other reports, search and rescue measures shall be initiated as provided in SP 69.080.01, Search and Rescue.

8.6.8 The Radiation Protection Manager shall determine the need and extent for personal vehicle monitoring and additional personnel monitoring and will establish appropriate monitoring stations consistent with the guidelines of SP 69.030.03, Contamination Control During Emergencies.

8.6.9 Security shall provide appropriate personnel to direct traffic onsite and at the intersections of North Country Road and the site access roads. If monitoring is to be performed at the LILCO substation, Security shall be notified to direct all site traffic towards the substation.

8.6.10 When traffic control and radiological monitoring stations are ready (as applicable) and accountability efforts are essentially complete, a Control Room Operator shall announce over the page system (including all buildings and areas in the exclusion area):

"Attention all personnel. All personnel except those with emergency assignments, proceed to your automobiles, and exit the site orderly and promptly. Obey the directions of traffic control personnel. Proceed to the radiological monitoring station located on the site access road near Route 25A. Following monitoring proceed to the __(remote assembly area)__ (or to your homes)."

OR (No monitoring required)

"Attention all personnel. All personnel except those with emergency assignments, proceed to your automobiles and leave the site orderly and promptly. Obey the directions of traffic control personnel. Proceed to the __(remote assembly area)__ (or to your homes)".

8.6.11 Repeat the announcement three additional times at one minute intervals.

8.6.12 At the radiological monitoring station, vehicles found to be contaminated shall be directed by health physics personnel to the LILCO substation for decontamination efforts.

8.6.13 When the site evacuation is complete, Security personnel not necessary to maintain an appropriate security posture should be directed to the remote assembly area to await further instructions.

8.7 Immediate Site Evacuation Guidelines

An immediate site evacuation shall be implemented upon occurrence of radiological conditions in widespread areas onsite of such magnitude that personnel exposures in excess of 5 rem whole body or 25 rem thyroid would be likely if a normal site evacuation was implemented.

8.8 Immddiate Site Evacuation

8.8.1 Control Room Operator sound the "YELP" evacuation tone using the multitone generator.

8.8.2 Announce the following over the page party system (including all buildings and areas within the exclusion area):

"Attention all station personnel. All personnel except those with emergency assignments shall evacuate the site immediately. Proceed in your automobile to (remote assembly area) and await further instructions. Personnel monitoring will be performed at the remote assembly area.

Continue with additional instructions as necessary.

8.8.3 Repeat the alarm and the announcement three additional times at one minute intervals.

8.8.4 Implement appropriate personnel accountability measures as provided in SP 69.030.02, Personnel Accountability.

8.8.5 Personnel within the Restricted Area should proceed to their vehicles, without delaying at the Health Physics Access Control Point for monitoring. If personnel suspect excessive contamination on their protective clothing, they should don a clean pair of coveralls over their contaminated clothing.

8.8.6 If necessary, based on the outcome of accountability efforts or other reports, search and rescue measures shall be initiated as provided in SP 69.080.01, Search and Rescue.

8.8.7 Security have appropriate personnel direct traffic onsite and at the intersections of North Country Road and the site access roads (if applicable).

8.8.8 The Radiation Protection Manager shall determine the need and extent for personal vehicle monitoring and additional personnel monitoring and will establish appropriate monitoring stations at the remote assembly area, consistent with the guidelines of SP 69.030.03, Contamination Control During Emergencies.

8.8.9 Contaminated vehicles should be isolated pending decontamination. Contaminated personnel shall be decontaminated at the (Later

8.8.10 When the site evacuation is complete, Security personnel not necessary to maintain an appropriate security posture should be directed to the remote assembly area to await further assignment.

8.8.11 When personnel monitoring efforts are complete at the remote assembly area, and onsite accountability efforts are essentially complete, the Emergency Director shall release personnel to their homes, or if an offsite evacuation has taken place, to the designated reception center for his home community.

9.0 ACCEPTANCE CRITERIA

N/A

10.0 FINAL CONDITIONS

All non-essential station personnel have been evacuated from the affected areas to areas of safety and, where applicable, have been appropriately monitored for contamination.

11.0 REFERENCES

11.1 Shoreham Nuclear Power Station Emergency Plan and Emergency Plan Implementing Procedures.

11.2 Shoreham Nuclear Power Station Health Physics Manual

12.0 APPENDICES

12.1 Criteria for Mandatoty Evacuations

12.2 Evacuation Summary

12.3 Shoreham Remote Assembly Area(s) Map

12.4 Site Evacuation Route and Traffic Control Map

CRITERIA FOR MANDATORY EVACUATIONS[1]

WHOLE BODY[2] DOSE RATE (mrem/hour)	IMPLEMENT EVACUATION WITHIN	RADIOIODINE[3] CONCENTRATION (μCi/cc)
Up to 600	8 Hours	Up to 1E-5
600 to 1000	4 Hours	1E-5 to 2E-5
1000 to 2500	2 Hours	2E-5 to 4E-5
2500 to 5000	1 Hour	4E-5 to 7E-5
5000 to 10,000	30 Minutes	7E-5 to 1E-4
10,000 to 20,000	15 Minutes	1E-4 to 3E-4
>20,000	IMMEDIATELY	>3E-4

1. It is important to realize that there is no direct correlation between the whole body dose rates and the radioiodine concentrations; and the measurements or projections of each must be performed independently. In the event that only a direct radiation determination is available, with no corresponding knowledge of the concentration or fraction of the total which is attributable to radioiodine, the most conservative assumptions specified in the USEPA Manual for Protective Action Guides would be required. Such assumptions, based only on direct radiation determinations, would likely result in gross over-estimation of thyroid dose commitment.

2. Whole body dose to non-emergency personnel should not exceed 5000 mrem from the event. The whole body dose rates specified above are based on 5000 mrem. This value is based on the USEPA PAG Manual specified upper limit for members of the general public. Although this table specifies mandatory evacuation times, in the absence of significant constraints evacuations should be implemented to maintain personnel exposure as low as reasonably achievable and within specified quarterly exposure limits.

3. Maximum concentrations for specified time corresponds to approximately 25,000 mrem adult tyroid dose commitment. Radioiodine concentration vs adult thyroid dose commitment based on Appendix D, (January, 1979) to USEPA Manual of Protective Action Guides. Radioiodine nuclide distribution corresponds to 4 hours following reactor shutdown.

EVACUATION SUMMARY*

Type	Assembly Area	Personnel Monitoring	Accountability	Follow-up	Subsequent Monitoring
Local	Nearby Area	Local Control Point	Job Foreman (by observation)	Exit Restricted Area	Health Physics Access Control Point
				Return to Work	None
Drywell	Drywell Access Control Point	Drywell Access Control Point	HP Personnel at Access Control Point (via RWPs)	Exit Restricted Area	Health Physics Access Control Point
				Return to Work	None
Restricted Area	Machine Shop	Local Control Points and/or Health Physics Access Control Point	Craft Foremen/Supvrs (by muster)	Early Dismissal	Normal Guardhouse Monitoring
				Site Evacuation	Site Access Road Checkpoi
				Return to Work	None
Site	Parking Lot	Guardhouse Portal Monitors	Badge Turn-in at Guardhouse	Significant Release Has Occurred	Site Access Road Checkpoi
				Release Hasn't Occurred	None
Site Immediate	Remote Assembly Area	Remote Assembly Area	Badge Turn-in at Guardhouse	N/A	Vehicle and Personnel Monitoring at Remote Assembly Area

*Does not include contractor groups with greater than 20 onsite employees.

Submitted: _____

Approved: _____
(Plant Manager)

DRAFT - PRELIMINARY

SP Number 69.030.02
Revision D
Date Eff. _____
TPC _____
TPC _____
TPC _____

PERSONNEL ACCOUNTABILITY

1.0 PURPOSE

This procedure provides instructions for accounting for SNPS personnel, onsite visitors, and selected contractor/vendor personnel in the event of an evacuation of plant areas. This procedure applies to Local, Restricted Area, and Site evacuations.

2.0 RESPONSIBILITY

The Emergency Director is responsible to ensure that appropriate accountability measures are implemented following an evacuation at SNPS.

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3.0 DISCUSSION

3.1 This procedure addresses general methods for establishing accountability following an evacuation. The means of establishing accountability may vary from area to area, particularly for a local evacuation. In many cases, radiation work permit sign-in sheets may identify personnel known to be in an area, in other cases, the computerized security system may be able to identify those personnel suspected of being in the area. Responsible LILCO personnel are expected to take appropriate action to facilitate accountability by use of all personnel data available for a given evacuation.

3.2 When the emergency organization is activated, the Administrative Supervisor will assume responsibility for accountability efforts and will advise the Emergency Director on the need for search and rescue efforts, if necessary.

3.3 Topics

4.0 PRECAUTIONS

Security personnel shall remain alert to the computerized personnel accountability system operating conditions during evacuations. If it appears that the demands of personnel movement throughout the station are exceeding the capability of the system security personnel should promptly respond to these movements (by opening doors, operating turnstyles, etc), the system should be placed in free-wheeling to minimize delays in evacuating personnel, or delays in providing necessary access to plant areas for emergency personnel. Personnel accountability, however, shall not be compromised under such conditions.

5.0 PREREQUISITES

A condition at the Shoreham Nuclear Power Station has made personnel evacuation to unaffected areas necessary.

6.0 LIMITATIONS AND ACTIONS

N/A

7.0 MATERIALS AND TEST EQUIPMENT

N/A

8.0 PROCEDURE

8.1 Accountability Following a Local Evacuation

The number of personnel involved in a local evacuation is normally small, and involves areas which, when occupied, are normally attended by supervisory and/or Health Physics personnel. Accountability is performed as follows:

8.1.1 Upon receipt of a local area radiation monitor or continuous air monitor alarm, or upon observation of abnormal radiation levels (via portable survey instruments), personnel in the affected area will evacuate the affected area and relocate to an unaffected area. The senior individual present will ensure that all personnel clear the affected area and will notify the Control Room for further instructions.

8.1.2 If access to the affected area is controlled by a manned Health Physics control point, such as the reactor drywell during shutdown periods, Health Physics personnel will account for all personnel in the area using the radiation work permit sign-in sheets. The Health Physics personnel will notify the Control Room when all personnel have been accounted for and are clear of the affected area.

8.2 Accountability Following a Restricted Area Evacuation

8.2.1 Following an announcement of a restricted area evacuation, a supervisor from each craft or section will report to the machine shop.

8.2.2 As personnel gather in the machine shop from the restricted area, the leadman/foreman of the pertinent work parties shall account for all the personnel directly assigned to him by visual contact or verbal communication, and report the names of missing personnel to his immediate supervisor.

8.2.3 As each station craft/section is accounted for, the applicable supervisor shall notify the Control Room, or TSC if activated, that accountability for his section/craft is complete, or identify the names of missing personnel.

8.2.4 Control Room/TSC personnel will relay the incoming reports to the Administrative Supervisor (Watch Engineer, until relieved).

8.2.5 The Administrative Supervisor will contact designated individuals in the contractor/vendor organizations for the results of their accountability.

8.2.6 As the reports are collected, the results shall be recorded on the Accountability Checklist, Appendix 12.1.

8.2.7 If personnel are discovered to be missing, proceed to section 8.4 of this procedure.

8.3 Accountability Following a Site Evacuation

8.3.1 Following announcement of a site evacuation, the Shift Security Supervisor shall assign additional security personnel to the guardhouse(s) to facilitate handling of badges and clearing personnel out of the protected area.

8.3.2 If the emergency organization is activated, the Administrative Supervisor shall proceed to the main guardhouse to coordinate accountability efforts. If the emergency organization is not yet activated, the Emergency Director (Watch Engineer) or the most senior individual shall appoint a coordinator from available manpower to coordinate accountability efforts.

8.3.3 Personnel inside the protected area, exit the station, via the guardhouse through which you entered the site, you turn in the security badges and dosimetry to the security personnel, and pass through the portal monitors and proceed to your designated assembly area.

NOTE: Dosimetry is not turned in at the Security Building during an Immediate Site Evacuation. It will be turned in at the offsite assembly area.

8.3.4 Security personnel will place the badges on the badge racks as they are turned in.

8.3.5 The senior supervisor in the Technical Support Center, the Operations Support Center, and the Control Room shall compile a list of the names and security badge numbers of those personnel in these locations. These lists shall be called in to the guardhouse.

8.3.5 Personnel outside of the protected area fence, when a site evacuation is called, shall proceed to the designated assembly area. Personnel outside the protected area, and who have emergency assignments within the protected area shall pick-up their security badge and dosimetry at the guardhouse and proceed to their emergency assignment.

8.3.6 After all personnel have exited the site, the badge racks shall be inspected by the Shift Security Supervisor and missing badges identified and listed. This list will be compared to the lists reported by the Technical Support Center, the Operations Support Center, and the Control Room, to determine personnel not accounted for.

8.3.7 If personnel are discovered to be missing, proceed to Section 8.4 of this procedure.

8.3.8 The Operations Support Center, Technical Support Center, and the Control Room shall maintain accountability for personnel performing emergency measures under their direction.

8.3.9 At the direction of the Administrative Supervisor, SNPS security personnel shall implement a building by building search of buildings and trailers onsite but outside of the protected area fence, and search parking lots and site roads for stragglers and others who may not have heard the evacuation alarm and announcement. All personnel found shall be directed to the appropriate assembly area, or in the case of visitors, offsite.

8.3.10 Following completion of accountability efforts and any search and rescue operations, or as directed by the Emergency Director, the security force (with the exception of those necessary to maintain a minimum security posture) will relocate to the assembly area to await further instructions.

8.4 Action to Locate Missing Personnel

The following general actions may be taken by the Shift Security Supervisor to determine the whereabouts of missing personnel before search and rescue efforts are initiated. If the following actions fail to account for missing personnel, commence search and rescue activities in accordance with SP 69.080.01, Search and Rescue.

8.4.1 Verify that the individual was inside the Protected Area with the computerized personnel accountability system and/or the visitors log in the security building.

8.4.2 Page the missing personnel using the page party system and request response.

8.4.3 Contact the individual's supervisor, or co-workers, to determine the missing personnel's last known whereabouts.

8.4.4 If applicable, contact other assembly areas, to determine if the missing individual went to the wrong assembly area.

8.4.5 Contact the Technical Support Center, the Operations Support Center, and the Control Room to determine if the whereabouts of the individual is known to them.

8.5 Accountability of Emergency Organization Personnel Following Site Evacuation

NOTE: Only those personnel with express permission from the Technical Support Center shall be authorized access to the site.

8.5.1 The security force will establish an appropriate security posture, in accordance with the SNPS Security Plan to control access, until such time as conditions permit re-establishing the normal security

program (or an appropriately modified program).

9.0 ACCEPTANCE CRITERIA

N/A

10.0 FINAL CONDITIONS

Personnel have been accounted for, or appropriate search and rescue operations are in progress.

11.0 REFERENCES

11.1 Shoreham Nuclear Power Station Emergency Plan

11.2 SP 69.Ø8Ø.Ø1, Search and Rescue

12.0 APPENDICES

12.1 Accountability Checklist

ACCOUNTABILITY CHECKLIST

Supervisor	Check Here if All Accounted For	Names of Personnel Unaccounted For	Date/Time/Initials
Reactor Engineering			
Health Physics			
Radiochemistry			
Instrumentation and Control			
Operations			
Maintenance			
Security			
PAC			
SPAC			
OQA			
Other			

SPF 69.Ø3Ø.Ø2-1

Submitted: _____

Approved: _____
(Plant Manager)

DRAFT

DRAFT - PRELIMINARY

SP Number 69.030.03
Revision A
Date Eff. _____
TPC _____
TPC _____
TPC _____

CONTAMINATION CONTROL DURING EMERGENCIES

1.0 PURPOSE

This procedure provides general guidance to Emergency Organization Members to supplement the guidance contained in the Health Physics Procedures.

2.0 RESPONSIBILITY

The Radiation Protection Manager is responsible for insuring the proper implementation of this procedure.

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3.0 DISCUSSION

During an emergency condition, substantial quantities of radioactive material may be released to the Station or to the environment. As a result, there will likely be an increase in contamination levels. The normal contamination control methods established in the Health Physics Procedures may not be adequate, or suitable, under these circumstances. This procedure provides guidance on alternate contamination control methods which may be used in addition to, or in lieu of, the methods established in the normal operating Health Physics Procedures.

4.0 PRECAUTIONS

4.1 Skin contamination less than one (1) rad per hour is unlikely to be immediately life-threatening, and therefore, skin decontamination efforts should never take precedence over necessary first aid.

4.2 Accidents related to fuel degradation and leakage of reactor coolant may result in alpha contamination in addition to the typical beta-gamma radionuclides. If alpha activity is suspected, a random selection of swipes (and air samples) should be counted for alpha activity. The size of the random selection should be decreased or increased on the basis of the initial alpha count results.

5.0 PREREQUISITES

The provisions of this procedure should not be implemented unless:

5.1 An emergency condition has been declared at the Shoreham Nuclear Power Station as provided in the SNPS Emergency Plan.

5.2 As a result of the emergency condition, significantly abnormal contamination levels may be present.

6.0 LIMITATIONS AND ACTIONS

N/A

7.0 MATERIALS OR TEST EQUIPMENT

Contamination control and/or decontamination supplies identified in the SNPS Health Physics Manual.

8.0 PROCEDURE

8.1 Contamination Control

8.1.1 It may become necessary to extend the boundaries of the Restricted Area. Appropriate access control and associated contamination control measures shall be established for any area in which contamination exists at levels higher than that specified for an Unrestricted Area in the Health Physics Procedures.

8.1.2 Normal personnel and equipment monitoring and release procedures and criteria shall remain in force to the extent possible. There may be exceptions applicable to emergency conditions as follows:

8.1.2.1 If background at normal monitoring locations preclude detection of levels of contamination equivalent to the clean limit, monitoring shall be moved to a location where this can be done. However, if significant levels of contamination exist, it may be appropriate to perform a gross screening at the exit of grossly contaminated areas, to be followed by a complete monitoring at a more suitable location.

8.1.2.2 If dose rates within the contaminated area (or Restricted Area) warrant an immediate evacuation, personnel monitoring shall not be required prior to evacuation. If possible, personnel exiting such areas should remove any clothing thought to be contaminated, or don clean coveralls to minimize the spread of potential contamination, pending subsequent monitoring. In this case, appropriate monitoring should be performed at the designated assembly area.

8.1.2.3 Contamination limits specified in the Health Physics Procedures for release of personnel, equipment, and areas shall remain in effect to the maximum extent possible. The Radiation Protection Manager will determine when a change in contamination limits is warranted. However, under site evacuation conditions, decontamination is normally mandatory if the contamination exceeds 100 cpm above background on RM-14/HP210 (1000 dpm/100 cm^2) beta-gamma activity.

8.1.3 For rescue efforts in which there is a potential for the imminent death of the victim, and for which the magnitude of radiological conditions in the affected area are generally known, a rescue team member(s) should proceed to the scene without protective clothing to assess the situation and render first aid. Other members of the rescue team should don appropriate protective clothing and proceed to the area to assist. The initial rescue team member(s) should leave the area and be monitored and/or decontaminated as soon as possible.

8.1.4 For fire-fighting efforts, normal fire-fighting gear (helmets, coats, boots, gloves, etc.) may take the place of protective clothing. The apparrel is as likely to provide protection from contaminated water spray.

8.2 Contamination Monitoring During a Site Evacuation

In the event of site evacuation, the extent and nature of personnel and automobile monitoring will depend on the amount and physical nature (particulate, noble gas, etc.) of the radioactive material released, and release and meteorological parameters (ground level or elevated release, wind direction, stability, etc.). The Radiation Protection Manager will determine the need for and extent of personnel monitoring beyond that required during normal operations. The following guidance should be considered in establishing personnel monitoring and/or vehicle monitoring requirements.

8.2.1 If personnel exit the site via the portal monitors in the guardhouse, monitoring can be considered complete. If background levels in the guardhouse preclude use of the portal monitors, monitoring should be performed at the offsite assembly area.

8.2.2 If iodine or particulate releases have occurred such that contamination of vehicles and the site access road is probable, monitoring of personnel automobiles should be performed prior to releasing the vehicle to the public highways, subject to the following:

8.2.2.1 If the release has resulted in extensive offsite contamination such that evacuation of the general public is being implemented, monitoring and decontamination of vehicles prior to exit from the site would probably be superfluous in light of the potential for re-contamination offsite. Under these circumstances, site personnel and vehicles will be monitored for contamination as provided in the emergency plans of the affected jurisdictions.

8.2.2.2 If vehicle monitoring is performed, it should be performed along the site access road near the LILCO substation in order to prevent backups on site. Vehicles found to be contaminated should be directed into the substation for decontamination. Document results on Appendix 12.1.

8.2.2.3 The Radiation Protection Manager should determine whether spot-checking or complete monitoring will be performed, consistent with probability of contamination.

8.2.3 Once personnel have evacuated the site, consideration should be given to establishing a shuttle bus system in order to minimize the number of vehicles requiring monitoring.

8.3 Decontamination

8.3.1 Personnel decontamination shall be performed as provided in Health Physics Procedures.

8.3.2 Contaminated/injured personnel should be decontaminated prior to transfer to the hospital, if possible, and if compatible with the extent of the injuries. Even a superficial initial decontamination to remove the loose contamination will help minimize the contamination of ambulances and hospital facilities and personnel. Refer to SP 69.041.01, Offsite Medical Assistance.

8.3.3 Most cases of skin decontamination with radioactive materials can be decontaminated using methods established in the Health Physics Procedures by Health Physics personnel. If the contamination is not removed by these initial methods, if decontamination has resulted in excessive irritation of the skin, or if contamination has entered wounds or body openings, medical assistance should be sought. The urgency of such treatment will depend on the dose rate attributable to the contamination. Except in cases of high-level contamination, over about one rad per hour including beta radiation, as measured with an ion-chamber instrument (4-7 mg/cm^3 window), there is no urgency to complete skin decontamination. If the skin contamination is the primary health hazard, Radiation Management Corporation should be consulted, and the individual transferred to the Central Suffolk Hospital for evaluation and treatment, at the direction of RMC. Refer to SP 69.041.01, Offsite Medical Assistance.

8.3.4 Decontamination of persons with significant internal contamination shall be referred to medical personnel from the Radiation Management Corporation for evaluation and treatment. In the event of a significant uptake of radioiodine, potassium iodide may be administered in accordance with SP 69.xxx.xx (Later).

9.0 ACCEPTANCE CRITERIA

N/A

10.0 FINAL CONDITIONS

All personnel who have exited the site have been appropriately monitored for contamination, and where applicable, have been properly decontaminated.

11.0 REFERENCES

11.1 Shoreham Nuclear Power Station Emergency Plan

11.2 SNPS Health Physics Procedures

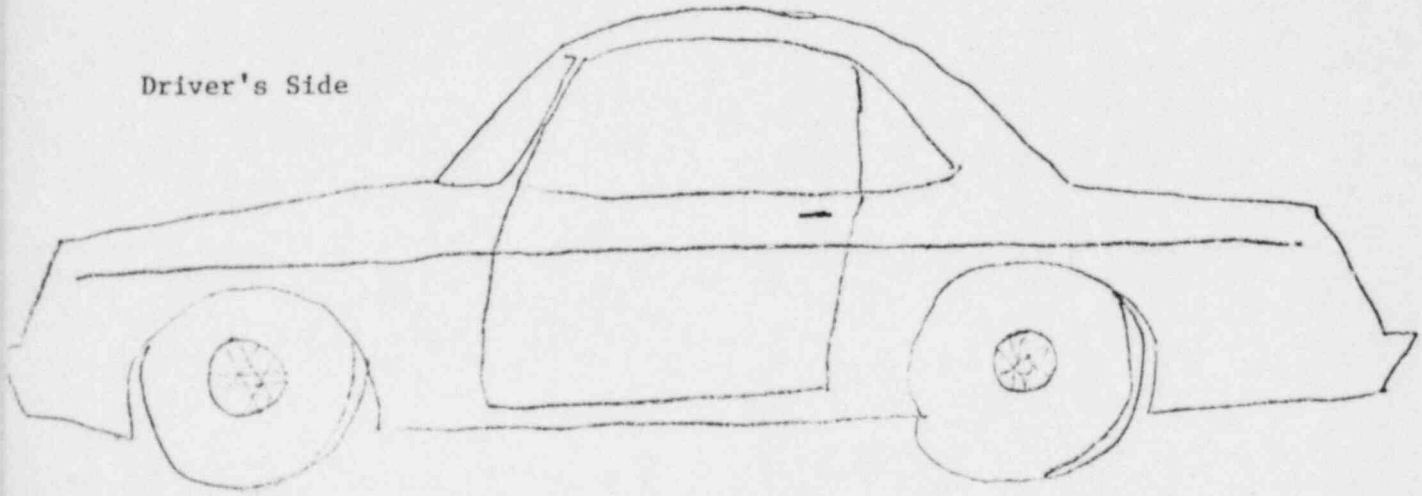
12.0 APPENDICES

12.1 SPF-69.Ø3Ø.Ø3, Vehicle Survey Form

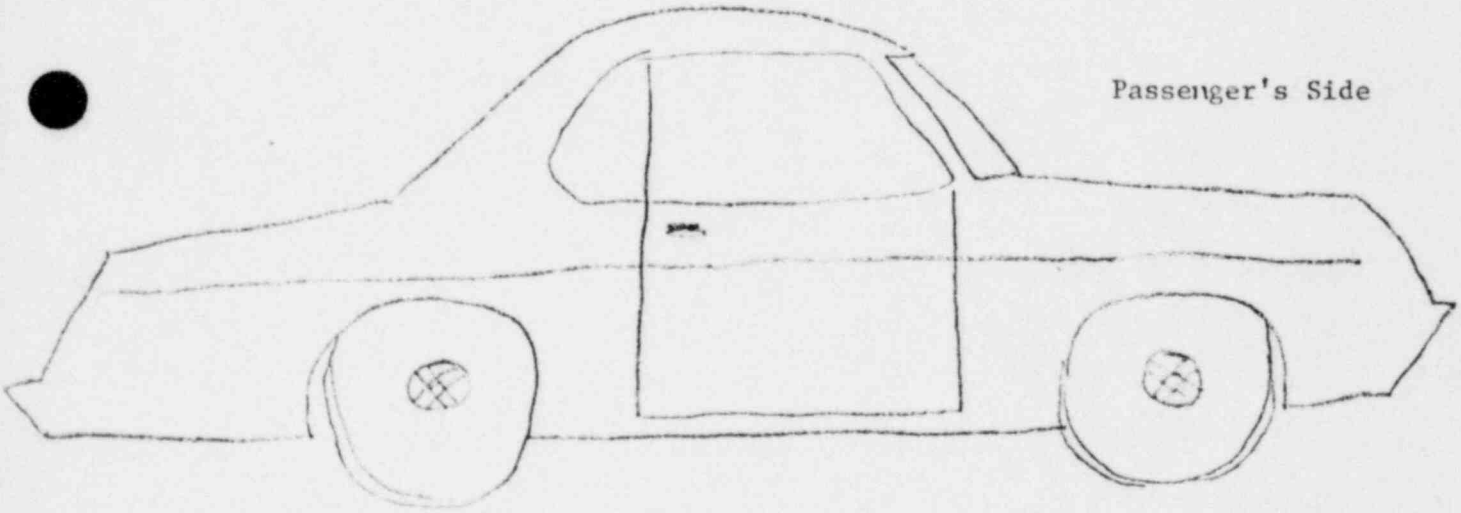
VEHICLE SURVEY FORM

This form should only be filled out for contaminated vehicles. Ensure that all license #'s and names are recorded.

Driver's Side



Passenger's Side



NAME _____

LIC # _____

Signature _____ Date _____

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FUTURE EXPANSION.

Submitted: _____ SP Number 69.040.01

Approved: _____ Revision C
(Plant Manager)

Date Eff. _____

PERSONNEL INJURY

DRAFT - PRELIMINARY

1.0 PURPOSE

To describe the actions to be taken by station personnel in the event of a injury which may or may not involve radioactive contamination at SNPS.

2.0 RESPONSIBILITY

The Health Physics Engineer is responsible for ensuring compliance with this procedure.

3.0 DISCUSSION

3.1 All injuries shall be reported to the control room so that effective measures such as dispatch of first-aid teams and offsite transportation can be performed in an expeditious manner.

3.2 In the event of a severe or life threatening injury, immediate medical treatment is given a priority over any radiological considerations.

3.3 If offsite transportation of a contaminated injured person occurs, the event is classified as an Unusual Event in accordance with the Shoreham Nuclear Power Station Emergency Plan and appropriate actions should be taken accordingly.

3.4 Topics covered in this procedure:

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4.0 PRECAUTIONS

N/A

5.0 PREREQUISITES

A person has become injured and/or requires medical attention.

6.0 LIMITATIONS AND ACTIONS

The individual may require offsite medical treatment, and if contaminated require SNPS personnel to classify the incident and take emergency measures pursuant to the SNPS Emergency Plan.

7.0 MATERIALS AND TEST EQUIPMENT

See Section 8.0

8.0 PROCEDURE

8.1 Minor Injury

8.1.1 Any station personnel who comes across another individual having an injury shall render qualified first-aid, if possible.

8.1.2 If the injured person is ambulatory, perform the following:

.1 Notify health physics personnel to check the injured person for any contamination.

.2 Health physics person, decontaminate any wounds in accordance with normal practices (e.g., flush wound with luke warm water), if applicable.

.3 Person finding injured individual, accompany him to the first-aid room for subsequent medical treatment and examination.

8.2 Major Injury

8.2.1 Any station personnel who come across another individual having an injury shall render qualified first aid, if possible.

8.2.2 Report the following information to the Control Room using the page-party system or another phone system:

.1 Number of affected individuals

.2 Location of injured individual(s)

.3 Injury description

.4 Extent of contamination, if any

.5 Additional assistance required

8.2.3 Watch Engineer or designee, based on information received on the injured person(s) condition dispatch the Fire Brigade (First-aid) Team by sounding the "siren" tone and making the following announcement over the page-party system three times at one-minute intervals:

"Attention all station personnel. There has been a personnel injury involving (number) of personnel which (are/are not) contaminated. First Aid Team (and in-plant Radiation Monitoring Technician - if contamination is suspected) report to (location) immediately"

8.2.4 Implement Section 8.3 or 8.4 of this procedure depending on whether injured person(s) is contaminated.

8.3 Treatment of Non-Contaminated Injured Personnel

8.3.1 First Aid Team members, obtain first aid kit, communications equipment and other equipment as necessary and proceed to the scene of the incident as directed by the announcement over the page-party system.

8.3.2 First Aid Team members, determine the extent of medical injuries and administer first aid.

8.3.3 First Aid Team Leader, determine if hospitalization is required.

.1 If hospitalization is not required, transport injured person(s) to First Aid Room for further treatment, examination and release.

.2 If hospitalization is required, perform the remaining steps in this section.

8.3.4 First Aid Team Leader, notify the Watch Engineer that the injured individual(s) medical condition warrants offsite assi tance and transportation to the hospital.

8.3.5 Watch Engineer or designee, implement SP 69.041.01 "Offsite Medical Assistance".

8.3.6 First Aid Team members, prepare the injured individual(s) for ambulance transport as follows:

.1 Request stretcher by contacting

.2 Load the injured person(s) into the stretcher in accordance with normal medical practices.

NOTE: If the injured person(s) cannot be moved, keep him warm with blankets and await ambulance personnel.

.3 Wheel the stretcher to the nearest building egress point and await ambulance.

.4 Notify the Watch Engineer of your location.

8.4 Treatment of Contaminated Injured Personnel

8.4.1 First Aid Team members and In-plant Radiation Monitoring Technician, obtain first-aid kit, communications equipment and other equipment as necessary and proceed to the scene of the incident as directed by the announcement over the page-party system.

8.4.2 If the injury has occurred in a high radiation or contaminated area, First Aid Team members and In-plant Radiation Monitoring Technician, proceed to the main health physics checkpoint and don appropriate clothing and respirators.

NOTE: For severe or life threatening injuries and/or high radiation areas, time is of the utmost importance. Use judgement when performing step 8.4.2. For severe injuries in a contaminated area, immediate medical treatment is of the highest priority and radiological controls are considered secondary.

8.4.3 First Aid Team members and In-plant Radiation Monitoring Technician, move the injured person(s) out of a high radiation area if the injury is not severe and the exposure is life threatening.

8.4.4 First Aid Team Members, implement appropriate first aid techniques making efforts to prevent contaminating or spreading any contamination which might be on the injured person.

8.4.5 First Aid Team Leader, determine if hospitalization is required.

8.4.6 If hospitalization is required; Watch Engineer or designee implement SP 69.041.01 "Offsite Medical Assistance".

8.4.7 In-plant Radiation Monitoring Technician, perform the following:

.1 Survey any wound areas for contamination and complete a Body Map (Attachment 12.1) showing contaminated and/or injured areas of the body. If hospitalization is required the body map will accompany the individual.

.2 Attempt to remove any contaminated clothing. Ensure that removal of contaminated clothing does not aggravate the injury or cause cross-contamination.

.3 If conditions permit, flush any wounds with luke warm water.

.4 Request plastic sheets, blankets, stretcher and other necessary equipment be dispatched to the injured person(s) location by contacting the Watch Engineer.

.5 Load individual onto the stretcher taking care to ensure medical and contamination control measures are followed.

NOTE: If the injured person(s) cannot be moved, keep him warm with warm blankets and await ambulance personnel.

.6 If hospitalization is not required, transport the individual to the first-aid room for further examination, treatment and release. If hospitalization is necessary, perform the remainder of this procedure.

8.4.8 First Aid Team members, wheel the stretcher to the nearest building egress point.

8.4.9 First Aid Team member, notify the Watch Engineer of your location.

8.4.10 Watch Engineer, initiate SP 69.010.01 "Classification of Emergency Action Levels".

9.0 ACCEPTANCE CRITERIA

N/A

10.0 FINAL CONDITIONS

10.1 Appropriate first aid has been administered.

10.2 Appropriate decontamination has been performed.

11.0 REFERENCES

Shoreham Nuclear Power Station Emergency Plan

12.0 APPENDICES

12.1 Body Map

Submitted: _____ SP Number 69.041.01

Approved: _____ Revision C
(Plant Manager)

Date Eff. _____

OFFSITE MEDICAL ASSISTANCE

DRAFT - PRELIMINARY

1.0 CONDITIONS

1.1 One or more station personnel have been injured and require(s) immediate offsite medical assistance.

1.2 Immediate first aid activities are being carried out in accordance with SP 69.040.01, Personnel Injury.

1.3 A personnel radiation overexposure has occurred requiring offsite medical treatment.

2.0 IMMEDIATE ACTIONS

2.1 Emergency Director or designee, perform the following:

2.1.1 Complete a Personnel Injury Fact Sheet (Appendix 6.1) and give it to a Control Room Operator, TSC Communicator or EOF Communicator for transmission to the following offsite organizations in accordance with SP69.ØØ9.Ø1 "Notifications".

.1 Wading River Fire Department

.2 Central Suffolk Hospital

.3 Suffolk County Emergency Operations Center

NOTE: Suffolk County EOC will be notified only if the injury does not involve contamination.

2.1.2 Notify the Shift Security Supervisor and provide the following information:

.1 Gate at which emergency vehicle is arriving.

.2 Area or plant site to direct emergency vehicle to (building and door location).

.3 Issue emergency dosimetry to ambulance personnel.

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3.0 SUBSEQUENT ACTIONS

3.1 All Incidents

3.1.1 Site Security shall perform required access control measures to ensure rapid arrival of emergency vehicles to designated building/door location.

3.1.2 Health Physics personnel shall ensure that appropriate personnel dosimetry has been provided to emergency vehicle attendants.

3.1.3 Whenever possible, without further risk to the individual injured, transport the victim to the assigned door location to meet the emergency vehicle.

3.1.4 Health Physics personnel shall perform required vehicle survey while victim is being placed into ambulance.

3.1.5 Site Security shall provide escort for the ambulance offsite.

3.2 Contaminated Victim

3.2.1 The Inplant Radiation Monitoring Technician shall prepare the ambulance as follows:

.1 Lay blotting paper and/or plastic sheeting inside the ambulance.

.2 Lay plastic sheeting or blankets over the surface of the stretcher.

3.2.2 A person qualified in health physics "Self-Monitoring" shall accompany the victim in the ambulance. This individual should have appropriate protective clothing, survey instruments, and personal dosimetry.

NOTE: If there are multiple casualties, the health physics qualified person should accompany the first ambulance. Additional qualified personnel should be sent as they become available to facilitate ambulance surveys.

3.2.5 The staff of the hospital should prepare for receipt of the contaminated victims in accordance with the hospital incident response plan. Upon arrival at the hospital, the health physics qualified person should assess the contamination control preparations and assist hospital personnel in upgrading the preparations if necessary.

3.2.6 Assist hospital and ambulance personnel in transferring the victim to the treatment room.

3.2.7 After the contaminated victim (or last victim if there is more than one) has been placed in the treatment room, the health physics qualified person shall perform the following:

3.2.7.1 Roll up any blotting paper that was laid down between the ambulance and the treatment room. Place this blotting paper in plastic bags for transfer back to SNPS for disposal.

3.2.7.2 Recommend appropriate protective clothing to persons entering the treatment rooms and assist these personnel with removal of protective clothing and monitoring when leaving the room.

3.2.7.3 As time permits, monitor the ambulance attendants for contamination. If contamination in excess of detectable levels is found, these personnel should be decontaminated at the hospital, otherwise, they may be released. Document the results of this survey. Collect dosimeters from ambulance attendants.

3.2.7.4 As time permits, monitor the ambulance for contamination. If contamination in excess of detectable levels is found, the ambulance should be returned to SNPS for decontamination, otherwise, it may be released. Document the results of this survey.

3.2.7.5 At the direction of the attending physician, monitor the victim(s) for contamination and apprise the physician of the results. It may be necessary to repeat this process as the hospital staff decontaminates the victim.

3.2.8 At the completion of treatment and at the direction of the physician, restore the treatment area(s) to normal use as follows:

3.2.8.1 Monitor all fixed equipment, floors, tables, and any other surfaces that may have been contaminated. Decontamination of contaminated equipment and surfaces will be performed by LILCO personnel at the direction of hospital personnel and health physics supervision to levels less than detectable, prior to release to other uses. Document all surveys.

3.2.8.2 Collect any protective clothing, and any other potentially contaminated waste for transport back to the station.

3.2.8.3 When SNPS personnel are no longer needed at the hospital, they should report back to the site.

4.0 FINAL CONDITIONS

4.1 Injured victim has been transported to the hospital for further medical assistance.

4.2 Hospital facilities and the ambulance have been cleared for further use.

4.3 Notifications have been completed in accordance with SP 69.009.01, Notifications.

5.0 DISCUSSION

5.1 First aid and health physics personnel providing assistance to injured personnel must remain alert to their own exposure. Emergency exposure limits for life-saving activities are provided in SP 69.050.01, Radiation Doses During an Emergency.

6.0 APPENDICES

6.1 Personnel Injury Fact Sheet

PERSONNEL INJURY FACT SHEET

Notification for Ambulance Assistance (Usually Wading River Fire Department)

1. This is the Shoreham Nuclear Power Station. An injury involving _____ person(s)
(number)

has occurred onsite which requires ambulance service. The individual(s)

_____ contaminated and will be transported to
(are/are not)

_____
(hospital - usually Central Suffolk Hospital

2. _____
(brief description of injuries)

3. Enter the station through the _____ gate.
(east/west)

Notification to: 1. Receiving Hospital (Usually Central Suffolk Hospital)
2. Suffolk County Emergency Operations Center

1. This is the Shoreham Nuclear Power Station. An injury involving _____ person(s)
(number)

has occurred onsite which requires medical treatment. The individual(s)

_____ contaminated and are being sent to
(are / are not)

_____ for treatment.
(hospital - usually Central Suffolk Hospital)

2. (Same as Item #2 above)

3. The estimated time of arrival at the hospital is _____ hours.
(time - use 24 hr clock)

Submitted: _____

Approved: _____
(Plant Manager)

DRAFT

DRAFT - PRELIMINARY

SP Number: 69.050.01
Revision: B
Date Eff: _____
TPC _____
TPC _____
TPC _____

RADIATION DOSES DURING AN EMERGENCY

1.0 PURPOSE

To provide a guide for the authorization of radiation exposure during a declared emergency.

2.0 RESPONSIBILITY

The Health Physics Engineer shall be responsible for ensuring compliance with this procedure.

PPF1021.600-6.421

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3.0 DISCUSSION

3.1 Persons involved in emergency activities may be exposed to high levels of radiation. The guiding principle is to minimize personnel dose As Low As Reasonably Achievable. However, control of exposures should be consistent with the immediate objective of the necessary actions.

3.2 Authorization to expose individuals to the levels of radiation presented in this procedure shall only be given during a declared emergency. Only the Radiation Protection Manager or the Emergency Director shall give authorization to expose individuals to these levels.

3.3 Persons performing emergency activities should be volunteers broadly familiar with radiation dose consequences if expected dose exceeds normal limits.

3.4 If possible, volunteers who are authorized to receive emergency exposure limits should be more than 45 years of age.

3.5 Topics covered in this procedure:

4.0 PRECAUTION

4.1 Emergency exposures should be limited to once in a lifetime occurrence.

5.0 PREREQUISITES

5.1 One of the four emergency classifications established in Ref. 11.4 shall have been declared.

5.2 Dosimetry equipment capable of measuring the anticipated maximum levels and types of radiation shall be worn by personnel receiving emergency exposure.

5.3 Review radiation dose history of volunteers. if time permits.

6.0 LIMITATIONS AND ACTIONS

6.1 Women of child-bearing age shall not be permitted to receive doses which exceed 10CFR20 limits.

7.0 MATERIALS

N/A

8.0 PROCEDURE

8.1 Authorization of Exposure

8.1.1 The Radiation Protection Manager shall be responsible for authorizing exposure of individuals to the levels presented in this procedure.

8.1.2 The Emergency Director may authorize exposure of individuals to the levels presented in this procedure.

8.2 Life Saving Activities

8.2.1 For the rescue of persons trapped or incapacitated in a dangerous situation which includes high radiation levels, and there is no time for adequate planning and protection, exposures of rescue personnel should be limited as follows: (See references 11.2 and 11.3)

8.2.1.1 75 Rem Whole Body

8.2.1.2 No specific thyroid limit

NOTE: No specific upper limit is given for thyroid exposure since in the extreme case complete thyroid loss might be an acceptable penalty for a life saved.

8.2.2 For the rescue of persons trapped or incapacitated in a dangerous situation which includes high radiation levels, and time permits adequate planning and protection, exposures of rescue personnel should be limited as follows:

8.2.2.1 12 Rem Whole Body

8.2.2.2 75 Rem thyroid

8.3 Substantial Reduction of Public Exposure

8.3.1 These actions are deemed essential to reduce a hazard or hazard potential to acceptable levels. They may entail equipment repair, fire control, effluent control, etc. These activities are considered to be less urgent than life saving activities.

8.3.2 If there is no time for adequate planning and protection, exposures should be limited as follows: (See references 11.2 and 11.3)

8.3.2.1 25 Rem Whole Body

8.3.2.2 125 Rem Thyroid

8.4 General Emergency Operations

8.4.1 Exposures to individuals performing emergency actions other than those covered in Sections 8.2 and 8.3 shall have exposure limits as set forth in 10CFR20 (see reference 11.1).

9.0 ACCEPTANCE CRITERIA

N/A

10.0 FINAL CONDITIONS

10.1 Evaluation of doses received shall be made after emergency exposure by the Health Physics Engineer.

10.2 Dose Records shall be updated to indicate these doses.

11.0 REFERENCES

11.1 10CFR20, Standards for Protection Against Radiation

11.2 EPA-520/1-75-001, Manual of Protective Action Guides and Protective Actions for Nuclear Incidents

11.3 NCRP Report No. 39, Basic Radiation Protection Criteria

11.4 SP 69.Ø1Ø.Ø1, Conditions for Emergency Action Levels

12.0 APPENDICES

N/A

Submitted:_____

Approved:_____
(Plant Manager)

DRAFT - PRELIMINARY

SP Number 69.051.01
Revision A B
Date Eff._____
TPC_____
TPC_____
TPC_____

THYROID BLOCKING

1.0 PURPOSE

The purpose of this procedure is to provide guidelines and instructions for the administration of potassium iodide (KI) to station personnel.

2.0 RESPONSIBILITY

The Radiation Protection Manager shall be responsible for ensuring compliance with this procedure.

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3.0 DISCUSSION

Radioiodines inhaled or ingested by the thyroid gland may be blocked by the ingestion of stable iodine. The administration (oral) of approximately 130 milligrams of potassium iodine (KI) will result in sufficient accumulation of stable iodide in the thyroid gland to prevent significant uptake of radioiodine. KI as a thyroid blocking agent is only effective if the radiation exposure is from radioiodines and the administration of the stable iodine is accomplished shortly before or after uptake.

4.0 PRECAUTIONS

KI, as a thyroid blocking agent, is normally administered by prescription and its distribution must be in accordance with existing New York State health laws.

5.0 PREREQUISITES

KI is administered when the calculated actual or potential thyroid absorbed dose is equal to or greater than 10 rad.

6.0 LIMITATIONS AND ACTIONS

N/A

7.0 MATERIALS AND EQUIPMENT

N/A

8.0 PROCEDURE

8.1 Determination

8.1.1 The Radiation Protection Manager (TSC), the Radiological Control Manager (EOF) or their designees, shall determine the need for administration of potassium iodide (KI) as follows:

.1 Determine the I-131 concentration (μCi/cc) in the affected area(s).

.2 Divide the I-131 concentration by the protection factor of the respiratory equipment, if applicable.

.3 Determine the length of time (minutes) of the individual(s) in the affected area.

.4 Locate the intersection of these points on the thyroid graph (Attachment 1).

.5 If the projected dose is equal to or greater than 10 rad, KI administration is recommended.

8.2 Administration

8.2.1 Affected personnel will report to one of the locations that stock KI tablets (See Section 8.3).

8.2.2 Health Physics personnel at these locations shall ask ~~if~~ the person if it was determined during pre-employment physical exam ~~is known to have any allergic reactions to iodine~~. that person has any allergic reactions to iodine. If no reaction is known, Health Physics personnel shall advise that taking of KI is voluntary. If person did not take physical exam he shall not be given KI.

8.2.3 Health Physics personnel at these locations shall log the person's name, social security number, employee number, company/department and date on the KI Administration Form, Appendix 12.2.

8.2.4 Administer one KI tablet (100 mg iodide per 130 mg tablet) to each individual who requires KI.

8.2.5 After administration, the names of persons who have received KI are reported to the Radiation Protection Manager (TSC) or the Radiological Control Manager (EOF).

8.2.6 The Radiation Protection Manager (TSC) or the Radiological Control Manager (EOF) shall notify the LILCO Medical Director of persons who have received KI.

8.2.7 KI is administered daily to each person on the form until the accumulated dose is 1 gm of iodine or as otherwise directed by the LILCO Medical Director. The time required to accumulate 1 gm of iodine is 10 days.

8.3 Location of KI Supplies

8.3.1 KI supplies are stored in the following locations:

.1 Emergency Operations Facility (EOF).

.2 Technical Support Center (TSC).

.3 First Aid Room.

.4 Downwind Survey Kit.

8.3.2 Potassium Iodide (KI) tablets to be administered are generically equivalent to Potassium Iodine, U.S.P., 130 mg each (100 mg iodide).

8.4 Maintenance

8.4.1 KI tablets have a shelf life of approximately two years. The Radiation Protection Manager (TSC) or the Radiological Control Manager (EOF) is responsible for ensuring that inventories are maintained and that tablets whose shelf life has been exceeded are replaced.

9.0 ACCEPTANCE CRITERIA

N/A

10.0 FINAL CONDITIONS

All records shall be forwarded to the Administrative Section for filing in accordance with permanent plant procedures.

11.0 REFERENCES

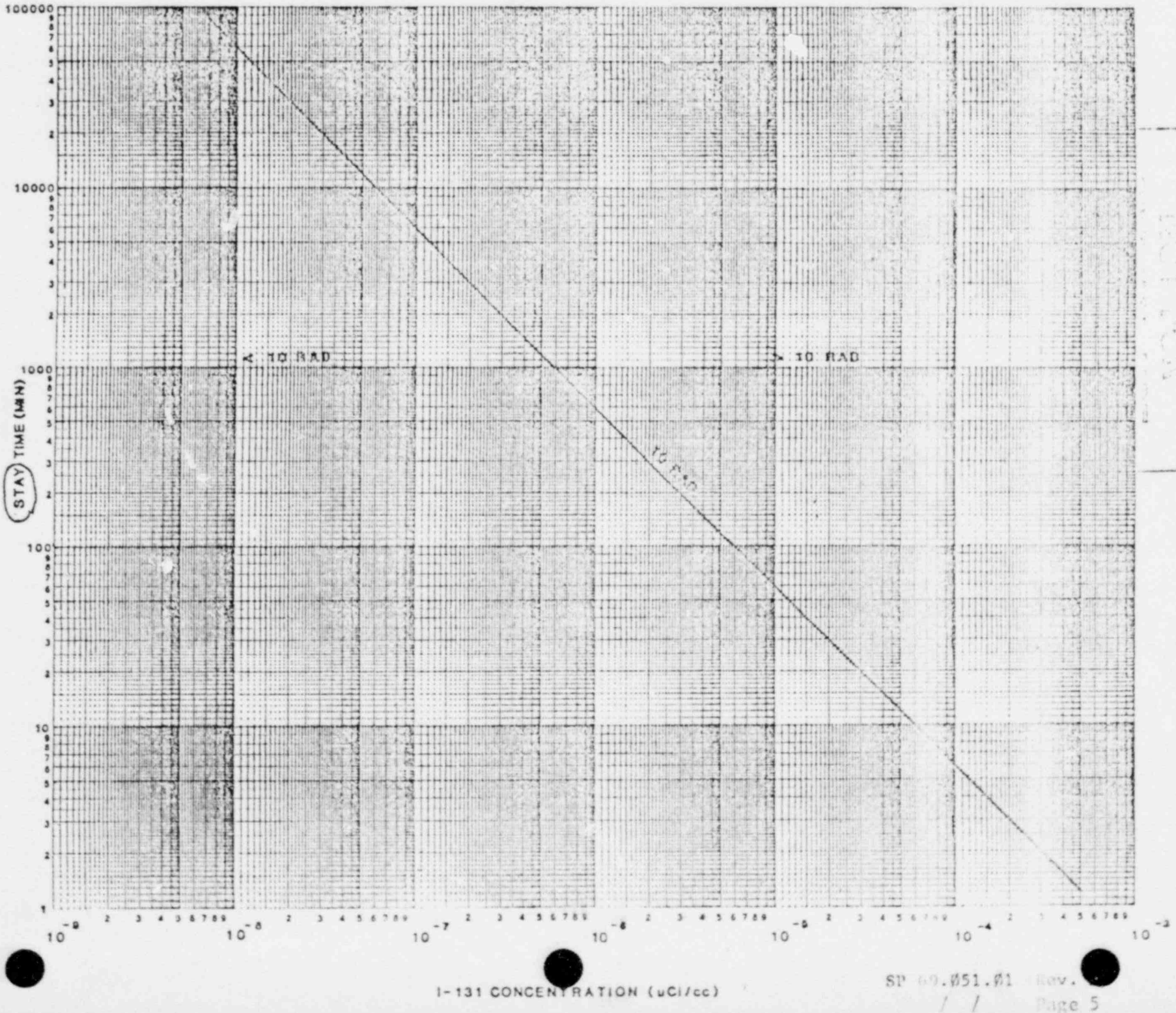
NCRP Report No. 55, Protection of the Thyroid Gland in the Event of Releases of Radiodine, (National Council on Radiation Protection and Measurements, Washington 1977).

12.0 APPENDICES

12.1 Thyroid Dose Graph

12.2 KI Administration Form

THYROID GRAPH



KI ADMINISTRATION FORM

NAME	SOC. SEC. NO.	EMPLOYEE NO.	COMPANY/DEPT.	DATE	SUBSEQUENT DATES

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NOT FOR
OFFICIAL USE

Submitted: _____

Approved: _____
(Plant Manager)

DRAFT - PRELIMINARY

SP Number 69.062.01
Revision B
Date Eff. _____
TPC _____
TPC _____
TPC _____

EMERGENCY RESPONSE FACILITIES EQUIPMENT CONTROL AND READINESS CHECK

1.0 PURPOSE

This procedure describes the method by which emergency equipment and instruments are inspected, inventoried, and operationally checked. It also describes how instruments removed for calibration are replaced by spares.

2.0 RESPONSIBILITY

The Health Physics Engineer is responsible for ensuring the inspection, inventory, and operational checking of emergency equipment.

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3.0 DISCUSSION

3.1 This procedure is utilized in performing periodic inventories, inspections, and operational checks each calendar quarter and after each use for the following emergency equipment:

3.1.1 Emergency Kits placed at various facilities, of the following types:

1. Downwind Survey Kits

2. Decontamination Kits

3. First Aid Kits

3.1.2 Additional emergency equipment located in the Technical Support Center (TSC), Emergency Operations Facility (EOF), Operational Support Center (OSC), LILCO First Aid Room, Main Control Room, and Central Suffolk Hospital.

3.1.3 Communications equipment in these facilities including telephones and radios.

3.1.4 Facility environment monitoring equipment.

3.1.5 RMS System located within the facilities.

3.2 The following attachments are promulgated by this procedure:

3.2.1 Equipment Discrepancy List, SPF 69.Ø62.Ø1-1 is utilized for documenting and correcting discrepancies discovered during inventories, inspections, and operational checks.

3.2.2 Emergency Kit Inventory Forms, SPF 69.Ø62.Ø1-2a through c, are used for inventorying, inspecting, and operationally checking the kits and for recording general results.

3.2.3 Emergency Facility Inventory Forms, SPF 69.Ø62.Ø1-3, a through g, are used for inventorying the emergency facilities. Separate copies of SPF 69.Ø62.Ø1-2 must be used in conjunction with the Facility forms for kits located within the Facilities.

3.2.4 Inventory Form Instructions, SPF 69.Ø62.Ø1-4 describe the use of SPF 69.Ø62.Ø1-2 and -3.

3.3 All equipment with integral rechargable batteries shall be kept charged in accordance with the manufacturers recommendations.

3.4 Batteries must be removed and stored after operational checks on the equipment to prevent damage.

4.0 PRECAUTIONS

N/A

5.0 PREREQUISITES

5.1 Obtain the necesssary Inventory Forms, SPF 69.Ø62.Ø1-2, 3 and 4 for the inventory.

5.2 Review the previous Emergency Equipment Inventory forms for a list of equipment that will require recalibration in the next four months and obtain replacement equipment.

5.3 Obtain replacement TLDs if their previous anneal date is more than _____ months ago. All TLDs in a facility or kit should be replaced at the same time to preserve the validity of the control TLD.

5.4 Obtain replacement Direct Reading Dosimeters (DRDs) for those that will require recalibration in the next four months.

5.5 If the Central Suffolk Hospital facility is to be inventoried, phone to coordinate and arrange access.

6.0 LIMITATIONS AND ACTIONS

N/A

7.0 MATERIALS AND/OR EQUIPMENT

7.1 Seals for the emergency kits and lockers.

7.2 Sealing tool and removal tool.

7.3 "Incomplete Inventory" tags for labeling discrepant kits and lockers.

7.4 Sufficient Inventory Forms.

7.5 Keys to Facilities to be Inventoried.

7.6 Two way Radio of same frequency as those in Kits and Lockers.

8.0 PROCEDURE

8.1 Inventory

8.1.1 Break the seal on the locker or kit.

8.1.2 Steps 8.1.3 thru 8.1.10 are most efficiently accomplished sequentially for each item.

8.1.3 Count the number of units present for each item and enter the amount found in the appropriate column of the inventory sheet.

8.1.4 Record the SNPS ID number of the actual equipment found. When replacing equipment that requires recalibration, enter the SNPS ID number of the new equipment under "Action Taken".

8.1.5 Enter the recalibration date for the equipment with the exception of Direct Reading Dosimeters. Review the recalibration dates of all DRDs and remove those that will require recalibration within four (4) months. If the recalibration date has been passed, make an entry on the "Equipment Discrepancy List".

8.1.6 Assure that DRDs, TLDs, and other dosimetry are stored as remotely as possible from the check sources.

8.1.7 Perform an operational check of those items for which preprinted "N/A" has not been entered on the "Emergency Equipment Inventory" form in accordance with the "Special Instructions".

8.1.8 Inspect the items for evidence of unacceptable physical conditions or damage.

8.1.9 Record discrepancies by assigning a sequential number and other required information on the "Equipment Discrepancy List SPF 60.Ø62.Ø1-1". The following types of findings shall be recorded:

.1 Shortages of major equipment (note that numbers given for disposable items such as swipes are target numbers and that numbers of such items may be estimated rather than counted).

.2 Damaged or missing items.

.3 Out of date or spoiled items.

.4 Broken or improper seals on cabinets or kits.

.5 Items that are beyond their recalibration date upon inventory.

8.1.10 Record the numbers of all discrepancies entered against a particular item.

8.1.11 When inventory is complete, reseal the kit. Tag it with a label "INCOMPLETE INVENTORY" if discrepancies exist.

8.1.12 Return all Inventory and Discrepancy Forms to the Health Physics Engineer for resolution.

8.3 Health Physics Engineer, perform the following:

8.3.1 Resolve all discrepancies and have assigned individual replenish emergency kits or lockers and reseal.

8.3.2 Enter the date that the inventory was closed (by the resolution of all discrepancies) on the SNPS Scheduled Activity Worksheet, complete the worksheet and return it to data processing.

8.3.3 Assure that "Instrument Malfunction and Calibration History," SPF 61.Ø8Ø.Ø9-1, for each kit or facility is updated and refiled from the results of the inventory.

8.3.4 File and maintain all records of the inventory.

9.0 ACCEPTANCE CRITERIA

The numbers of units specified in the "Emergency Equipment Inventory" must be present in the kits and cabinets, the equipment must be in good functional condition, and the calibration due date must not be passed before the next scheduled inventory.

10.0 FINAL CONDITIONS

All outstanding discrepancies shall be resolved and the seal applied before the inventory can be considered complete.

11.0 REFERENCES

Shoreham Nuclear Power Station, Emergency Plan, subsection 8.3.

12.0 APPENDICES

12.1 Equipment Discrepancy List, SPF 69.Ø62.Ø1-1

12.2 Downwind Survey Kit Inventory, SPF 69.Ø62.Ø1-2

12.3 Decontamination Kit Inventory, SPF 69.Ø62.Ø1-3

12.4 First Aid Kit Inventory, SPF 69.Ø62.Ø1-4

12.5 Main Control Room Inventory, SPF 69.Ø62.Ø1-5

12.6 Technical Support Center Inventory, SPF 69.Ø62.Ø1-6

12.7 Emergency Operations Center Inventory, SPF 69.Ø62.Ø1-7

12.8 Operations Support Center Inventory, SPF 69.Ø62.Ø1-8

12.9 First Aid Room Inventory, SPF 69.Ø62.Ø1-9

12.10 Vehicles Inventory, SPF 69.Ø62.Ø1-10

12.11 Central Suffolk Hospital Inventory, SPF 69.Ø62.Ø1-11

12.12 Inventory Form Instructions, SPF 69.Ø62.Ø1-12

EQUIPMENT DISCREPANCY LIST

INVENTORY DATE _____

NO.	DISCREPANCY	LOCATION	ACTION TAKEN	DATE CLEARED

SPF69.062.01-1

DOWNWIND SURVEY KIT INVENTORY

NO.	EQUIPMENT	NOMINAL QUANTITY	QUANTITY FOUND	ID NUMBER	RECAL DATE	SPECIAL INSTRUCTIONS	OPER CHK	DISCR NO	ACTION TAKEN
1	RO-2A (Eberline)	1				Check Battery and Test with "Check Source"			
2	496 (Victoreen)/HP-270	1				Check Battery and Test with "Check Source"			
3	RM-14/HP-210 (Eberline)	1				Check Battery and Test with "Check Source"			
4	TCS Air Sampler (Bat Oper.)	1				Check Operation with 12 Volt Power Supply			
5	Shield Assy with Sample Holder for Item 3(SH-4)	1		N/A	N/A	N/A	N/A		
6	Filters For Item 4	30		N/A	N/A	N/A	N/A		
7									
8	Smears	100		N/A	N/A	N/A	N/A		
9	Ultraview Respirator With GMR Cartridge	2		N/A	N/A	Check Expiration Date of Cartridges	N/A		

INVENTORY BY _____ DATE _____ REVIEWED BY _____ DATE _____

SPF 69.062.01-2

SHEET 1 OF 4

1/13/82

DOWNWIND SURVEY KIT INVENTORY

NO.	EQUIPMENT	NOMINAL QUANTITY	QUANTITY FOUND	ID NUMBER	RECAL DATE	SPECIAL INSTRUCTIONS	OPER CHK	DISCR NO	ACTION TAKEN
10	Direct Reading Dosimeters	—	—	N/A	Check Only	Do Not Record Exp Dates of DRDs	N/A		
a	0-200MR	2							
b	0-5R	2							
11	DRD Charger	1		N/A	N/A	Install Batteries and Check Operation	N/A		
12	Plastic Sample Bags With Labels	50		N/A	N/A	N/A	N/A		
13	Environmental Station Key	1		N/A	N/A	N/A	N/A		
14									
a									
b									
c									
15	Check Source	1			N/A	Store Away From Dosimetry And Instruments	N/A		
16	Clipboard/Paper	1/1		N/A	N/A	N/A	N/A		
17	Pens Writing/Marking	2/1		N/A	N/A	N/A	N/A		
18	Maps/Procedure	2/1		N/A	N/A	N/A	N/A		

INVENTORY BY _____ DATE _____ REVIEWED BY _____ DATE _____

SHEET 2 OF 4

DOWNWIND SURVEY KIT INVENTORY

NO.	EQUIPMENT	NOMINAL QUANTITY	QUANTITY FOUND	ID NUMBER	RECAL DATE	SPECIAL INSTRUCTIONS	OPER CHK	DISCR NO	ACTION TAKEN
19	Roll of Dimes, 50 per roll	1		N/A	N/A	N/A	N/A		
20	Survey Forms SPF69.020.01-	30		N/A	N/A	N/A	N/A		
21	Portable 2 Way Radio, _____ MHz	1			N/A	Install Batteries and Test Transmit/Receive			
22	Flashlight With Spare Bulb	2		N/A	N/A	Install Batteries and Test			
23	Potassium Iodide (KI)			N/A	N/A	Check Exp. Date	N/A		
24	Protective Clothing								
a	Coveralls	2		N/A	N/A	N/A	N/A		
b	Gloves With Liners, Pair	2		N/A	N/A	N/A	N/A		
c	Booties, Pair	2		N/A	N/A	N/A	N/A		
d	Hoods	2		N/A	N/A	N/A	N/A		
25	Tape, Masking /roll	1		N/A	N/A	N/A	N/A		
26*	Personnel TLD	2		N/A	N/A	Check Anneal Date	N/A		
27*	Control TLD	1		N/A	N/A	Check Anneal Date	N/A		

INVENTORY BY _____ DATE _____ REVIEWED BY _____ DATE _____

SHEET 3 OF 4

1/13/82

DOWNWIND SURVEY KIT INVENTORY

NO.	EQUIPMENT	NOMINAL QUANTITY	QUANTITY FOUND	ID NUMBER	RECAL DATE	SPECIAL INSTRUCTIONS	OPER CHK	DISCR NO	ACTION TAKEN
28	Batteries								
a	"D" Cell - Long Life	( )		N/A	N/A	Check With Battery Tester			
b	"C" Cell - Long Life	( )		N/A	N/A	Check With Battery Tester			
c	"B" Cell - Long Life	( )		N/A	N/A	Check With Battery Tester			
d	"A" Cell - Long Life	( )		N/A	N/A	Check With Battery Tester			
e	"AA" Cell - Long Life	( )		N/A	N/A	Check With Battery Tester			
						*All TLDs must be replaced at the same time			

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SHEET 4 OF 4

1/13/82

DECONTAMINATION KIT INVENTORY

NO.	EQUIPMENT	NOMINAL QUANTITY	QUANTITY FOUND	ID NUMBER	RECAL DATE	SPECIAL INSTRUCTIONS	OPER CHK	DISCR NO	ACTION TAKEN
1	Radiac Wash in Spray Bottle	2		N/A	N/A	N/A	N/A		
2	Washcloth	2		N/A	N/A	N/A	N/A		
3	Paper Towels, roll	1		N/A	N/A	N/A	N/A		
4	Soap, bar	3		N/A	N/A	N/A	N/A		
5	Plastic Sheet 4' x 8'	1		N/A	N/A	N/A	N/A		
6	Scissors With Comb	1		N/A	N/A	N/A	N/A		
7	Tongs	1		N/A	N/A	N/A	N/A		
8	Protective Clothing								
a	Coveralls	4		N/A	N/A	N/A	N/A		
b	Gloves With Liners	4		N/A	N/A	N/A	N/A		
c	Booties	4		N/A	N/A	N/A	N/A		
d	Hoods	4		N/A	N/A	N/A	N/A		
e	Dust Masks, Disposable	10		N/A	N/A	N/A	N/A		
9	Plastic Bags With Labels - 10 Gallon	3		N/A	N/A	N/A	N/A		
10	Q-Tips, box	1		N/A	N/A	N/A	N/A		
12	Tape, Masking, roll	1		N/A	N/A	N/A	N/A		

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SHEET 1 OF 1

FIRST AID KIT INVENTORY

NO.	EQUIPMENT	NOMINAL QUANTITY	QUANTITY FOUND	ID NUMBER	RECAL DATE	SPECIAL INSTRUCTIONS	OPER CHK	DISCR NO	ACTION TAKEN
1	Small Oxygen Tank and Mask	1		N/A	N/A	Check Tank Pressure	N/A		
2	Tourniquet - Buckle Type	1		N/A	N/A	N/A	N/A		
3	Stethoscope	1		N/A	N/A	N/A	N/A		
4	Bandage Scissors	1		N/A	N/A	N/A	N/A		
5	Emesis Basin	1		N/A	N/A	N/A	N/A		
6	Penlite Flashlight	1		N/A	N/A	Check Operation With Battery	N/A		
7	Sterile Gauze Pads 2" x 2" & 4" x 4"	6 ea.		N/A	N/A	N/A	N/A		
8	Gauze Roller Bandage, Roll	1		N/A	N/A	N/A	N/A		
9	Roll Adhesive Tape 1"	1		N/A	N/A	N/A	N/A		
10	Kling Bandages - 2" & 3"	3 ea.		N/A	N/A	N/A	N/A		
11	Plain Absorbant Gauze 24" x 72"	3		N/A	N/A	N/A	N/A		
12	Sling	1		N/A	N/A	N/A	N/A		
13	Ammonia Inhalants	6		N/A	N/A	Check Expiration Date	N/A		

INVENTORY BY _____ DATE _____ REVIEWED BY _____ DATE _____

SHEET 1 OF 2

FIRST AID KIT INVENTORY

NO.	EQUIPMENT	NOMINAL QUANTITY	QUANTITY FOUND	ID NUMBER	RECAL DATE	SPECIAL INSTRUCTIONS	OPER CHK	DISCR NO	ACTION TAKEN
14	Assorted Plastic Strip Bandages, Package	1		N/A	N/A	N/A	N/A		
15	Antiseptic Salve, Tube	1		N/A	N/A	Check Expiration Date	N/A		
16	Alcohol or Hydrogen Peroxide, Small Bottle	1		N/A	N/A	Check Expiration Date	N/A		
17	Antiseptic Spray, Aerosol	1		N/A	N/A	Check Expiration Date	N/A		
18	Aspirin, bottle	100		N/A	N/A	Check Expiration Date	N/A		
19	Oral Thermometer	1		N/A	N/A	N/A	N/A		
20	First Aid Instructions	1		N/A	N/A	N/A	N/A		
21	Space Blanket	1		N/A	N/A	N/A	N/A		
22	Tweezers	1		N/A	N/A	N/A	N/A		
23	Eye Dressing Packet	1		N/A	N/A	N/A	N/A		

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MAIN CONTROL ROOM INVENTORY

NO.	EQUIPMENT	NOMINAL QUANTITY	QUANTITY FOUND	ID NUMBER	RECAL DATE	SPECIAL INSTRUCTIONS	OPER CHK	DISCR NO	ACTION TAKEN
1	First Aid Kit	1			N/A	Inventory per FAK Emerg Equip Inv Sheets	N/A		
2	Emergency Plan, Shoreham	1			N/A	Updating done in accordance with procedure _____.	N/A		
3	Emergency Operations Procedure	1			N/A	Updating done in accordance with procedure _____	N/A		
4	Emergency Plan Implementing Procedures	1			N/A	Updating done in accordance with procedure _____.	N/A		
5	Logbooks	1		N/A	N/A	N/A	N/A		
6	Eberline RO-2	1				Check Battery and Test with check source			
7	Duct Tape, Roll	2		N/A	N/A	N/A	N/A		
8	Batteries For RO-2	?		N/A	N/A	Check with Battery Tester			

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TECHNICAL SUPPORT CENTER INVENTORY

NO.	EQUIPMENT	NOMINAL QUANTITY	QUANTITY FOUND	ID NUMBER	RECAL DATE	SPECIAL INSTRUCTIONS	OPER CHK	DISCR NO	ACTION TAKEN
1	First Aid Kit	1			N/A	Inventory per FAK Emerg Equip Inv Sheets	N/A		
2	Emergency Plan, Shoreham	1			N/A	Updating Done in Accordance with Procedure _____.	N/A		
3	Emergency Plan Implementing Procedures	2			N/A	Updating Done in Accordance with Procedure _____.	N/A		
4	Emergency Operating Procedures	1			N/A	Updating Done in Accordance with Procedure __	N/A		
5	Logbook	1		N/A	N/A	N/A	N/A		
6	Paper/Clipboard	10/5		N/A	N/A	N/A	N/A		
7	Pens/Pencils	30/30		N/A	N/A	N/A	N/A		
8a	Eberline RO-2	2				Check Battery and Test with Check Source			
8b	Eberline RO-2	__				Check Battery and Test with Check Source			

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TECHNICAL SUPPORT CENTER INVENTORY

NO.	EQUIPMENT	NOMINAL QUANTITY	QUANTITY FOUND	ID NUMBER	RECAL DATE	SPECIAL INSTRUCTIONS	OPER CHK	DISCR NO	ACTION TAKEN
9a	Eberline RM14 with HP 210 Probe	—				Check Battery and Test with Check Source Check Battery and Test with Check Source			
11a	RADECO _____ Air Sampler	1				Check Operation with 12 Volt Power Supply			
11b	TCS _____ Air Sampler	1							
12	Teletector-Hi Range Survey Inst Eberline 6212	1				Check Battery and Test with Check Source			
13	Calculators with chargers	4		N/A	N/A	N/A	N/A		
14*	TLD	50		N/A	N/A	Check Anneal Date	N/A		

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TECHNICAL SUPPORT CENTER INVENTORY

NO.	EQUIPMENT	NOMINAL QUANTITY	QUANTITY FOUND	ID NUMBER	RECAL DATE	SPECIAL INSTRUCTIONS	OPER CHK	DISCR NO	ACTION TAKEN
15	Direct Reading Dosimeters	—	—						
a	0-200 mR	100		N/A	Check Only	Do Not Record Expiration Dates of DRDs	N/A		
b	0-1 R	100		N/A	Check Only	Do Not Record Expiration Dates of DRDs	N/A		
c	0-5 R	20		N/A	Check Only	Do Not Record Expiration Dates of DRDs	N/A		
d	0-20 R	10		N/A	Check Only	Do Not Record Expiration Dates of DRD	N/A		
16a	DRD Charger	2			N/A	Install Batteries and Check Operation			
17	Particulate Filters For Item 11, boxes	2		N/A	N/A	N/A	N/A		
18	Canisters for Item 1b	30		N/A	N/A	Check Expiration Date	N/A		
19	Smears	500		N/A	N/A	N/A	N/A		
20	Flashlight	10		N/A	N/A	Check Operation with Batt	N/A		

INVENTORY BY _____ DATE _____ REVIEWED BY _____ DATE _____

TECHNICAL SUPPORT CENTER INVENTORY

NO.	EQUIPMENT	NOMINAL QUANTITY	QUANTITY FOUND	ID NUMBER	RECAL DATE	SPECIAL INSTRUCTIONS	OPER CHK	DISCR NO	ACTION TAKEN
21	Absorbant Pads, case	1		N/A	N/A	N/A	N/A		
22	Plastic Bags - Large, box	1		N/A	N/A	N/A	N/A		
23	Plastic Sample Bags, Assorted	100		N/A	N/A	N/A	N/A		
24	Plant Floor Plans	1		N/A	N/A	N/A	N/A		
25	Lead Bricks/Blankets	18/2		N/A	N/A	N/A	N/A		
26	Protective Clothing Disposable	—		—					
a	Coveralls	50		N/A	N/A	N/A	N/A		
b	Surgeon Caps	50		N/A	N/A	N/A	N/A		
c	Hoods	25		N/A	N/A	N/A	N/A		
d	Booties	50		N/A	N/A	N/A	N/A		
e	Shoe Covers	50		N/A	N/A	N/A	N/A		
f	Poly Disposable Gloves 1000/Box	2		N/A	N/A	N/A	N/A		
g	Latex Gloves	50		N/A	N/A	N/A	N/A		
27	Masking Tape 2" Width	4		N/A	N/A	N/A	N/A		
28	Radiation Sign With Inserts	4		N/A	N/A	N/A	N/A		
29	Radiation Rope, Feet	100		N/A	N/A	N/A	N/A		

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TECHNICAL SUPPORT CENTER INVENTORY

NO.	EQUIPMENT	NOMINAL QUANTITY	QUANTITY FOUND	ID NUMBER	RECAL DATE	SPECIAL INSTRUCTIONS	OPER CHK	DISCR NO	ACTION TAKEN
30	Tape, "Radioactive Material" w Dispenser	1		N/A	N/A	N/A	N/A		
31	Tag, "Radioactive Material"	100		N/A	N/A	N/A	N/A		
32	Kraft Paper, 36" Width	1		N/A	N/A	N/A	N/A		
33	Plastic Sheet 24" Width, Roll	1		N/A	N/A	N/A	N/A		
34	Herculite, Roll	1		N/A	N/A	N/A	N/A		
35	Duct Tape, Roll	2		N/A	N/A	N/A	N/A		
36	SCBA - Pressure Demand Type-MGA 463831	4		N/A	N/A	Check Pressure	N/A		
37	Replacement Cylinder - MSA 460320	4		N/A	N/A	Check Pressure	N/A		
38	Keys for Downwind Survey Vans	2							

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TECHNICAL SUPPORT CENTER INVENTORY

NO.	EQUIPMENT	NOMINAL QUANTITY	QUANTITY FOUND	ID NUMBER	RECAL DATE	SPECIAL INSTRUCTIONS	CPER CHK	DISCR NO	ACTION TAKEN
39	Single Channel Analyzer-Eberline MS-2	1				Check Battery and Test with			
b	With SPA-3 Scintillation Probe Assy	1				Test with Check Source			
b	HP210 with Aluminum Probe Holder Sh 4	1				Test with Check Source			
40a	Two Way Radio, MHz	2			N/A	Check Battery, Transmit and receive			
40b	Two Way Radio, MHz	-			N/A	Check Battery, Transmit and receive			
41	Air Purifying Full Face Respirator With Particulate and Iodine Cartridges MSA 457111	6		N/A	N/A	Check Exp Date of Iodine Cartridges	N/A		
42	Replacement Cartridges-MSA 88182	6		N/A	N/A	Check Exp Date	N/A		
43	Bullhorn	1		N/A	N/A	Check Op with Batteries			
44	Tool Kit	1		N/A	N/A	N/A	N/A		
45									

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TECHNICAL SUPPORT CENTER INVENTORY

NO.	EQUIPMENT	NOMINAL QUANTITY	QUANTITY FOUND	ID NUMBER	RECAL DATE	SPECIAL INSTRUCTIONS	OPER CHK	DISCR NO	ACTION TAKEN
46	Radiological Health Handbook	1		N/A	N/A	N/A	N/A		
47	Batteries For Instruments Long Life			N/A	N/A	N/A	N/A		
a	"D" Cell			N/A	N/A	Check with Battery Tester			
b	"C" Cell			N/A	N/A	Check with Battery Tester			
c	"B" Cell			N/A	N/A	Check with Battery Tester			
d	"A" Cell			N/A	N/A	Check with Battery Tester			
e	"AA" Cell			N/A	N/A	Check with Battery Tester			

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EMERGENCY OPERATIONS FACILITY INVENTORY

NO.	EQUIPMENT	NOMINAL QUANTITY	QUANTITY FOUND	ID NUMBER	RECAL DATE	SPECIAL INSTRUCTIONS	OPER CHK	DISCR NO	ACTION TAKEN
1	First Aid Kit	1			N/A	Inventory per FAK Emerg Equip Inv Sheets	N/A		
2	Downwind Survey Kit	3			N/A	Inventory per SK Emerg Equip Inv Sheets	N/A		
3	Decontamination Kit	2			N/A	Inventory per DK Emerg Equip Inv Sheets	N/A		
4	Emergency Plan, Shoreham	1			N/A	Updating Done in Accordance with Procedure _____.	N/A		
5	Emergency Operating Procedures, Set	2			N/A	Updating Done in Accordance with Procedure _____.	N/A		
6	Emergency Plan Implementing Procedures, Set	1			N/A	Updating Done in Accordance with Procedure _____.	N/A		
7	Logbooks	4		N/A	N/A	N/A	N/A		
8	Paper/Clipboards	20/5		N/A	N/A	N/A	N/A		
9	Pens/Pencils	50/50		N/A	N/A	N/A	N/A		

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1/14/82

EMERGENCY OPERATIONS FACILITY INVENTORY

NO.	EQUIPMENT	NOMINAL QUANTITY	QUANTITY FOUND	ID NUMBER	RECAL DATE	SPECIAL INSTRUCTIONS	OPER CHK	DISCR NO	ACTION TAKEN
10	Calculators with Chargers	4		N/A	N/A	N/A	N/A		
11	Particulate Filters For Air Samplers, boxes	10		N/A	N/A	N/A	N/A		
				N/A	N/A	Check Expiration Date	N/A		
13	Smears	500		N/A	N/A	N/A	N/A		
14	Flashlight	10		N/A	N/A	Check Operation with Batt			
15	Absorbant Pads, Case	2		N/A	N/A	N/A	N/A		
16	Plastic Bags-Large, Box	1		N/A	N/A	N/A	N/A		
17	Plastic Sample Bags-Assorted	100		N/A	N/A	N/A	N/A		
18	Plant Floor Plans	1		N/A	N/A	N/A	N/A		
19	Lead Bricks/Blankets	18/2		N/A	N/A	N/A	N/A		
20	Protective Clothing	____		N/A	N/A	N/A	N/A		
a	Coveralls	100		N/A	N/A	N/A	N/A		
b	Surgeon Caps	100		N/A	N/A	N/A	N/A		
c	Hoods	25		N/A	N/A	N/A	N/A		

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EMERGENCY OPERATIONS CENTER INVENTORY

NO.	EQUIPMENT	NOMINAL QUANTITY	QUANTITY FOUND	ID NUMBER	RECAL DATE	SPECIAL INSTRUCTIONS	OPER CHK	DISCR NO	ACTION TAKEN
d	Booties	50		N/A	N/A	N/A	N/A		
e	Shoe Covers	50		N/A	N/A	N/A	N/A		
f	Poly Disposable Gloves 1000/Box	1		N/A	N/A	N/A	N/A		
g	Latex Gloves	100		N/A	N/A	N/A	N/A		
h	Dust Masks, Disposable	100		N/A	N/A	N/A	N/A		
21	Masking Tape 2" Width, Rolls	2		N/A	N/A	N/A	N/A		
22	Radiation Rope, Feet	200		N/A	N/A	N/A	N/A		
23	Tape, "Radioactive Material" w Dispenser	1		N/A	N/A	N/A	N/A		
24	Tags, "Radioactive Material"	100		N/A	N/A	N/A	N/A		
25	Kraft Paper 36" Width, Roll	1		N/A	N/A	N/A	N/A		
26	Stretcher	1		N/A	N/A	N/A	N/A		
27	Blankets	2		N/A	N/A	N/A	N/A		
28	Plastic Sheet 24" Width, Roll	1		N/A	N/A	N/A	N/A		
29	Herculite, Roll	1		N/A	N/A	N/A	N/A		
30	Duct Tape, Roll	2		N/A	N/A	N/A	N/A		

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1/14/82

EMERGENCY OPERATIONS CENTER INVENTORY

NO.	EQUIPMENT	NOMINAL QUANTITY	QUANTITY FOUND	ID NUMBER	RECAL DATE	SPECIAL INSTRUCTIONS	OPER CHK	DISCR NO	ACTION TAKEN
31	Batteries For Instruments Long Life			N/A	N/A	N/A	N/A		
a	"D" Cell			N/A	N/A	Check with Battery Tester			
b	"C" Cell			N/A	N/A	Check with Battery Tester			
c	"B" Cell			N/A	N/A	Check with Battery Tester			
d	"A" Cell			N/A	N/A	Check with Battery Tester			
e	"AA" Cell			N/A	N/A	Check with Battery Tester			
32	Eberline RO-2A	2							
33	RM-14 W/HP-270	1							
34	TCS Air Sampler	1							
35	Caninisters for TCS Air Sampler	30							

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OPERATIONS SUPPORT CENTER INVENTORY

NO.	EQUIPMENT	NOMINAL QUANTITY	QUANTITY FOUND	ID NUMBER	RECAL DATE	SPECIAL INSTRUCTIONS	OPER CHK	DISCR NO	ACTION TAKEN
1	First Aid Kit	1			N/A	Inventory per FAK Emerg Equip Inv Sheets	N/A		
2	Survey Kit	1			N/A	Inventory per FAK Emerg Equip Inv Sheets	N/A		
3	Decontamination Kit	3			N/A	Inventory per FAK Emerg Equip Inv Sheets	N/A		
4	Emergency Plan, Shoreham	1			N/A	Updating Done in Accordance with Procedure _____	N/A		
5	Emergency Plan Implementing Procedures	2 sets			N/A	Updating Done in Accordance with Procedure _____	N/A		
6	Logbooks	2		N/A	N/A	N/A	N/A		
7	Paper/Clipboards	5/5		N/A	N/A	N/A	N/A		
8	Pens/Pencils	30/30		N/A	N/A	N/A	N/A		
9	Forms			N/A	N/A	N/A	N/A		
10a b	Eberline RO-2 Eberline RO-2	2 ___				Check Battery and Test with Check Source			

INVENTORY BY _____ DATE _____ REVIEWED BY _____ DATE _____

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OPERATIONS SUPPORT CENTER INVENTORY

NO.	EQUIPMENT	NOMINAL QUANTITY	QUANTITY FOUND	ID NUMBER	RECAL DATE	SPECIAL INSTRUCTIONS	OPER CHK	DISCR NO	ACTION TAKEN
14	Particuiate Filters, Box	10		N/A	N/A	N/A	N/A		
16	Smears	500		N/A	N/A	N/A	N/A		
17	Flashlight	5		N/A	N/A	Check Operation with Battery			
18	Absorbant Pads, Box	1		N/A	N/A	N/A	N/A		
19	Plastic Bags-Large, Box	1		N/A	N/A	N/A	N/A		
20	Plastic Sample Bags Assorted	100		N/A	N/A	N/A	N/A		
21	Plant Floor Plans	1		N/A	N/A	N/A	N/A		
22	Camera SX-70	1		N/A	N/A	Inspect & Test Shutter	N/A		

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OPERATIONS SUPPORT CENTER INVENTORY

NO.	EQUIPMENT	NOMINAL QUANTITY	QUANTITY FOUND	ID NUMBER	RECAL DATE	SPECIAL INSTRUCTIONS	OPER CHK	DISCR NO	ACTION TAKEN
23	Film For SX-70, pack	10		N/A	N/A	Check Expiration Date	N/A		
24	Protective Clothing								
a	Coverall	100		N/A	N/A	N/A	N/A		
b	Surgeon Caps	100		N/A	N/A	N/A	N/A		
c	Hoods	25		N/A	N/A	N/A	N/A		
d	Booties	1000		N/A	N/A	N/A	N/A		
e	Shoe Covers	100		N/A	N/A	N/A	N/A		
f	Poly Disposable Gloves 1000 1 Box	1 box		N/A	N/A	N/A	N/A		
g	Latex Gloves	100		N/A	N/A	N/A	N/A		
h	Dust Masks, Disposable	100		N/A	N/A	N/A	N/A		
25	Masking Tape - 2", Roll	4		N/A	N/A	N/A	N/A		
26	Radiation Signs With Inserts	4		N/A	N/A	N/A	N/A		
27	Radiation Rope, Feet	200		N/A	N/A	N/A	N/A		
28	Tape, "Radioactive Material" With Dispenser, roll	1		N/A	N/A	N/A	N/A		
29	Tags, "Radioactive Material"	100		N/A	N/A	N/A	N/A		
30	Kraft Paper, 36" Width, Roll	1		N/A	N/A	N/A	N/A		

INVENTORY BY _____ DATE _____ REVIEWED BY _____ DATE _____

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SHEET 3 OF 6

1/13/82

OPERATIONS SUPPORT CENTER INVENTORY

NO.	EQUIPMENT	NOMINAL QUANTITY	QUANTITY FOUND	ID NUMBER	RECAL DATE	SPECIAL INSTRUCTIONS	OPER CHK	DISCR NO	ACTION TAKEN
31	Stretcher	2		N/A	N/A	N/A	N/A		
32	Blankets	4		N/A	N/A	N/A	N/A		
33	Plastic Sheet 24" Wide, Roll	1		N/A	N/A	N/A	N/A		
34	Herculite, Roll	1		N/A	N/A	N/A	N/A		
35	Duct Tape, Roll	2		N/A	N/A	N/A	N/A		
36	SCBA Pressure Demand Type - MSA463831	4		N/A	N/A	Check Pressure	N/A		
37	Replacement Cylinder MSA460320	4		N/A	N/A	Check Pressure	N/A		
38	Batteries For Instruments - Long Life								
a	"D" Cell			N/A	N/A	Check with Battery Tester			
b	"C" Cell			N/A	N/A	Check with Battery Tester			
c	"B" Cell			N/A	N/A	Check with Battery Tester			
d	"A" Cell			N/A	N/A	Check with Battery Tester			
e	"AA" Cell			N/A	N/A	Check with Battery Tester			
39*	TLD	100		N/A	N/A	Check Anneal Date	N/A		
40	TLD Reader	1				Check Op with 115 VAC			

INVENTORY BY _____ DATE _____ REVIEWED BY _____ DATE _____

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SHEET 4 OF 6

1/13/82

OPERATIONS SUPPORT CENTER INVENTORY

NO.	EQUIPMENT	NOMINAL QUANTITY	QUANTITY FOUND	ID NUMBER	RECAL DATE	SPECIAL INSTRUCTIONS	OPER CHK	DISCR NO	ACTION TAKEN
41	Direct Reading Dosimeters								
a	0-200 mR	100		N/A	Check Only	Do Not Record Calibration Dates of DRDS	N/A		
b	0-1R	100		N/A	Check Only	Do Not Record Calibration Dates of DRDs	N/A		
c	0-5R	20		N/A	Check Only	Do Not Record Calibration Dates of DRDs	N/A		
d	0-20R	10		N/A	Check Only	Do Not Record Calibration Dates of DRDs	N/A		
42a 42b	DRD Charger DRD Charger	2			N/A N/A	Install Battery and Check Operation			
		1				Check Battery			
		1 1 1				Check Battery Test with Check Source Test with Check Source			
45a 45b	Two Way Radio, MHz Two Way Radio, MHz	10 –			N/A N/A	Check Battery, Transmit and Receive			

INVENTORY BY _____ DATE _____ REVIEWED BY _____ DATE _____

SPF 69.062.01-8

OPERATIONS SUPPORT CENTER INVENTORY

NO.	EQUIPMENT	NOMINAL QUANTITY	QUANTITY FOUND	ID NUMBER	RECAL DATE	SPECIAL INSTRUCTIONS	OPER CHK	DISCR NO	ACTION TAKEN
46	Air Purifying Full Face Respirator With Particulate and Iodine Cartridges MSA 45711	6		N/A	N/A	Check Exp Date of Iodine Cartridges	N/A		
47	Replacement Cartridges MSA88182	6		N/A	N/A	Check Exp Date	N/A		
48	Bullhorn	1		N/A	N/A	Check Op with Batteries			
49	Tool Kit	1		N/A	N/A	N/A	N/A		
50	Radiological Health Handbook	1		N/A	N/A	N/A	N/A		
51	Harnesses and Rope	1		N/A	N/A	N/A	N/A		
						*All TLDs must be replaced at the same time			

INVENTORY BY _____ DATE _____ REVIEWED BY _____ DATE _____

SPF 69.Ø62.Ø1-8

SHEET 6 OF 6

1/13/82

FIRST AID ROOM INVENTORY

NO.	EQUIPMENT	NOMINAL QUANTITY	QUANTITY FOUND	ID NUMBER	RECAL DATE	SPECIAL INSTRUCTIONS	OPER CHK	DISCR NO	ACTION TAKEN
1a	First Aid Kit	3			N/A	Inventory Per FAK	N/A		
1b	First Aid Kit	-			N/A	Emerg Equip Inv Sheets	N/A		
1c	First Aid Kit	-			N/A		N/A		

INVENTORY BY _____ DATE _____ REVIEWED BY _____ DATE _____

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SHEET 1 OF 1

1/13/82

CENTRAL SUFFOLK HOSPITAL INVENTORY

NO.	EQUIPMENT	NOMINAL QUANTITY	QUANTITY FOUND	ID NUMBER	RECAL DATE	SPECIAL INSTRUCTIONS	OPER CHK	DISCR NO	ACTION TAKEN
1	Decontamination Kit	1			N/A	Inventory Per DK Emerg Equip Inv Sheets	N/A		
2	Logbook	1		N/A	N/A	N/A	N/A		
3	Paper/Clipboards	5/2		N/A	N/A	N/A	N/A		
4	Pens/Pencils	10/10		N/A	N/A	N/A	N/A		
5	Eberline RO-2	1				Check Battery and Test with Check Source			
6a	Eb.RM14/HP210/SH-4	1				Check Batter and Test with Check Source			
7	RADECO Air Sampler	1				Check Operation with 12 V Power Source			
8	Particulate Filters, box	1		N/A	N/A	N/A	N/A		
9	Silver Zeolite Filters			N/A	N/A	Check Expiration Date	N/A		
10	Smears	100		N/A	N/A	N/A	N/A		
11	Flashlight	2		N/A	N/A	Check Operation with Battery	N/A		
12	Absorbant Pads, case	1		N/A	N/A	N/A	N/A		

INVENTORY BY _____ DATE _____ REVIEWED BY _____ DATE _____

SPF 69.Ø62.Ø1-11

SHEET 1 OF 5

1/13/82

CENTRAL SUFFOLK HOSPITAL INVENTORY

NO.	EQUIPMENT	NOMINAL QUANTITY	QUANTITY FOUND	ID NUMBER	RECAL DATE	SPECIAL INSTRUCTIONS	OPER CHK	DATE NO	ACTION TAKEN
13	Plastic Bags, Large, box	1		N/A	N/A	N/A	N/A		
14	Plastic Sample Bags, Assorted	100		N/A	N/A	N/A	N/A		
15	Camera, SX-70	1		N/A	N/A	Inspect and Test Shutter			
16	Film For SX-70, pack	2		N/A	N/A	Check Expiration Date	N/A		
17	Protective Clothing								
a	Coveralls	25		N/A	N/A	N/A	N/A		
b	Lab Coats	50		N/A	N/A	N/A	N/A		
c	Surgeon Caps	100		N/A	N/A	N/A	N/A		
d	Hoods	25		N/A	N/A	N/A	N/A		
e	Booties	25		N/A	N/A	N/A	N/A		
f	Shoe Covers	25		N/A	N/A	N/A	N/A		
g	Poly Disposable Gloves 1000/box	1		N/A	N/A	N/A	N/A		
h	Surgeon Gloves	100		N/A	N/A	N/A	N/A		
i	Surgeon Masks	25		N/A	N/A	N/A	N/A		
j	Dust Masks, Disposable	25		N/A	N/A	N/A	N/A		
18	Masking Tape 2", roll	2		N/A	N/A	N/A	N/A		
19	Radiation Signs with Inserts	6		N/A	N/A	N/A	N/A		
20	Radiation Rope, feet	200		N/A	N/A	N/A	N/A		

INVENTORY BY _____ DATE _____ REVIEWED BY _____ DATE _____

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SHEET 2 OF 5

1/13/82

CENTRAL SUFFOLK HOSPITAL INVENTORY

NO.	EQUIPMENT	NOMINAL QUANTITY	QUANTITY FOUND	ID NUMBER	RECAL DATE	SPECIAL INSTRUCTIONS	OPER CHK	DISCR NO	ACTION TAKEN
21	Tape, "Radioactive Material" w Dispenser, roll	1		N/A	N/A	N/A	N/A		
22	Tags, "Radioactive Material"	100		N/A	N/A	N/A	N/A		
23	Kraft Paper 36" Width, roll	1		N/A	N/A	N/A	N/A		
24	Stretcher	1		N/A	N/A	N/A	N/A		
25	Blankets	2		N/A	N/A	N/A	N/A		
26	Plastic Sheet 24" Width, roll	1		N/A	N/A	N/A	N/A		
27	Herculite, Roll	1		N/A	N/A	N/A	N/A		
28	Lead Container, High Activity Specimen	1		N/A	N/A	N/A	N/A		
29	Movable Protective Shield. With Adjustable 4 Inch Thick Viewing Window	1		N/A	N/A	N/A	N/A		
30	Decontamination Table Top With Splash Guards, Stretcher, Hose, Faucet, and Plastic Water Recepticle	1		N/A	N/A	N/A	N/A		

INVENTORY BY _____ DATE _____ REVIEWED BY _____ DATE _____

SPF 69.062.01-11

SHEET 3 OF 5

1/14/82

CENTRAL SUFFOLK HOSPITAL INVENTORY

NO.	EQUIPMENT	NOMINAL QUANTITY	QUANTITY FOUND	ID NUMBER	RECAL DATE	SPECIAL INSTRUCTIONS	OPER CHK	DISCR NO	ACTION TAKEN
31	Hospital Emergency Procedures, set	1			N/A	N/A	N/A		
32	TLD Rings	10		N/A	N/A	N/A	N/A		
33									
a									
b									
34	Duct Tape, roll	2		N/A	N/A	N/A	N/A		
35*	TLD	10		N/A	N/A	Check Anneal Date	N/A		
36	Direct Reading Dosimeters, 0-200 MR	10		N/A	Check Only	Do Not Record DRD Calibration Date	N/A		
37	DRD Charger	1			N/A	Install Battery and Check Operation			
38	Batteries For Instruments Long Life								
a	"D" Cell			N/A	N/A	Check with Battery Tester			
b	"C" Cell			N/A	N/A	Check with Battery Tester			

INVENTORY BY _____ DATE _____ REVIEWED BY _____ DATE _____

SPF 69.Ø62.Ø1-11

1/14/82

CENTRAL SUFFOLK HOSPITAL INVENTORY

NO.	EQUIPMENT	NOMINAL QUANTITY	QUANTITY FOUND	ID NUMBER	RECAL DATE	SPECIAL INSTRUCTIONS	OPER CHK	DISCR	ACTION TAKEN
[illegible]	"B" Cell			N/A	N/A	Check with Battery Tester			
[illegible]	"A" Cell			N/A	N/A	Check with Battery Tester			
[illegible]	"AA" Cell			N/A	N/A	Check with Battery Tester			

INVENTORY BY _____ DATE _____ REVIEWED BY _____ DATE _____

SPF 69.062.01-11

SHEET 5 OF 5

1/13/82

INVENTORY FORM INSTRUCTIONS

1. NO. Sequential number of item - pre-printed. Assign number for all items added to inventory list by hand.

2. EQUIPMENT Name or description of equipment - pre-printed.

3. NOMINAL QUANTITY Approximate number of units of item required to be stocked at this location - pre-printed.

4. QUANTITY FOUND Enter actual number of items found at this location. Make an entry on the "Equipment Discrepancy List", SPF69.064.01-1, if the Quant found is significantly less than the nom quant.

5. ID NUMBER If this column spaces does not contain a preprinted "N/A", enter the SNPS ID Number of the inventoried equipment

6. RECAL DATE If this column space does not contain a preprinted "N/A", enter the recalibration date of the inventoried equipment. If the date has been passed remove the equipment from service, return it to the calibration facility, and make an entry on the "Equipment Discrepancy List".

7. SPECIAL INSTRUCTIONS Instructions how to perform the operational check or inspection - pre-printed.

8. OPER CHECK Enter "P" for passed or "F" for failed. If "F" make an entry on the "Equipment Discrepancy List".

9. DISCR NO If there is any visible evidence of damage make an entry in the "Equipment Discrepancy List". In this case, or if another discrepancy has been recorded, enter the discrepancy number in this space.

10. ACTION TAKEN Record action taken if applicable.

THIS SECTION INTENTIONALLY LEFT BLANK FOR
FUTURE EXPANSION.

Submitted: _____

Approved: _____
(Plant Manager)

DRAFT - PRELIMINARY

SP Number 69.070.01
Revision A B
Date Eff. _____
TPC _____
TPC _____
TPC _____

RE-ENTRY

1.0 PURPOSE

This procedure provides guidance and instruction concerning re-entry to an area(s) in which the magnitude of radiological conditions is either uncertain or unknown during emergency operations.

Normal access control methods and standard safety precautions should be observed, in lieu of this procedure, for re-entry to areas for which the habitability of the area is not in question, or has otherwise been determined to be safe.

2.0 RESPONSIBILITY

The Emergency Director (ED) and/or the Radiation Protection Manager is responsible for insuring the proper implementation of this procedure.

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3.0 DISCUSSION

3.1 Re-entry to an affected area during emergency operations may be made for such purposes as life saving, search and rescue, equipment operations, damage control, and survey of plant equipment status and radiological conditions.

3.2 Since emergency incidents may create radiological and industrial hazards, not commonly encountered during normal operations, only the Emergency Director, with the concurrence of the Radiation Protection Manager (RPM) if readily available, shall authorize re-entry to an area for which the habitability is unknown.

3.3 Radiation exposures during re-entry operations shall be maintained as low as reasonably achievable consistent with the urgency and necessity of the operations being performed. Emergency radiation exposure limits may be established in accordance with SP 69.050.01, Radiation Doses During an Emergency, if necessary.

3.4 To the extent possible the ~~utilization~~ number of ~~personnel~~ persons performing re-entries should be ~~maximized~~ minimized. For example, radiation monitor personnel may be called upon to assist with the re-entry operation to reduce the number of persons involved. Also, monitoring could be performed concurrent with the re-entry rather than as a separate activity.

4.0 PRECAUTIONS

4.1 Re-entry teams shall be comprised of a minimum of two individuals. These individuals shall remain in visual/voice contact with each other at all times when in the affected area.

4.2 If the ventilation to the area has been isolated, and/or if there is reason to believe that the air within the area is toxic or there is is an oxygen deficiency, appropriate self-contained breathing apparatus shall be used. In this case, in addition to the two man entry team, one or more additional individuals shall be assigned to remain outside of the affected area, in appropriate protective clothing and wearing SCBAs on standby, ready to enter the area to affect rescue if needed.

4.3 Non-metallic life-lines should be used in areas containing heavy smoke, or in areas where visual contact cannot be maintained with the re-entry team.

4.4 Protective clothing should be chosen on the basis of the suspected conditions, or if a reasonable projection cannot be made, the protective clothing affording the highest protection should be worn.

4.5 Survey instruments should be continuously monitored and personnel dosimeters read periodically while in the affected area to ensure detection of unexpected localized areas of higher radiation levels.

5.0 PREREQUISITES

5.1 Re-entry personnel should be issued appropriate additional dosimetry (eg: high range dosimeters, alarming dosimeters, etc) to supplement the normal TLD and self-reading dosimeter.

6.0 LIMITATIONS AND ACTIONS

6.1 Personnel radiation exposures shall be maintained, as low as reasonably achievable, within normal Shoreham administrative limits, except as provided in SP 69.050.01, Radiation Doses During an Emergency.

7.0 MATERIALS OR TEST EQUIPMENT

The following equipment may be required as directed by the Emergency Director/ Radiation Protection Manager:

7.1 Appropriate radiological protective clothing

7.2 Appropriate protective clothing for other hazards (fire gear, electrician gloves, etc)

7.3 Appropriate respirators

7.4 High range self-reading pocket dosimeters

7.5 Additional TLD badges

7.6 Walkie-talkies

7.7 Appropriate high range survey instruments

7.8 Contamination swipes

7.9 Air sampler and sample media

7.10 Personal lapel air samplers and/or personal alarming dosimeters (or chirpers)

7.11 Damage control equipment

7.12 First aid kit

7.13 Life-lines

7.14 Flashlights

7.15 Equipment necessary to perform re-entry operation (tools, etc)

8.0 PROCEUDRE

This procedure is divided into two parts, each of which may be performed independently or in sequence. The first is re-entry to an affected area within plant buildings. The second is re-entry to the evacuated site from a remote location.

8.1 Re-entry to Areas Within Plant Buildings

8.1.1 The Emergency Director/Radiation Protection Manager should utilize all pertinent data available, including that from area radiation monitors, process instrumentation, adjacent area survey data, observations made by evacuated personnel, and any other available source to determine:

.1 Extent and location of affected area;

.2 The conditions (hazards, temperature, air quality, etc) in the area;

.3 If any personnel are trapped or disabled in the area;

.4 If it is practical to reduce the potential hazards to re-entry personnel (ventilating, stopping equipment, etc);

.5 Determine which route to take to the repair/operation location to minimize radiation exposure;

.6 Determine if Potassium Iodide administration is required in accordance with SP 69.050.01 Thyroid Blocking; and

.7 If re-entry can be deferred without affecting plant safety to allow for radioactive decay.

8.1.2 Form an appropriate re-entry team(s). The Radiation Protection Manager should be called upon to organize and direct re-entry surveys. The re-entry team should be briefed prior to commencing re-entry. Topics should include specific assignments, the number of people the work requires, what tools, spare parts, and equipment are needed, expected or projected hazards and radiological conditions, applicable dose limits, equipment and protective clothing to be used, and other similar topics. The Radiological Protection Manager should also:

.1 Determine each team members allowable dose and calculate the stay time for each; and

.2 Arrange, in advance, for any anticipated reliefs needed for re-entry teams.

8.1.3 At the direction of the Emergency Director or the Radiation Protection Manager, obtain appropriate equipment and don appropriate protective clothing and respirators. Typical re-entry equipment is identified in section 7.0 of this procedure.

8.1.4 As appropriate to the radiological conditions, and/or the re-entry team assignment the following should be performed by re-entry team members:

.1 Prior to entering the area, turn on and check operation of the survey instrument.

NOTE: If at any time during the re-entry, the survey instrument appears to be malfunctioning, immediately retreat to a safe area. Be especially suspicious of survey instrument readings lower than expected. Most GM survey instruments will read "0" or a low value if the detector is saturated by extremely high radiation levels.

.2 Approach the affected area, continuously monitoring dose rates.

NOTE: When using an instrument with a telescopic probe, remain alert to the dose rate where you are standing, in addition to the dose rate where the detector is located.

.3 Continuously apprise the Technical Support Center of the progress of the re-entry team, conditions observed and dose rates.

.4 Re-entry team members shall check their pocket dosimeters periodically and report the results to the Technical Support Center. The frequency of these checks should be consistent with the observed dose rate.

.5 If at any time during re-entry, the observed dose rates exceed 100 mrem/hr (or another pre-determined level) or if the exposure of any team member exceeds 3 rem or other specified maximum allowable dose, the entire re-entry team shall retreat to a safe area, notify the Technical Support Center, and standby for further instructions.

.6 Perform appropriate surveys and obtain air samples as directed by the Radiation Protection Manager or the Emergency Director. If possible, perform this survey concurrent with other re-entry team activities, in order to minimize stay time.

.7 Perform appropriate inspections, repairs, and/or equipment operations, as directed.

.8 Perform appropriate rescue and first aid functions if trapped or disabled personnel are discovered in the area in accordance with SP 69.040.01, Personnel Injury, and SP 69.080.01, Search and Rescue, as necessary.

.9 At the completion of the assigned functions, leave the affected area and return to the Health Physics checkpoint removing protective clothing and frisking for contamination as directed by Health Physics personnel.

8.1.5 Notify the Technical Support Center when clear of the affected area, and brief the Emergency Director on the conditions observed and any other data obtained during the re-entry.

8.2 Re-entry to the Site

This section of the procedure assumes personnel have evacuated the site and have assembled at one of the offsite assembly areas, or at the remote Emergency Operations Facility (EOF), and that the EOF is staffed and operational. Control of re-entry team personnel will be performed by EOF staff.

8.2.1 Form an appropriate re-entry team(s). The senior LILCO supervisor at the assembly area or at the EOF should organize and brief the re-entry team. If possible, at least one member of the re-entry team should be from the Health Physics section.

8.2.2 Re-entry team personnel should obtain necessary equipment and don appropriate protective clothing. In particular, obtain a walkie-talkie that can be used for communications with the EOF and/or the Technical Support Center. Emergency kits containing typical re-entry equipment are located at the Emergency Operations Facility.

NOTE: Protective clothing and respirators should not be worn in public areas, unless absolutely warranted, to prevent undue public concern. This is especially important if evacuation of public areas surrounding the site have not been implemented.

8.2.3 Obtain a vehicle for transportation to the site. If possible, use a LILCO vehicle, otherwise use a personal automobile. Note gas tank level. If the level is less than 1/2, use another vehicle.

8.2.4 If available, spread plastic sheeting on the seats and along the floor of the vehicle, and perform any other readily applied techniques to minimize contamination of the vehicle.

8.2.5 As appropriate to the radiological conditions and/or re-entry team assignment, the following should be performed by re-entry team members:

.1 Prior to leaving the Emergency Operations Facility, turn on and check operation of the survey instrument and the walkie-talkie.

NOTE: If at any time during the re-entry, the survey instrument appears to be malfunctioning, immediately retreat to a safe area. Be especially suspicious of survey instrument readings lower than expected. Most GM survey instruments will read "0" or a low value if the detector is saturated by extremely high radiation levels.

.2 Using the prepared vehicle, approach the site from upwind as much as possible. Continuously monitor radiation levels by extending the instrument probe out the vehicle window.

.3 Unless otherwise directed, continuously apprise the Emergency Operations Facility of the progress of the re-entry team, conditions observed, and dose rates.

.4 Re-entry team members shall check their pocket dosimeters periodically and report the results to the Emergency Operations Facility. The frequency of these checks should be consistent with the observed dose rate.

.5 If at any time during the re-entry, observed dose rates exceed 100 mrem/hr (or another predetermined level) or if the exposure of any member of the re-entry team exceeds 3 rem (or other predetermined level), the entire re-entry team shall retreat to a safe area, notify the Emergency Operations Facility, and standby for further instructions.

.6 Perform assigned surveys in accordance with SP 69.020.01, Downwind Surveys. Document all survey results.

.7 At the site boundary, enter the site and perform additional surveys as directed.

.8 If instructed to re-enter the plant, approach the guardhouse, continuously monitoring dose rate. Upon entering the guardhouse, notify the Technical Support Center or Emergency Operations Facility of the progress and dose rates observed.

.9 If directed further, re-enter the plant and continue as provided in section 8.1 of this procedure.

9.0 ACCEPTANCE CRITERIA

N/A

10.0 FINAL CONDITIONS

10.2 Upon completion of the re-entry, team members shall report to the Radiation Protection Manager for exposure evaluation and follow-up.

10.2 When warranted, the Emergency Director should restore access to the affected areas upon the advice of the Radiation Protection Manager and based upon the results of the re-entry surveys. The Radiation Protection Manager will determine appropriate access control measures for subsequent entry to the area for recovery operations.

11.0 REFERENCES

11.1 Shoreham Nuclear Power Station Emergency Plan

12.0 APPENDICES

N/A

Submitted:_____

Approved:_____
(Plant Manager)

DRAFT - PRELIMINARY

SP Number 69.070.03
Revision A
Date Eff._____
TPC_____
TPC_____
TPC_____

TERMINATION OF THE EMERGENCY AND RECOVERY

1.0 PURPOSE

This procedure outlines instructions and provides guidance for terminating an emergency condition at the Shoreham Nuclear Power Station and restoring the plant to near pre-emergency conditions.

2.0 RESPONSIBILITY

That person charged with Overall Direction and Control (Response Manager or Emergency Director) is responsible for insuring the proper implementation of this procedure.

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3.0 DISCUSSION

Activation of this procedure is not essential for emergencies minor in nature or that require little or no recovery efforts. Recovery for such emergencies may be done on an informal basis through the use of normal operating procedures.

3.1 Progression from Emergency to Termination/Recovery

3.1.1 Actions taken during an emergency situation can be categorized into two general phases: response and recovery. Response actions are the corrective and protective measures taken to mitigate the consequences of the event and to place the emergency under control. Recovery actions are longer-term actions taken to restore the plant, as nearly as possible, to its pre-emergency condition.

3.1.2 The extent and nature of the corrective and protective measures and the extent of recovery operations will depend on the emergency conditions at hand and the status of plant areas and equipment. In many emergency situations, the emergency condition may be resolved without significant plant damage, and thus, the plant can be restored to a normal operation mode without a definitive recovery phase and without extensive outside assistance. In the event of more extensive damage, a long-term recovery may be necessary, and the man-power and resources demand of such a long-term recovery will require the establishment of a recovery organization.

8.1.3 At the onset of an emergency condition, response actions to mitigate the consequences of the accident take precedence over recovery actions. The Emergency Director may initiate some limited recovery operations during the response phase. Gradually as the response effort begins to abate, recovery efforts gain more importance. Finally, a point is reached where the emergency situation has decreased to the extent that it can be considered, for all practical purposes, to be resolved. At this point, the emergency may be declared terminated, and a recovery organization implemented if necessary.

3.1.4 If following termination, an emergency situation recurs, the Emergency Director will re-activate the onsite emergency organizations, and if necessary, reactivate or recommend the same for the offsite emergency organizations. Recovery efforts will be suspended until they are allowed to resume.

3.2 Termination Criteria

An emergency condition can be considered resolved, and a recovery organization established (if necessary) when the following guidelines have been met:

3.2.1 Radiation levels in all in-plant areas are stable or are decreasing with time.

3.2.2 The reactor and associated systems are considered to be in a safe, stable condition.

3.2.3 Any fire, flooding, earthquake, or similar initiating events are under control or have ceased.

3.2.4 Releases of radioactive material to the environment are under control or have ceased.

3.2.5 For contaminated/injured personnel, when the victim(s) has been transferred to a hospital, or has received appropriate medical treatment.

3.2.6 For emergency conditions classified as Unusual Events, when the specified corrective action has been taken or when the plant has been placed in the appropriate operating mode (LCO-related EALs), and when notifications are complete.

3.3 Authority

3.3.1 That person charged with overall direction and control (Response Manager or Emergency Director) will make the determination of when an emergency condition is resolved, in accordance with the above criteria, and may declare the termination of the emergency.

3.3.2 Upon declaring the termination of the emergency, that person charged with Overall Direction and Control shall assume or appoint the position of Recovery Manager. The Recovery Manager shall review and approve the adoption of a recovery organization if such is needed. The position and the authority of Recovery Manager may later be transfered to another qualified personnel as applicable.

3.3.3 For any emergency condition involving plant systems and/or a plant shutdown, the Recovery Manager will make a determination as to when it is safe to return the plant to a normal operating mode. LILCO (licensing) will resolve any license or technical specification concerns related to the emergency.

3.4 Recovery Organization

Although the planning for recovery and the extent of the recovery efforts will vary according to the nature of the specific emergency situation, a long-term recovery organization is defined in Section 9 of the SNPS Emergency Plan.

3.5 Recovery Operations

3.5.1 Recovery activities not covered by existing approved procedures shall be pre-planned and approved by the Review of Operations Committee prior to their implementation.

3.5.2 Plant recovery activities shall be in accordance with the SNPS Technical Specifications and other license conditions. Specifically, during recovery operations, the radiation exposure limits of 10CFR20 shall apply. Compliance with these limits shall be the responsibility of the Recovery Manager via the Radiation Protection Manager.

3.5.3 Recovery actions that plan for or may result in radioactivity releases will be evaluated by the Recovery Manager and his staff as far in advance of the event as is possible. Such events and data pertaining to the release will be reported to the appropriate offsite emergency response organizations and agencies, even if the release is within normal technical specifications, for as long as the recovery operation continues.

3.5.4 The recovery operation will continue until the plant is returned to its pre-emergency status.

4.0 PRECAUTIONS

N/A

5.0 PREREQUISITES

5.1 The emergency has been declassified in accordance with SNPS Emergency Plan Implementing Procedures and

5.2 Any of the following conditions exist:

5.2.1 Extensive or significant plant damages are known to have occurred.

5.2.2 Repair, decontamination, or radwaste disposal work is expected to be sizable and long-term (e.g., beyond three weeks).

5.2.3 Re-licensing process is foreseen.

8.2.4 Advisory and technical support from outside sources (e.g., GE, S&W, NRC) is anticipated to te long-term.

8.2.5 Deficiencies in operational or safety related procedures or equipment are revealed in the course of the emergency.

6.0 LIMITATIONS

N/A

7.0 MATERIALS OR TEST EQUIPMENT

As required.

8.0 PROCEDURE

8.1 The decision to relax protective measures shall be reached in and by a meeting between the Emergency Director and, if applicable, the Response Manager. They shall base their decision upon input from their advisors. Federal, State, and local entities shall be notified of the decision and any resulting changes to the emergency organizations with the formation of a recovery organization. The command center for recovery operations shall be located at the highest level emergency response facility (i.e., EOF, TSC, etc.). However, the Recovery Manager, once assuming responsibility, may relocate the command center after proper consideration of operational needs when conditions permit; or he may divide the functions needed between the Station and Support Corporate Headquarters.

NOTE: SNPS personnel should be informed that the emergency has been terminated and recovery operations are underway, if applicable.

8.2 The Emergency Communication Director should be notified to make a press release (via the LILCO Public Affairs Dept.) on the termination of the emergency (and the start of recovery effort).

8.3 Any emergency radiation exposure limits shall be terminated and normal radiation control measures re-established except as specified in SP 69.Ø7Ø.Ø1 Re-Entry and/or SP 69.Ø8Ø.Ø1 Search and Rescue.

8.4 Any procedural waivers instituted during the emergency should be terminated, or formally documented by procedure changes.

8.5 Emergency organization personnel should be directed to assemble all documents generated during the emergency and submit them to the Communications Coordinator. The Communications Coordinator shall keep chronological records of events and decisions using the Recovery Operations Log (Appendix 12.3).

8.6 Any emergency equipment used during the emergency shall be serviced, as necessary, and returned to designated storage locations. Any damaged or defective equipment shall be brought to the attention of individuals responsible for its maintenance. These actions shall be documented.

8.7 If a long-term recovery operation is indicated, a recovery organization will be established in accordance with the SNPS Emergency Plan.

8.8 For Alert and higher emergency conditions, the Emergency Director, with the assistance of the Technical Support Center staff will prepare a report of the emergency and submit this report to the Review of Operations Committee. For Unusual Events, the Licensee Event Report (LER) satisfies this requirement. Appendix 12.1 provides a suggested format.

8.9 The Review of Operations Committee, under the auspices of the Recovery Manager will review the Emergency Director's report and will evaluate and assign responsibilities for corrective actions.

8.10 The Review of Operations Committee, under the auspices of the Recovery Manager, shall review/approve procedures for plant recovery that include as applicable:

8.10.1 Procedures for decontamination

8.10.2 Procedures for repair

8.10.3 Recommendations for special inspections and tests that must be performed to assure the integrity of the plant and adequacy of the repairs.

8.10.4 Radioactive waste processing and handling procedures

8.10.5 An estimate of the radiation exposure that will be accumulated by personnel in executing these procedures.

8.10.6 Exposure reduction methods (ALARA) to minimize the projected exposure of personnel.

8.10.7 The Emergency Planning Coordinator should review the various reports on the emergency to identify deficiencies in the Emergency Plan and implementing procedures, if any, and should initiate appropriate corrective action, if necessary, in a timely manner.

8.11 If the emergency involved radiological hazards in the plant, consider the following:

8.11.1 Extensive surveys of affected plant areas should be performed. This should include direct radiation, contamination and airborne levels. The Radiological Protection Manager shall, if conditions warrant, develop an updated plant radiological status map. This status map may be used in conjunction with SP 69.Ø7Ø.Ø1 Reentry and/or SP 69.Ø8Ø.Ø1 Search and Rescue.

8.11.2 Posting, decontamination and shielding efforts should be initiated when hazardous and contaminated areas are identified. Posting should restrict access to hazardous areas. Decontamination should begin in least contaminated areas and progress toward most highly contaminated areas. Man-rem benefit of installing shielding should be considered.

8.11.3 Radiation exposure should be maintained as low as reasonably achievable during recovery operations.

8.11.4 Assessment of plant operations effect on decontamination or other efforts should be considered. Plant Operations may result in elevated radiation levels or increased airborne and surface contamination.

8.11.5 Any personnel who used emergency self-contained breathing apparatus for radiological protection or was potentially exposed to airborne radioactivity should undergo bioassay analysis.

8.11.6 Personnel exposure assessment should be performed. Individual total man-rem, internal and external exposure should be considered.

8.11.7 Information gathered by reentry, rescue, damage assessment and repair teams may be useful for assessing radiological conditions and planning appropriate recovery operations.

8.12 If the emergency involved offsite release of radioactive effluents, consider the following:

8.12.1 Increased environmental monitoring should be performed. Increased monitoring should provide a means to assess the environmental impact of the release. SP 69.024.01, Environmental Sample Collection During an Emergency, gives guidance.

8.12.2 The site and environs should be surveyed for contamination, airborne and direct radiation levels. Any areas with levels above normal background should be decontaminated.

8.12.3 Equipment, vehicles, buildings and other structures that may have been in the effluent plume should be surveyed for contamination. If contamination is found, these areas should be decontaminated.

8.12.4 New York State Department of Health may request assistance from LILCO. LILCO personnel should be available for assistance in radiological matters.

8.12.5 It is unlikely that a member of the public would be exposed to substantial amounts of airborne contamination, but if this might have occurred, bioassay analysis and/or dose estimation should be considered.

8.13 If the emergency involved damage to plant systems, consider the following:

8.13.1 Damage assessment of plant systems should be performed. A list of damaged systems should be developed. Estimates of manpower requirements and man-rem exposure for repairs should be included to ascertain the total effort necessary. Meetings, where applicable, shall be convened to determine plant conditions and damages, and detailed recovery objectives.

8.13.2 Exposure control methods such as temporary shielding should be used for repair efforts if man-rem benefits result.

8.13.3 Procedures may already be developed for testing and startup of systems but these should be reviewed for possible variances from a normal startup.

8.13.4 If extensive damage was sustained, or prolonged shutdown is anticipated, projected repair and startup schedules should be developed.

NOTE: Startup of damaged systems after repair or rework may require USNRC approval.

8.14 Additional Considerations are:

8.14.1 Flooding: Flood barricades should be returned to storage as the situation allows

8.14.2 High Winds: Damage to buildings and structures should be assessed.

8.14.3 Fire: Fire fighting equipment should be maintained and returned to storage.

9.0 ACCEPTANCE CRITERIA

9.1 The Recovery Manager's review shall include, but not be limited to, the following before terminating the recovery phase:

9.1.1 Plant conditions;

9.1.2 Offsite radiological conditions;

9.1.3 Onsite and/or offsite long-term radiological monitoring requirement;

9.1.4 Recovery program objectives (accomplished as applicable);

9.1.5 Licensing status;

9.1.6 Radwaste handling, storage;

9.1.7 Legal and insurance;

9.1.8 Other corporate and public concerns; and

9.1.9 Satisfactory conditions onsite and offsite.

9.2 All participating Company groups and organizations shall conduct applicable reviews.

9.3 Close-out of emergency is with concurrence of NRC.

9.4 Necessary LER and other reports have been filed in accordance to applicable regulations.

9.5 Notification to onsite and offsite personnel and agencies that recovery operations are terminated, by use of the Follow-up Notification Fact Sheet, Appendix to SP 69.009.01 Notifications, has been carried out.

10.0 FINAL CONDITIONS

10.1 The station has been returned to a pre-emergency condition.

11.0 REFERENCES

11.1 Shoreham Nuclear Power Station Emergency Plan

11.2 SNPS 69.xxx.xx series Emergency Plan Implementing Procedures

12.0 APPENDICES

12.1 Suggested Report Format

SUGGESTED EMERGENCY REPORT FORMAT

1. Description of the emergency conditions (causes, pertinent events, etc.)
2. Plant radiological survey data
3. Site and environs radiological survey
4. Environmental monitoring, and projected impact
5. Damage assessment; plant/public
6. Radiation exposure data (plant and general public)
7. Personnel injuries
8. Plant operating shutdown conditions
9. Emergency Organization operation critique
10. Corrective actions; start-up and repair schedules

INVENTORY FORM INSTRUCTIONS

1. NO. Sequential number of item - pre-printed. Assign number for all items added to inventory list by hand.

2. EQUIPMENT Name or description of equipment - pre-printed.

3. NOMINAL QUANTITY Approximate number of units of item required to be stocked at this location - pre-printed.

4. QUANTITY FOUND Enter actual number of items found at this location. Make an entry on the "Equipment Discrepancy List", SPF69.064.01-1, if the Quant found is significantly less than the nom quant.

5. ID NUMBER If this column spaces does not contain a preprinted "N/A", enter the SNPS ID Number of the inventoried equipment

6. RECAL DATE If this column space does not contain a preprinted "N/A", enter the recalibration date of the inventoried equipment. If the date has been passed remove the equipment from service, return it to the calibration facility, and make an entry on the "Equipment Discrepancy List".

7. SPECIAL INSTRUCTIONS Instructions how to perform the operational check or inspection - pre-printed.

8. OPER CHECK Enter "P" for passed or "F" for failed. If "F" make an entry on the "Equipment Discrepancy List".

9. DISCR NO If there is any visible evidence of damage make an entry in the "Equipment Discrepancy List". In this case, or if another discrepancy has been recorded, enter the discrepancy number in this space.

10. ACTION TAKEN Record action taken if applicable.

SNPS - RECOVERY OPERATIONS LOG

Logger_____ Page____of____

Date/Time:_____/_____ Event:_____

Action/Decision by:_____Authorized by:_____Remarks_____

_____

_____

Logger_____/_____

Date/Time:_____ Event:_____

Action/Decision by:_____Authorized by:_____Remarks_____

_____

_____

Logger_____/_____

Date/Time:_____ Event:_____

Action/Decision by:_____Authorized by:_____Remarks_____

_____

_____

Logger_____/_____

Date/Time:_____ Event:_____

Action/Decision by:_____Authorized by:_____Remarks_____

_____

_____

Submitted: _____ SP Number 69.080.01

Approved: _____ Revision: B
(Plant Manager)

Date Eff: _____

SEARCH AND RESCUE

DRAFT - PRELIMINARY

1.0 CONDITIONS

This procedure provides instructions and guidance for locating missing individuals and for the rescue and treatment of individuals once they have been located.

2.0 IMMEDIATE ACTIONS

2.1 When an Individual's Location is Known or has been Reported

2.1.1 Control Room Operator, announce the following over the page-party system three times at one-minute intervals.

"Emergency Rescue Team members report to (location). (Name of Emergency Rescue Leader) contact the Control Room (or TSC).

2.1.2 Perform section 2.3 of this procedure.

2.2 When an Individual's Location is not Known

2.2.1 As soon as it is recognized that one or more individuals are missing, the Plant Technician Manager or designee shall attempt to determine the individuals location by performing the following:

.1 Page the individual over the public address system.

.2 Contact the individual's supervisor and co-workers to determine his last known work location.

2.2.2 If efforts fail to locate the missing individual(s), the Plant Technical Manager shall contact the Control Room or TSC and provide the following information:

.1 Name(s) of individual(s)

.2 Summary of efforts performed to locate the individual(s)

.3 Last known location of the individual(s)

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INFORMATION ONLY

2.2.3 Upon receipt of a report of a missing person(s), Control Room Operator, announce the following over the page-party system three times at one-minute intervals.

"Attention, all plant personnel. The following individual(s) (name of individual(s)) is missing within the plant. Personnel knowing the whereabouts of the individual(s) contact the Control Room.

2.3 Emergency Rescue Team

2.3.1 At the emergency kit location, Emergency Rescue Team Leader, contact the Control Room and be briefed on the situation.

2.3.2 "Rescue Team Leader, ensure that the rescue team is equipped with the following (if applicable).

.1 Low range self reading dosimeter (0-200mR)

.2 Medium range self reading dosimeter (0-5R)

.3 High range self reading dosimeter (0-200R)

.4 Personal TLD capable of recording doses in excess of 100R

.5 Protective clothing

.6 Respiratory protection equipment

2.3.3 Radiation Protection Manager or designee, determine if potassium iodide administration is necessary in accordance with SP 69.051.01 "Thyroid Blocking" and advise Emergency Rescue Team members to take the tablet.

2.3.4 Radiation Protection Manager or designee, obtain approval from the Emergency Director for team members to obtain doses from 3 rem to 75 rem. Refer to SP 69.050.01, "Radiation Doses during an Emergency".

2.3.5 Emergency Rescue Team Leader, maintain communications with the Radiation Protection Manager during search and rescue operations by the use of walkie talkies.

2.3.6 Emergency Rescue Team Leader, ensure the team is equipped with the following.

.1 High range survey equipment (if applicable)

.2 First-aid kit

2.3.7 Emergency Rescue Team, proceed to the last known location of the individual(s) and if necessary, expand the search to adjacent areas.

2.3.8 Emergency Rescue Team Leader, inform the Radiation Protection Manager or designee of any significant actions.

2.3.9 Emergency Rescue Team members keep within sight or voice range of each other unless directed otherwise by the Radiation Protection Manager or designee.

2.3.10 Emergency Rescue Team Leader, inform the Radiation Protection Manager immediately upon locating any personnel.

2.3.11 Emergency Rescue Team, provide First Aid in accordance with SP 69.040.01 "Personnel Injury" and transport or escort the individual to a safe location as soon as possible.

2.3.12 Radiation Protection Manager, recall the Emergency Rescue Team when search and rescue operations are no longer necessary as determined by the highest ranking official onsite or when all missing persons are accounted for.

3.0 SUBSEQUENT ACTIONS

3.1 Emergency Rescue Team personnel, report to the Radiation Protection Manager for follow-up.

4.0 FINAL CONDITIONS

All missing individuals have been accounted for.

5.0 DISCUSSION

5.1 If an individual is trapped or disabled in a high radiation area, the rescue must be performed as expediously as possible to minimize the dose to the victim and the doses to the rescue personnel and to ensure that first aid can be provided as soon as possible.

5.1.1 In an emergency situation, each individual in the rescue team and first aid personnel may receive an exposure of 75 rem if necessary to save a life. Refer to SP 69.050.01 Radiation Doses During an Emergency.

5.1.2 If the situation is not one of life or death but requires action to minimize the further excessive exposure of the victims, rescue personnel may be allowed to receive doses up to 12 rem. Refer to SP 69.Ø5Ø.Ø1, "Radiation Doses During an Emergency".

5.1.3 If the situation is other than that described in Step 5.1.1 and/or 5.1.2, normal Shoreham Nuclear Power Station Administrative radiation exposure guides and regulatory exposure limits apply.

5.1.4 Rescue of a victim shall take precedence over fire-fighting efforts unless the fire must be suppressed to effect rescue or if the fire poses an immediate threat to the lives of others.

5.1.5 Rescue of a victim shall take precedence over isolation of high energy fluids (Steam, hot water under pressure, hydraulic fluids, etc.) unless isolation of the system is necessary to effect rescue or if failure to isolate the system will seriously affect reactor safety or will place the lives of other personnel in immediate danger.

6.0 APPENDICES

N/A

THIS SECTION INTENTIONALLY LEFT BLANK FOR
FUTURE EXPANSION.

Submitted:_____

Approved:_____
(Plant Manager)

DRAFT - PRELIMINARY

SP Number 69.Ø9Ø.Ø1
Revision A B
Date Eff._____
TPC_____
TPC_____
TPC_____

DOCUMENTATION AND RECORD KEEPING DURING AN EMERENCY EMERGENCY

1.0 PURPOSE

This procedure provides the method for maintaining a complete and accurate record of a declared emergency.

2.0 RESPONSIBILITY

The maintenance of logs and records onsite and offsite during an emergency shall be the responsibility of the Administrative Supervisor (TSC), and the Records Supervisor (EOF), respectively. A summary shall be prepared by the Health Physics Engineer after the termination of the emergency.

MAR 19 1982
INFORMATION COPY

3.0 DISCUSSION

3.1 Emergency Function Logs

Emergency Function Logs shall be maintained for all emergency classifications (i.e., Unusual Event, Alert, Site Area Emergency and General Emergency) by all functions that are activated.

During a declared emergency, personnel performing emergency response organization functions as listed in paragraph 12.3 shall maintain logs while responsible for an emergency response function. The Emergency Function Log Form, SPF 69.Ø9Ø.Ø1-1, shall be used for logging pertinent data while Appendix 3 is a list of potential items that may be included in the Emergency Function Log.

3.2 Communication Record Keeping Form

During a declared emergency all incoming and outgoing communications shall be recorded by the person responsible for that message. Communications Record Keeping Form, SPF 69.Ø9Ø.Ø1-2, a 3 copy color coordinated form shall be used for recording all communications as well as any remarks as applicable.

3.3 Emergency Summary

At the termination of a declared emergency the Health Physics Engineer shall prepare an Emergency Summary. This summary report shall be a chronological compilation of all logs and records that were prepared during the emergency.

3.4 Other Records

Essential portions of the records for an event will be generated under existing operational procedures and other Emergency Plan Implementing Procedures. A list of anticipated records is included as "Other Emergency Records," Appendix 5, which may be included in the Emergency Summary.

4.0 PRECAUTIONS

N/A

5.0 PREREQUISITES

N/A

6.0 LIMITATIONS AND ACTIONS

N/A

7.0 MATERIALS AND/OR EQUIPMENT

7.1 Emergency Function Logs

7.2 Communication Record Keeping Forms

7.3 Accurate Clock or Synchronized Watches

8.0 PROCEDURE

8.1 Emergency Function Logs

The logger shall initiate the log by:

8.1.1 Using SPF 69.Ø9Ø.Ø1-1, enter the appropriate title. Emergency Function Logs shall be filled out for each position given in Section 12.3.

8.1.2 Enter name of the person filling out the log.

8.1.3 Enter date, time (24 hour clock), and location.

8.1.4 Enter page number for all pages.

8.1.5 Enter chronologically those events pertinent to the function, as recommended in Appendix 3. Emphasis should be placed on all decisions and recommendations.

8.1.6 If additional pages are needed, enter title using SPF 69.Ø9Ø.Ø1-1, pg 2.

8.1.7 At the termination of the event, submit the completed onsite logs to the Administrative Supervisor (TSC) and offsite logs to the Records Supervisor (EOF).

8.2 Communication Record Keeping Form

The communicator shall initiate the form by:

8.2.1 Using SPF 69.Ø9Ø.Ø1-2, circle RECEIVED or TRANSMITTED.

8.2.2 Enter time (use 24 hour clock time).

8.2.3 Enter the date in month day and year.

8.2.4 Circle the location From which the message was transmitted.

8.2.5 Circle the location To which the message was transmitted.

8.2.6 Enter the message as accurately and completely as possible. If not totally clear on message have it repeated.

8.2.7 After communication is terminated, enter any remarks as applicable.

8.2.8 The communicator shall sign the form once it is completed.

8.2.9 The White Copy shall be passed over to the Emergency Director/ Response Manager at the TSC or EOF for information routing and record keeping, depending on whether it is an onsite or offsite communication.

8.2.10 The Canary copy shall be sent to Addressee.

8.2.11 The Pink copy shall be kept in the communications file.

8.2.12 The Emergency Director/Response Manager shall turn over all forms to the Health Physics Engineer for inclusion in the Emergency Summary at the end of the emergency.

8.3 Emergency Summary

The Health Physics Engineer shall:

8.3.1 Obtain the Emergency Function Logs and Communication Record Keeping Forms from the Administrative Supervisor, the Records Supervisor, and the Emergency Director/Response Manager.

8.3.2 Obtain the records and documents called out in Appendix 5.

8.3.3 Review all records, documents and logs for completeness.

8.3.4 Compile all items in chronological order on the Emergency Function Log Form, SPF 69.Ø9Ø.Ø1-1 page 1 and 2.

.1 Do not paraphrase if direct quotation is feasible.

.2 For redundant entries select the one that most concisely describes the item.

.3 Enter source of the item, i.e., the document or log on which the item appeared originally.

.4 If multiple sources reference the same item with conflicting details, enter the items verbatim from differing sources.

8.3.5 The complete Emergency Summary will be reviewed and signed by the Plant Manager.

9.0 ACCEPTANCE CRITERIA

N/A

10.0 FINAL CONDITIONS

All logs, records, and documents shall be forwarded to the Administrative Section for filing in accordance with permanent plant procedures.

11.0 REFERENCES

11.1 Shoreham Nuclear Power Station, Emergency Plan, May 1981

11.2 Emergency Plan Implementing Procedures

12.0 APPENDICES

12.1 Emergency Function Log Form, first page, SPF 69.Ø9Ø.Ø1-1

12.2 Emergency Function Logs

12.3 Items that may be Included in Emergency Function Log

12.4 Communication Record Keeping Form, SPF 69.Ø9Ø.Ø1-2

12.5 Other Emergency Records

TITLE OF LOG

INITIATED BY | DATE / / | TIME : | LOCATION

TIME	INITIALS & DATE	ITEM (DESCRIPTION)	SOURCE

SPF69.090.01-1

PAGE _____ OF _____

TITLE OF LOG

TIME	INITIALS & DATE	ITEM (DESCRIPTION)	SOURCE

SPF69.090.01

PAGE _____ OF _____

EMERGENCY FUNCTION LOGS

1. Emergency Director (TSC)
2. Watch Engineer (CR)
3. Operations Manager (CR)
4. Radiation Protection Manager (TSC)
5. Plant Technical Manager (TSC)
6. Operations Support Center Supervisor (OSC)
7. Response Manager (EOF)
8. Technical Support Manager (EOF)
9. Radiological Control Manager (EOF)
10. Emergency Communication Director (EOF)

ITEMS THAT MAY BE INCLUDED IN EMERGENCY FUNCTION LOG

1. ESCALATION/DE-ESCALATION IN EAL
2. TRANSFER OF EMERGENCY ORGANIZATION POSITIONS
3. CAUSE OF EVENT DECLARATION
4. CHANGES IN STATUS OF CAUSE OF EVENT
5. ACTIVATION OF EMERGENCY FACILITIES
6. NOTIFICATION OF OFFSITE AUTHORITIES
7. REQUESTS FOR ASSISTANCE TO/FROM OFFSITE AUTHORITIES/BNL
8. NOTIFICATION OF CORPORATE HEADQUARTERS
9. COMMUNICATIONS WITH OTHER EMERGENCY FACILITIES
10. RECOMMENDATIONS OF PROTECTIVE ACTION TO OFFSITE AUTHORITIES
11. EVACUATION/SHELTERING STATUS OF OFFSITE POPULATION
12. ACTIVATION OF EMERGENCY ORGANIZATION POSITIONS
13. STATUS OF PLANT OPERATIONS
14. REENTRY EFFORTS
15. ACTIONS TAKEN TO MITIGATE EVENT
16. EVACUATION OF SITE OR EMERGENCY FACILITIES
17. METEOROLOGICAL DATA
18. PROJECTED POPULATION DOSE
19. STATUS OF RADIATION MONITOR ALARMS
20. PERSONAL INJURIES AND MEDICAL CARE ADMINISTERED
21. INCOMING REPORTS
22. REASSEMBLY OF PERSONNEL AND ACCOUNTABILITY STATUS ONSITE
23. PERSONNEL EXPOSURE
24. RADIATION/PLUME SURVEY REPORTS
25. EMERGENCY TEAM MEMBERS

ITEMS THAT MAY BE INCLUDED IN EMERGENCY FUNCTION LOG (Cont'd)

26. ARRIVAL AND DEPARTURE OF NRC, FEMA AND OTHER OFFICIAL OBSERVERS
27. OPERATIONS PLANS
28. MAINTENANCE/MODIFICATION DECISIONS
29. PLANS TO PROCESS/CONTROL LIQUID, GASEOUS, AND SOLID WASTES
30. ONSITE RADIOLOGICAL CONDITIONS
31. AUTHORIZATION OF RADIATION DOSES IN EXCESS OF NORMAL/EPA PAGS
32. REPORTS OF FIRE
33. ACTIVATION AND OCCURENCE OF ONSITE SIRENS AND ALARMS
34. OCCURENCE OF OFFSITE SIRENS
35. ISSUE OF RADIATION WORK PERMITS
36. ADMINISTRATION OF THYROID BLOCKING AGENT
37. STATUS AND AVAILABILITY OF SITE ELECTRICAL POWER
38. CRITICAL INSTRUMENT MALFUNCTIONS
39. ACHIEVEMENT OF HOT AND COLD SHUTDOWN
40. RETURN TO POWER/NORMAL

COMMUNICATION RECORD KEEPING FORM

LILCO - SHOREHAM NUCLEAR POWER STATION

RECEIVED/TRANSMITTED Time: _____ Date: _____

FROM: EOF EC TSC OSC CR DOSE ASSESMENT

Other: _____

TO: EOF EC TSC OSC CR DOSE ASSESMENT

Other: _____

MESSAGE: _____

Reviewed By: _____

WHITE COPY To Emergency DIRECTOR/RESPONSE MANAGER
CANARY COPY to Addresse PINK COPY to Communications File

49-145

OTHER EMERGENCY RECORDS

The following is a generic list of records that may be useful in generating the Emergency Summary:

A. Normal Operations Phase Activity Records

1. Plant Radiation and Contamination Survey Records
2. Off-Site Environmental Monitoring Survey Records
3. Radiation Exposure Records of Personnel
4. Reactivity Levels of Liquid and Gaseous Waste Released to Environment
5. Transient or Operational Cycling Records
6. Minutes of Meetings of Plant Nuclear Safety Committee and Company Nuclear Review Board
7. Abnormal Occurrence Records

B. Emergency Related Records

1. Security Log Books and Records
2. Records of Integrated Dose Calculations
3. Plant Radiation and Contamination Survey Records
4. Offsite Radiation Survey Records
5. Decontamination Records
6. Personnel Accountability Records
7. Rad/Met Records
8. SPDS Records
9. Radiation Work Permits
10. Press Releases

TABLE OF CONTENTS

VOLUME I

1.0 ON-SITE PROCEDURES

VOLUME II

2.0 OFF-SITE PROCEDURES

2.1 Corporate

2.1 Corporate (Cont'd.)

2.2 Public Affairs

2.3 Administrative

3.0 ATTACHMENTS

Submitted: _____

Approved: _____
(Plant Manager)

DRAFT - PRELIMINARY

CIP Number 1
Revision _____
Date Eff: _____

Corporate Notifications

1.0 Purpose

To specify the means by which communications for all emergency levels are made and to delineate personnel who would be called to augment the emergency response organization.

2.0 Responsibility

The Emergency Planning Advisor #1 is responsible for ensuring compliance with this procedure.

3.0 Discussion

3.1 Establishment of a quick, effective means of notification of an emergency is a critical part of an emergency response. Primary and secondary modes of communication are provided to insure the availability of proper communications.

3.2 The augmentation of the off-site emergency organization is directly dependent upon actions taken by site personnel. This procedure presumes that actions delineated in SP69.009.01, Notifications, have been taken.

3.3 Topics covered in this procedure:

4.0 Precautions

N/A

5.0 Prerequisites

An emergency has been classified in accordance with Classification of Emergency Action Levels.

6.0 Limitations and Actions

N/A

7.0 Materials and Equipment

As delineated in "Communications Equipment."

8.0 Procedure

As part of the initial notification and call out of site emergency response personnel by the Emergency Director, or his designee, for any given classification of an emergency, the Gas System Operator (GSO) shall be notified and given any pertinent information as specified in "Notifications."

NOTE: Any and all notifications made in this procedure shall be done by telephone and/or beeper as specified in Appendix 12.1, Offsite Call Out Check List.

8.1 Unusual Event

Upon notification of an Unusual Event, the following actions shall be taken:

8.1.1 The GSO shall notify the Emergency Planning Advisor (EPA) #1.

8.1.2 The EPA#1 shall notify the Response Manager.

8.1.3 The EPA#1 shall then proceed to the EOF; call the GSO for an update, if any is available; install the two dedicated lines between the TSC and the EOF; establish communications with the EPA#2, if he has reported to the TSC; and await notification of termination or escalation of the event.

8.2 Alert

Upon notification of an Alert, the following actions shall be taken:

8.2.1 The GSO shall notify the EPA#1.

8.2.2 The EPA#1 shall notify the Response Manager, Technical Support Manager, Radiological Control Manager, Technical Support Coordinator and an EOF communicator.

8.2.3 The EPA#1 and the EOF communicator shall then proceed to the EOF; call the GSO for an update, if any is available; establish communications with the EPA#2 at the TSC; activate the EOF; and await notification of termination or escalation of the event.

8.3 Site Area/General Emergency

Upon notification of a Site Area or General Emergency, the following actions shall be taken:

8.3.1 The GSO shall notify the EPA#1.

8.3.2 The EPA#1 shall notify the Response Manager, Technical Support Manager, R-diological Control Manager, Technical Support Coordinator and EOF communicator.

8.3.3 The EPA#1 shall proceed to the EOF; call the GSO for an update, if any is available; establish communications with the EPA#2 in the TSC; and activate the EOF.

8.3.4 The EOF communicator shall call out the remaining complement (with the aid of other EOF communicators notified) of the EOF and Support Corporate Headquarters staffs and direct each to their respective emergency response locations in accordance with emergency organizations.

8.4 Verification

Verification of notification may be accomplished by either voice recognition or call back verification and is applicable to the initial call from the GSO.

8.5 Termination

8.5.1 Notification of the termination of Unusual Event or Alert is accomplished in the same manner as the notification of the initiation of the applicable event.

8.5.2 Termination of a Site Area or General Emergency is addressed in "Termination of Event and Recovery."

9.0 Acceptance Criteria

N/A

10.0 Final Conditions

All notifications have been logged on appropriate check lists. All termination notifications, where applicable, have been made.

11.0 References

11.1 Communications Equipment

11.2 Notifications

11.3 Termination of Event and Recovery

12.0 Appendices

12.1 Off-Site Call Out Check List

APPENDIX 12.1

OFF-SITE CALL OUT CHECK LIST

				Notification of Event	
Title/Name	Office #	Home #	Beeper #	Initiation Date/Time	Termination Date/Time

CONTROLLED MATERIAL

Submitted: 2/1/82 CIP Number: 2

Approved: _____ Revision: 0

Date Eff.: _____

Communications Equipment

DRAFT - PRELIMINARY

1.0 Purpose

To discuss in detail the various communications equipment and the operations of this equipment that shall be available and used upon activation of the Corporate Emergency Organization.

This procedure is a supplement to the Corporate Emergency Communications, procedure CIP _____, which identifies the communications systems, while this procedure specifically identifies the equipment to be used in these systems.

2.0 Responsibility

The Emergency Planning Advisor #1 shall be responsible for this procedure, insuring that:

2.1 Certain equipment will be dedicated for the Corporate Emergency response and will be in place and operating condition at all times.

2.2 Certain equipment, although not dedicated to the Corporate Emergency Response, but pre-determined for use in an emergency, will be available and operating; their locations known at all times and accessible to support such a response at all times.

2.3 All personnel and their alternates assigned to operate this equipment are qualified in their use.

2.4 Qualified personnel are available to test this equipment and if required initiate repair orders on a scheduled basis and shall be available upon activation for required maintenance repairs and replacement.

2.5 Additional and/or replacement equipment is available as required.

2.6 Operating instructions for all equipment is available for reference.

3.0 Discussion

The Corporate Emergency Communications procedure, CIP _____, describes those communication systems that shall be activated in response to an emergency at Shoreham Nuclear Power Station. This procedure supplements that one and identifies the communications equipment that will be used in each of these systems.

3.1 This procedure identifies communications equipment that are to be dedicated to the Corporate Emergency Organization.

3.2 In addition, this procedure identifies non-dedicated communications equipment that shall be used in the event of such an emergency and although not in place will be accessible to support such a response at all times.

3.3 Figure I provides the primary emergency communication modes, paths and color codes for telephone hardware at each emergency facility. Appendix 12.1 illustrates the type of communications capability provided in each of the emergency facilities listed.

3.4 Communication equipment covered in this procedure include:

- 7.1 Primary Communications Lines and Equipment (Dedicated).
  - 7.1.1 Hotline
  - 7.1.2 Other Dedicated Lines
    - .1 NRC
    - .2 Internal
    - .3 NAWAS
- 7.2 Commercial Telephone (Dedicated and Non-dedicated)
- 7.3 Paging System
- 7.4 Two-way Radio
- 7.5 Hard Gopy Transceivers (Telecopy)

4.0 Precautions

N/A

5.0 Prerequisites

This equipment must be tested and documented on a regularly scheduled basis. Substandard conditions shall be reported immediately to the appropriate authorities, repair orders initiated immediately.

See Section 8.0 Procedures for testing Schedule.

6.0 Limitations and Actions

N/A

7.0 Materials and Equipment

7.1 Primary Communications Lines and Equipment (Dedicated)

These dedicated lines, made operational upon pickup of the receiver and depression of the manual ring button locations shall provide the capability enabling any and all of the locations to communicate simultaneously (See Figure I).

7.1.1 Hotline - The communication link that will be the primary means for notification of the State and County of emergency conditions at Shoreham. The color, quantity and location of such units:

.1 Gold Telephone (1) - Control Room
.2 Gold Telephone (1) - Technical Support Center
.3 Red Telephone (1) - Emergency Operations Facility
.4 Red Telephone (1) - New York State Emergency Operations Center (Albany)
.5 Red Telephone (2) - New York State Warning Point
.6 Red Telephone (1) - New York State Radiological Emergency Preparation Group
.7 Red Telephone (1) - New York State Southern District Office (Poughkeepsie)
.8 Red Telephone (1) - Suffolk County Emergency Operations Center
.9 Red Telephone (1) - Suffolk County Police Department Communicatins Center

TOTAL HOTLINE 10

7.1.2 Other Dedicated Lines - In addition to the Hotline, dedicated lines and instruments have been installed as primary means of communciation with the following:

7.1.2.1 Nuclear Regulatory Commission - This system will allow simultaneous communication with NRC's Bethesda Office and their King of Prussia Regional Office as well as the company's Control Room, Technical Support Center and Emergency Operations Facility. The type, quantity and location of such units shall be as follows:

.1 Red Telephone (1) - NRC - Bethesda, MD
.2 Red Telephone (1) - NRC - King of Prussia, PA
.3 Red Telephone (1) - LILCO - Control Room
.4 Red Telephone (1) - LILCO TSC
.5 Red Telephone (1) - LILCO EOF

TOTAL NRC 5

7.1.2.2 Internal - These shall be separate dedicated lines with automatic ring upon receiver off-hook between the following locations:

.1 Beige (2) Telephones - (1) CR - (1) TSC
.2 Beige (2) Telephones - (1) CR - (1) OSC
.3 Beige (2) Telephones - (1) TSC - (1) EOF
.4 Beige (2) Telephones - (1) TSC - (1) OSC
.5 Beige (2) Telephones - (1) EOF - (1) SCH
.6 Beige (2) Telephones - (1) EOF - (1) ENC

TOTAL INTERNAL 12

7.1.2.3 National Alert Warning System (NAWAS) - A dedicated NAWAS line will service as the primary backup communication between the Shoreham site, the Suffolk County Emergency Operations Center and the New York State Emergency Operations Center (Albany). The type and location of such units are as follows:

.1 Red Telephone (1) - Control Room
.2 Red Telephone (1) - Suffolk County EOC
.3 Red Telephone (1) - NYSEOC, Albany

TOTAL NAWAS 3

7.2 Commercial Telephone

7.2.1 The commercial telephone system consists of various dial-type telephones connected to the New York Bell Telephone System. These phones provide a means of communication between the various organizations and may be used a secondary backup to the Hotline. They are located throughout the Company's facilities as well as the following:

.1 Emergency Operations Facility
.2 Technical Support Center
.3 Support Corporate Emergency Response and Recovery Center
.4 Emergency News Center
.5 New York State Emergency Operations Center
.6 Suffolk County Emergency Operations Center

7.2.2 Programable Automatic Dialer Phone - The programable automatic dialer phone is tied into the commercial telephone system in both the Gas Systems Operations office (manned 24 hours/day) as well as the Nuclear Engineering Office in the Hicksville Operations Center. This system shall dial a programmed number automatically when selection of the desired individual to be called has been made.

7.2.3 Private Automatic Exchange - The private automatic telephone exchange consists of a network of commercial telephones that may be used in the dialing mode for intra-Company communications. These phones are located Company-wide, including the following locations:

.1 Emergency Operations Facility
.2 Technical Support Center
.3 Support Corporate Emergency Response and Recovery Center

7.3 Paging System

In conjunction with the call-out by commercial telephone of Company personnel essential to the emergecny organizations, beepers will also be activated. Upon activation of beepers, personnel shall call in on predetermined phone numbers to be given the course of action to be taken, plus any pertinent information regarding the emergency situation. Those personnel issued beepers, include, but may not be limited to, the following:

.1 Response Manager
.2 Emergency Communications Director
.3 Emergency Communications Liaison
.4 Technical Support Manager
.5 Radiological Control Manager
.6 Design and Construction Support Manager
.7 Administration and Scheduling Manager
.8 Emergency Planning Advisor #1

7.3.1 Type of Paging System

The pager will be a ____(Name)____, ____(Model)____ and can be activated (through any standard commercial telephone) or (through the Electric System Operations office - manned 24 hours/day) (See Appendix 12.2 for activation operating instructions).

7.4 Two-way Radio

7.4.1 A low powered UHF Radio Base Station with two frequencies, is established at the plant for communications between the Control Room Radio Communications Center and portable "walkie-talkie" units, as well as with offsite locations. A third frequency on this UHF Radio Base Station shall be established to provide the capability of two-way voice communication link between the Technical Support Center and the downwind survey teams.

7.4.2 A VHF Radio Base Station shall be established to provide the capability of two-way voice communication link between the station and police. At the station, links will be established in the Control Room and the Technical Suppor' Center. This link shall also be established in the Suffolk County Emergency Operations Center. Both ends of this communications link, as well as the aforementioned, are manned on a 24-hour per day basis. The Emergency Communicator for the Company and the Suffolk County Police for the County, provide this coverage.

7.5 Hard Copy Transceivers (Telecopy)

7.5.1 Transceivers also referred to as facsmile machines are used for transmitting and receiving hard copies of some source documents via use of commercial telephones. In order that data can be transmitted or received, the transceivers must be compatible.

(EXAMPLE ONLY)

1 Type of Transceivers - (A Graphic Sciences, Inc., Dex 1100 Series Model) is to be used at all locations. (See Appendix 12.2 for operating instructions).

2 Location of Transceivers

2.1 Control Room Communications Center

2.2 Technical Support Center

2.3 Emergency Operations Facility

2.4 Support Corporate Headquarters

2.5 Emergency News Center

8.0 Procedure

This section of the Communications Equipment Procedure applies to the following areas:

8.1 Testing schedules and sign-offs dedicated communication lines and equipment.

8.2 Transfer of non-dedicated equipment upon activation of Corporate Emergency Organization to designated facility.

8.1 Testing Schedules and Sign-offs

The primary communication lines and equipment (dedicated) as indicated in Section 7.1 of this procedure must be tested on a scheduled basis. Successful testing will be signed-off by the tester. Unacceptible testing will initiate a repair order and upon completion of the repair, and verification, the sign-off will be made.

8.1.1 Testing Schedules - See Appendix 12.4 for Test Schedules of primary communication lines and equipment.

8.1.2 Communications Lines and Equipment Log - A log, see Appendix 12.5, at each facility will be maintained indicating schedule dates of testing, sign-off (noise of tester and date) if test is successful. If equipment does not meet acceptable criteria, repair order will be initiated, the number logged and the originator indicated. Upon repair completion the test will be repeated and signed-off if equipment operates correctly.

8.2 Transfer of Non-dedicated Equipment Upon Activation of Corporate Emergency Organization to Designated Facility

All communications equipment as described in this procedure will be either in place at all times, some used in daily non-emergency oeprations, or stored at the designated facilities for use upon activation of the Emergency Response Organization with the exception of the two (2) transceivers that are designated for the (1) EOF and (1) ENC.

8.2.1 Normal Location of Tran ceivers to be Used at EOF and ENC

Both of these transceivers will be normally located in the Brentwood Operations Center and will be maintained and tested by the Customer Service Department. This equipment may be used during normal non-emergency operations; however upon notification of activation by the Emergency Planning Advisor #1 this equipment shall be delivered to the EOF and ENC.

8.2.2 Transfer of (2) Transceivers to EOF and ENC

Upon notification by EPA #1 of the activation of the Emergency Response Organization the Customer Service, Western-Suffolk Division Manager will immediately have the two (2) transceivers delivered from the Brentwood Operations Center; to the (1) Emergency Operations Facility and the (1) Emergency News Center.

9.0 Acceptance Criteria

N/A

10.0 Final Conditions

N/A

11.0 References

Corporate Emergency Communications - CIP _____

12.0 Appendices

12.1 Emergency Communications Facility List
12.2 Operating Instructions for Activation of Paging System (to be added)
12.3 Operating Instructions for Dex 1100 (Example Only)
12.4 Test Schedules for Primary Communication Lines and Equipment
12.5 Communications Test Log

EMERGENCY COMMUNICATIONS FACILITY LIST

A. Control Room

1. Hotline
2. NRC Line
3. Dedicated Lines
4. NAWAS
5. Commercial Telephone
6. Private Automatic Exchange
7. Page/Party System
8. Sound Powered Phone
9. Card Dialer Phone
10. Radio
11. Transceiver

B. Technical Support Center

1. Hotline
2. NRC Line
3. Dedicated Lines
4. NAWAS
5. Commercial Telephone
6. Private Automatic Exchange
7. Page/Party System
8. Sound Powered Phone
9. (Card Dialer Phone)
10. Radio
11. Transceiver

C. Operational Support Center

1. Commercial Telephone
2. Private Automatic Exchange
3. Page/Party System
4. Transceivers

D. Emergency Operations Facility

1. Hotline
2. NRC Line
3. Dedicated Lines
4. NAWAS
5. Commercial Telephone
6. Private Automatic Exchange
7. Radio
8. Transceiver

E. New York State Emergency Operations Center

1. Hotline
2. NAWAS
3. Commercial Telephone
4. Radio

F. Suffolk County Emergency Operations Center

1. Hotline
2. NAWAS
3. Commercial Telephone
4. Radio

G. Emergency News Center

1. Dedicated Line
2. Transceiver
3. Commercial Telephone

H. Nuclear Regulatory Commission

1. Dedicated Line
2. Commercial Telephone

I. Support Corporate Headquarters

1. Dedicated Lines
2. Commercial Telephone
3. Private Automatic Exchange
4. Radio
5. Transceiver

J. Suffolk County Police Department Communications Center

1. Hotline
2. Commercial Telephone

TESTING SCHEDULE OF PRIMARY COMMUNICATIONS LINES AND EQUIPMENT (DEDICATED)

National Alert Warning System (NAWAS)	Schedule
Control Room	Annually
Suffolk County Emergency Operations Center	"
New York State Emergency Operations Center (Albany)	"

TESTING SCHEDULE OF PRIMARY COMMUNICATION LINES AND EQUIPMENT (DEDICATED)

	Schedule
Hotline	
Control Room	Monthly
Technical Support Center	"
Emergency Operations Facility	"
New York State Emergency Operations (Albany)	"
New York State Southern District Office (Poughkeepsie)	"
Suffolk County Emergency Operations Center	"
Suffolk County Police Department Communications Center	"
New York State Warning Point	"
New York State Radiological Preparation Group	"
Nuclear Regulatory Commission	
Bethesda, Maryland	"
King of Prussia, Pennsylvania	"
Control Room	"
Technical Support Center	"
Emergency Operations Facility	"
Internal	
Control Room and Technical Support Center	"
Technical Support Center, Emergency Operations Facility, and Support Corporate Headquarters.	"
Emergency Operations Facility and Emergency News Center	Annually

Communications Test Log
Appendix 12.5

Communication Identification Number	Schedule Test Date	Actual Test Date	Acceptable	Non-Acceptable	Reason for Failure	Maintenace Work Order Issued

Submitted: _____ 1.12

Approved: _____
(Plant Manager) 1.14
1.15

CIP Number 3 1.18
Revision _____ 1.19
Date Eff. _____ 1.20

DRAFT - PRELIMINARY

Emergency Operations Facility Activation 1.27

1.0 Purpose 1.30

To identify the specific actions that will be taken and the personnel that must 1.32
be notified for the proper activation of the Emergency Operations Facility
(EOF). Orderly plans and procedures for the transfer of recovery 1.33
responsibility from the Technical Support Center (TSC) to the EOF will be 1.34
prescribed. The duties and responsibilities of the appropriate managers, 1.35
engineers, supervisor technicians and their staffs that must be fulfilled 1.36
before the EOF is formally activated will be specified. A set of checklists 1.38
for the managers and organization heads is attached to this document. 1.39

2.0 Responsibility 1.41

The Response Manager is responsible for ensuring compliance with this 1.43
procedure. The Emergency Planning Advisor No. 1 is responsible for ensuring 1.44
that this procedure is properly implemented.

3.0 Discussion 1.46

3.1 The Emergency Operations Facility (Figure 1) is located at the LILCO 1.48
Training Center in Hauppauge, 19.5 miles from the site. It has the 1.50
capability of displaying and transmitting plant status information to 1.51
the individuals responsible for engineering and management support 1.52
during emergency response and revovery. 1.53

3.2 The Emergency Operations Facility is capable of serving as the 1.54
emergency response facility responsible for accident assessment and 1.55
emergency classification during a Site Area Emergency or a General 1.56
Emergency. Command and control of the emergency response emanates 1.58
from the EOF once the facility has been made operationally ready and 1.59
will continue until the emergency terminates or deescalates which in 2.2
turn may allow the deactivation of the EOF. 2.3

Submitted: _____ 1.12

Approved: _____ 1.14
(Plant Manager) 1.15

CIP Number	_____	1.18
Revision	_____	1.19
Date Eff.	_____	1.20
TPC	_____	1.21
TPC	_____	1.22
TPC	_____	1.23

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from the EOF once the facility has been made operationally ready and 1.59
will continue until the emergency terminates or deescalates which in 2.2
turn may allow the deactivation of the EOF. 2.3

3.3 Activation of the Emergency Operations Facility consists of: 2.5

3.3.1 Activation of facility services and equipment including heating, venting, air conditioning, plumbing, copy machines, computers and instrumentation. 2.7

3.3.2 Installation and activation of sufficient phone and other communications equipment. 2.8

3.3.3 Provision of sufficient numbers of mobile units and radio pagers. 2.10

3.3.4 Establishment of direct communications with required onsite and offsite personnel. 2.12

3.3.5 Assurance of adequate technical, craft and clerical staffing. 2.13

3.3.6 Provision of properly organized and equipped radiological monitoring teams. 2.14

3.3.7 Provision for proper registration of all emergency response personnel arriving at the facility. 2.15

3.3.8 Provision of adequate security. 2.16

3.3.9 Assumption of responsibilities by personnel assigned to the EOF. 2.17

4.0 Precautions 2.19

No manager, engineer, supervisor, technician or any other individual at the EOF 2.23
will assume any responsibilities that are being performed onsite or elsewhere 2.24
until the Response Manager has formally declared the EOF operationally ready 2.26
and has transferred overall emergency response responsibility from the TSC to 2.28
the EOF. The Response Manager will not make this declaration until he is 2.29
assured by all manager and organization heads at the EOF that they are fully 2.31
prepared to carry out their own responsibilities. 2.32

5.0 Prerequisites 2.34

5.1 An Alert, Site Area Emergency or General Emergency has been declared 2.38
in accordance with SP 69.010.01, "Emergency Classification". 2.40

5.2 During an Alert the decision to activate any or all of the Emergency 2.41
Operations Facility organizations shall rest with the Response 2.42
Manager, based upon recommendations from the Emergency Director. 2.43

5.3 The Emergency Operations Facility shall be automatically activated in 2.44
the case of a Site Area or General Emergency. 2.45

6.0 Limitations and Actions

The Emergency Operations Facility Organizations shall assume no other duties or responsibilities other than those delineated in this procedure. See CIP Number 1, for offsite emergency organization duties.

7.0 Materials and Equipment

The following is a checklist to determine the readiness of the EOF to function as the command and control center for the emergency response. It shall be the responsibility of the Emergency Planning Advisor No. 1 to ensure that these items have been completed. Individual managers and organization heads will complete their own checklists which are attached to this procedure.

Date/Time	Initials	Action Items
		1. Determine if the following services at the EOF have been activated and are functioning adequately:
____/____	_____	a. Heating (seasonal)
____/____	_____	b. Air Conditioning (seasonal)
____/____	_____	c. Venting
		d. Plumbing
____/____	_____	2. Set up tables as shown on Figure 1 if necessary
____/____	_____	3. Determine if all phones have been plugged into their respective jacks. See Figure 2 for the location of these jacks. Test for a dial tone on all non-dedicated phone lines.
____/____	_____	4. Test dedicated lines by contacting the party on the other end of the line or verify that this contact has been confirmed by the appropriate manager or organization head.
____/____	_____	5. Ensure that the copy machines are functioning properly.
____/____	_____	6. Determine if all computers are functioning properly.
____/____	_____	7. Determine if all instrumentation at at the EOF is functioning properly.
____/____	_____	8. Ensure that each desk has an in/out mail basket.

___/___ _____ 9. Place appropriate name plates on each desk using Figure 1 for guidance. 3.47 3.48

___/___ _____ 10. Set up status boards as necessary. 3.50

8.0 Procedure 3.55

Prior to opening and activating the EOF, SP 69.010.01, entitled "Conditions for Emergency Action Levels" will have been initiated. 3.58 4.1

8.1 Activation 4.3

8.1.1 At the point when the opening and eventual activation of the EOF is to begin (optional at the Alert level and mandatory at the Site Area Emergency and General Emergency levels), the Emergency Planning Advisor #1 will open the facility. 4.5 4.6 4.7 4.9

8.1.2 Upon arrival at the EOF the Emergency Planning Advisor #1 will unlock only the front door, enter the facility and turn on all the lights. Should any LILCO personnel be there at the time, the security representative will advise them to await further instructions from the Emergency Director or the Response Manager. 4.10 4.12 4.13 4.14 4.15

8.1.3 The Emergency Planning Advisor #1 will plug all emergency telephones into their respective jacks. See Figure 2 for the location of these jacks. He will check for a dial tone on all outside non-dedicated phone lines by picking up the receiver and establishing contact with the specified other party or verify that a ring tone can be heard. 4.16 4.19 4.20 4.21 4.22

8.1.4 The Emergency Planning Advisor #1 shall station himself at the front door and admit only persons with identification from LILCO, New York state or the NRC. The general public shall be denied entry and press personnel shall be directed to the Emergency News Center by the Emergency Planning Advisor #1 until he is relieved of this function by security. 4.23 4.25 4.27 4.28 4.29

8.2 Operation 4.31

8.2.1 The Emergency Operations Facility will be staffed with the personnel listed in Attachment _____. 4.33 4.34

8.2.2 EOF personnel will perform their duties in accordance with procedure CIP-1 "Command and Control - Corporate Emergency Organization. 4.35 4.36 4.37

8.3 Function 4.40

The function of the Emergency Operations Facility is to: 4.42

A. Provide overall management of LILCO emergency response and resources 4.44

B. Coordinate emergency response activites will local, State, and Federal organizations 4.45 4.46

C. Verify magnitude and effects of any actual or potential radioactive release from the station 4.48 4.49

D. Disseminate official emergency status updates to hte news media 4.50

E. Account for, monitor, and decontaminate evacuees from the station 4.51

RESPONSE MANAGER

Date/Time	Initials		
___/___	_____	1)	Contact the Emergency Planning Advisor # 1 and discuss:
			A. Status of plant conditions including emergency classifications and corrective action underway
			B. Which Emergency Action Level (EAL) was exceeded to cause the emergency condition.
			C. Recommended protective actions made to date and his knowledge of the implementation of these actions.
			D. Status of EOF
___/___	_____	2)	Contact Radiological Control Manager and discuss:
			A. Status of readiness of off-site field monitoring teams.
			B. Off-site dose projections for actual and/or potential radiological releases and
			C. Protective action recommendations
___/___	_____	3)	Contact Technical Support Manager at TSC and discuss:
			A. Plant status.
			B. Status of SCH.

RESPONSE MANAGER (CONT)

Date/Time	Initial		
___/___	_____	4)	Contact Emergency Communications Director and discuss:
			A. Content of News Release made or contemplated

Date/Time	Initials		
		B. Status of Emergency Broadcast System	34 35
___/___	_____	5) Contact Emergency Director at TSC and discuss:	36 37
		A. Plant Status, recommended off-site actions and future operations that affect the plant and the environment	38 39 40
___/___	_____	6) Inform Emergency Director when ready that the EOF is activated	41 42
___/___	_____	7) Direct the notification of the State and County EOC that the EOF is activated	43 44
___/___	_____	8) Keep a log of all actions starting with the first notification of the emergency.	45 46
___/___	_____	_____	47
___/___	_____	_____	48
___/___	_____	_____	49
___/___	_____	_____	50
___/___	_____	_____	51
___/___	_____	_____	52
___/___	_____	_____	53
___/___	_____	_____	54
___/___	_____	_____	55
___/___	_____	_____	56
___/___	_____	_____	57
___/___	_____	_____	58
___/___	_____	_____	59
___/___	_____	_____	60
___/___	_____	_____	61
___/___	_____	_____	62
___/___	_____	_____	63
___/___	_____	_____	64
___/___	_____	_____	65
___/___	_____	_____	66

EMEGENCY PLANNING ADVISOR #1 (EOF)

Date/Time	Initials		
___/___	_____	1)	Contact Emergency Planning Advisor # 2 in TSC discuss:
			A. Progress of the Emergency Response and Plant Status.
___/___	_____	2)	Determine plant status and related response actions and make recommendations and Emergency Plan Procedures to Response Manager.
___/___	_____	3)	Keep a log of all actions starting with the first notification of the emergency.
___/___	_____		_____
___/___	_____		_____
___/___	_____		_____
___/___	_____		_____
___/___	_____		_____
___/___	_____		_____
___/___	_____		_____
___/___	_____		_____
___/___	_____		_____

TECHNICAL SUPPORT MANAGER

Date/Time	Initials			
___/___	_____	1)	Contact the Plant Technical Manager and provide engineering interface between the EOF and TSC (consult regularly on current plant status)	
___/___	_____	2)	Ensure SPDS is activated	
___/___	_____	3)	Contact Response Manager and provide input information regarding protective action recommendations.	
___/___	_____	4)	Contact Technical Support Coordinator (Corporate Headquarters) on an as needed basis to request additional corporate assistance.	
___/___	_____	5)	Keep a log of all actions starting with the first notification of the emergency.	
___/___	_____		_____	
___/___	_____		_____	
___/___	_____		_____	
___/___	_____		_____	
___/___	_____		_____	

DESIGN AND CONSTRUCTION MANAGER

Date/Time	Initials		
___/___	_____	1)	Contact Technical Support Manager at EOF
		A.	Coordinate Design and Construction activities of LILCO's Engineering Dept., Stone & Webster and General Electric personnel.
		B.	Identify and arrange the required equipment, part and services needed for design and construction to support the recovery plans.
___/___	_____	2)	Keep a log of all actions starting with notification of the emergency.
___/___	_____		_____
___/___	_____		_____
___/___	_____		_____
___/___	_____		_____
___/___	_____		_____
___/___	_____		_____
___/___	_____		_____
___/___	_____		_____
___/___	_____		_____

Date/Time	Initials		
___/___	_____	1)	First arrival check that all materials needed to perform assessments are available.
___/___	_____		A. Procedures and forms
___/___	_____		B. Radio Communications for Field Team
___/___	_____		C. Check all monitoring equipment
___/___	_____		D. Status of Rad Met Computer
___/___	_____	2)	Contact Radiation Protection Manager (TSC) and discuss:
___/___	_____		A. Status of projected off-site dose, extent of radiological release and protective actions recommendations.
___/___	_____		B. To date meteorology
___/___	_____		C. Inform him you will take over responsibility for off-site dose assessment.
___/___	_____		D. Location and extent of any contaminated areas
___/___	_____		E. Status of inplant surveys (if any)
___/___	_____	3)	Contact support team and dispatch to proper location
___/___	_____	4)	Determine off-site dose projections for actual or potential radiological release and assessment.
___/___	_____	5)	Contact Response Manager and communicate these projections
___/___	_____	6)	Once his decision regarding the type or protective actions to be recommended to the off-site agencies; contact State of New York EOC and Suffolk County EOC.

___/___	_____	7) Keep a log of all Actions starting with the first notification of the emergency	163 164
___/___	_____	_____	165
___/___	_____	_____	166
___/___	_____	_____	167
___/___	_____	_____	168
___/___	_____	_____	169

ADMINISTRATION AND SCHEDULING MANAGER

Date/Time	Initial			
___/___	_____	1)	Contact Response Manager and Review problem areas in the operation of EOF (Communication, Travel, Supplies, Motor Pool Special Transportation and Support for Twenty-Four Hour Recovery Operations).	
___/___	_____	2)	Contact Record Supervisor and Coordinate Record Material and registration at the EOF	
___/___	_____	3)	Contact Emergency Communication Director and discuss Communication problems and iniciate corrections for these problems.	
___/___	_____	4)	Keep a log of all actions starting with the first notification of the emergency	
___/___	_____	5)	Ensure clerical support is available.	
___/___	_____		_____	
___/___	_____		_____	
___/___	_____		_____	
___/___	_____		_____	
___/___	_____		_____	
___/___	_____		_____	

Submitted: _____

Approved: _____
(Plant Manager)

DRAFT - PRELIMINARY

CIP Number 4
Revision: _____
Date Eff: _____

Support Corporate Headquarter Activation

1.0 Purpose

To identify the specific actions that will be taken and the personnel that must be notified for the proper activation of the Support Corporate Headquarters (SCH).

2.0 Responsibility

The Technical Support Coordinator is responsible for ensuring compliance with this procedure.

3.0 Discussion

3.1 The SCH is located at LILCO's Operation Center in Hicksville approximately 40 miles from the site. It is the normal work location for both the Nuclear Engineering Department and the Nuclear Operations Support Department.

3.2 Activation of the SCH consists of:

3.2.1 Activation of facility services and equipment including heating, venting and air conditioning, plumbing, copy machines, computers and instruments.

3.2.2 Activation of communication links with other emergency facilities.

3.2.3 Assurance of adequate technical, craft and clerical staffing.

3.2.4 Provision for proper registration of all emergency response personnel arriving at the facility.

3.2.5 Provision for adequate security.

3.2.6 Assumption of responsibilities by personnel assigned to SCH.

4.0 Precautions

The Technical Support Coordinator will not activate the SCH until he has assured himself that the SCH is fully prepared to carry out its responsibility.

5.0 Prerequisites

N/A

6.0 Limitations and Actions

N/A

7.0 Materials and Equipment

The following is a checklist to determine the readiness of the SCH to function. It should be the responsibility of the Technical Support Coordinator to ensure that these items have been completed.

Date/Time	Initials	Action Items
_____/_____	_____	1. Determine if the following services at the SCH are functioning adequately: a. Heating (seasonal) b. Air Conditioning (seasonal) c. Venting d. Plumbing
_____/_____	_____	2. Determine if phones are working.
_____/_____	_____	3. Test dedicated lines by contacting the party on the other end of the line.
_____/_____	_____	4. Ensure copy machines are functioning properly.
_____/_____	_____	5. Determine if all computers are functioning properly.
_____/_____	_____	6. Set up status boards as necessary.
_____/_____	_____	7. Ensure telecopy equipment is functioning properly.

8.0 Procedure

8.1 Activation

8.1.1 A security representative from Headquarters will report at the point when the opening and eventual activation of the SCH is to begin.

8.1.2 Upon arrival, the Technical Support Coordinator will perform the checklist in Section 7.0 of this procedure.

8.2 Operation

8.2.1 The SCH will be staffed with the personnel listed in Appendix 12.1, "Support Corporate Headquarters Staffing."

9.0 Acceptance Criteria

N/A

10.0 Final Conditions

N/A

11.0 References

N/A

12.0 Appendices

12.1 Support Corporate Headquarters Staffing

APPENDIX 12.1

SUPPORT CORPORATE HEADQUARTERS STAFFING

				Notification of Event	
Title/Name	Office #	Home #	Beeper #	Initiation Date/Time	Termination Date/Time

CONTROLLED MATERIAL

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DRAFT - PRELIMINARY

Submitted: 2/18/82 CIP Number: 6

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Date Eff.: _____

Offsite Security

1.0 Purpose

To identify and describe the offsite security system designed for the protection of the offsite emergency response facilities; i.e., the Emergency Operations Facility (EOF), Emergency News Center (ENC) and the Support Corporate Headquarters (SCH). This procedure is activated in response to emergency conditions at the Shoreham Nuclear Power Station.

2.0 Responsibility

The Corporate Security Department is responsible for establishing and maintaining an effective Industrial Security Program which will assure the achievement of LILCO's security objectives and compliance with Government and Company security regulations. Overall jurisdiction and coordination of security matters, including all contacts with cognizant law enforcement agencies or the government concerning security matters, is also the responsibility of the Corporate Security Department.

While overall responsibility rests with Corporate Security, security remains an individual responsibility. Each member of supervision, in each facility, is responsible for assuring adherence to, and maintaining compliance with all security rules and regulations applicable to employees and areas under his or her jurisdiction.

3.0 Discussion

N/A

4.0 Precautions

N/A

5.0 Prerequisites

N/A

6.0 Limitations and Actions

6.1 This procedure will not be activated unless and until either an alert has been declared at the Shoreham Nuclear Power Station and the Response Manager has ordered activation of offsite facilities or a Site Area/General Emergency has been declared at the Shoreham Nuclear Power Station.

6.2 Offsite emergency organization personnel shall not release any information to the general public during emergency operations. All such inquiries shall be directed to the Emergency News Center.

6.3 If a disturbance appears to be of a serious nature and threatens the security of the facility or facility personnel then the senior security officer on site should call the Suffolk County Police. For a direct link to Suffolk County Police Headquarters call in Yaphank: 345-5000, and ask for the "Duty Officer". The Suffolk Police LILCO Coordinator and backup are as follows:

Mr. Frank Libert	Claims Dept.	LILCO Phone:	733-2212
		Home Phone:	757-8934
Mr. John P. Dunn	Claims Dept.	LILCO Phone:	733-2208
		Home Phone:	751-8861

For police assistance in Nassau County call: 535-4321

7.0 Materials and Equipment

Provided for the E.O.F., E.N.C. and the S.C.H. activation plans.

8.0 Procedure

8.1 General Security Requirements

Planning for offsite emergency facilities should provide flexibility to respond to a wide variety of potential threats. The content of this procedure addresses potential threats scenarios and conscientious application of the measures discussed will provide substantial protection against the postulated threats.

The perimeter (where possible) shall be marked by signs or others means, which will provide reasonable assurance that persons entering the area are aware they are on private property with limited access.

8.1.1 Access

Access to protected areas will be limited to authorized persons and essential vehicles. Each individual will have to pass through a manned security station before access to the facility is granted. Authorized individuals will have their names on a master facility security list and will have a facility badge which must be shown to the security guard before entering the building. Any individual who does not have a badge and is not on the master security list will have to be vouched for by an employee who is on the master security list. The person will then be given a visitor's badge and must be escorted by the authorizing employee.

8.1.2 Control

Control of access to an emergency facility or restricted areas within a facility will be provided by security by security personnel, or devices that are designed to admit authorized persons and exclude unauthorized persons.

.1 Identification

As a condtion for admission to protected areas, identification of individuals authorized access without escort shall be accomplished by (1) personal recognition by security force personnel or designated operating personnel, (2) comparison of the individual by security personnel with a company provided photo-identification badge.

Persons authorized access under escort shall be identified to the extent necessary to determine the validity of their need for access and shall be required to sign in and sign out and to register specific information, such as, name, date, time, purpose of visit, employment affiliation, citizenship and name of the individual to be visited. See Appendix 12.4 and 12.5.

Security personnel will exercise care in authorizing such visitors.

.2 Badging

Persons authorized access to an offsite emergency facility without escort will display a company-provided tamper-resistant photo-identification badge while within the protected area. Temporary non-photo badges will be available to qualified and approved company personnel who from time to time may require access to the facility.

.3 Inspections or Searches

Security procedures will provide for unannounced as well as scheduled inspections or searches of individuals, packages, and vehicles before entering or leaving the protected area. Conspicuous signs will be posted at access points, advising those who pass that their person, effects and vehicles are subject to random unannounced search.

8.1.3 Surveillance

Surveillance of protected areas shall be tailored to the individual facility and will include surveillance by facility security personnel or by operating personnel in the routine performance of their primary duties, supplemented to the degree appropriate by intrusion detection devices and alarms.

Patrols of the perimeter of offsite facilities will be conducted at irregular intervals by security personnel. Lighting of the protected area shall be sufficient to permit effective visual inspection of the area.

8.1.4 Enforcement

Enforcement of access control and surveillance requirements will be provided by security controls which include provisions for:

.1 Control of unauthorized persons and neutralization of potential threats by them

.2 External assistance (local law enforcement agencies)

.3 Records and reports of admissions, inspections, searches, patrols, alarms and tests of intrusion devices

.4 Corrective measures for violations

Response to a discovered intrusion of a protected area shall be provided with sufficient force or action to neutralize the suspected threat within a short enough time period to prevent penetration of any restricted areas.

8.2 Emergency Operations Facility

LILCO's Hauppauge Training Center is designated as the Emergency Operations Facility (EOF). The facility layout can be found in Appendix 12.1. The facility has a shop area with overhead garage doors allowing access by authorized vehicles. There is parking adjacent to the building and additional parking by a LILCO substation across the road and further south about 250 yards down the road.

The center has two access doors to the office area from the street and one access door to the shop. The shop has three (3) emergency exit doors to the outside and two (2) overhead vehicle doors. All doors will be kept normally locked with intrusion alarms activated except for the main entrance door on the north side facing the parking area. This door will have a manned security station at all times for access control.

All windows will be locked and will have intrusion devices activated at all times.

8.3 Emergency News Facility

The Old Mill In located on Veterans Memorial Highway, southwest of Islip MacArthur Airport will house the Emergency News Center. Appendix 12.2 provides a layout of the total facility. The layout specifies the areas which will comprise the working areas of the Emergency News Center.

In the main building located in the registration lobby will be the main security access point which will be responsible for credentialing all members of the press and television and their staffs. The first floor of the main building includes a 3,000 square foot press conference area. A security guard will be present during all briefings. In the basement of the Main Building, a 5,000 square foot working press area with a 300 square foot LILCO press office of it, is located. A security guard will be stationed at the door of the press area and at the door of the LILCO's press room at all operating times to control access.

The Company will maintain two suites each in the Grist Mill and Cider Mill Buildings. These each have three doors opening to a motel hallway. The suite will be configured with a center working room and a bedroom to each side of it. A security guard will be posted at the center suite door to control access. The two bedrooms will not be used. Each of the four suites are identical.

8.4 Support Corporate Headquarters

The S.C.H. will be located in LILCO's Operations Center at their Hicksville facility. This facility is under 24 hour guard protection and has barrier fences around the perimeter to control access. Appendix 12.3 provides a layout of the S.C.H.

A security guard will be posted at each entrance to the S.C.H. to control access during emergency operations.

8.5 Security Force

The security program will provde for adequate manpower to respond to a security threat without affecting the safe operation of the emergency facility.

8.5.1 Staffing

The following staffing schedules will be maintained for each facility as long as they are in an activated emergency status.

E.O.F.	-	4 Security Personnel
E.N.C.	-	9 Security Personnel
S.C.H.	-	2 Security Personnel

Staffing will be provided on a 24 hour basis as long as the facility is activated.

8.5.2 Training

Each member of the security force shall be thoroughly familiar with that portion of the facility security program that he is expected to implement and with the potential hazards he may be expected to encounter in carrying out his assigned duties. Each member shall receive such training and periodic re-training in the subject, skills, and procedures appropriate for effectively discharging his duties as a member of the security force.

8.6 External Security Forces

If disturbances appear to be of a serious nature the Suffolk County Police are to be called for assistance.

8.6.1 Suffolk County

If the disturbances are likely to involve or threaten the E.O.F. and E.N.C. in Suffolk County the senior site security agent can:

.1 request the Company Chief Security Agent to alert the proper police officials of possible need for assistance, or

.2 request police assistance directly as outlined below.

Suffolk County Police Headquarters: 345-5000
Ask for "Duty Officer"

If telephone service is interrupted contact with Suffolk County Police can be maintained using LILCO

radio tie-up with Suffolk County Civil Preparedness Headquarters in Yaphank which in turn maintains radio contact with Police Headquarters in Yaphank.

Civil Preparedness Headquarters: 924-4400

8.6.2 Nassau County

If the disturbances are likely to involve or threaten the S.C.H. in Nassau County the senior site security agent can:

.1 request the Company Chief Security Agent to alert the proper police officials of possible need for assistance, or

.2 request police assistance directly as outlined below.

For assistance in Nassau County contact:

Tour Supervisor Communications Bureau: 535-4321

or

over the direct tie line between the Hicksville Operations Center and Nassau Police Headquarter, Mineola

If telephone lines are interrupted, communications can be maintained over LILCO's radio contact with the Fire Communication Center in Mineola which in turn maintains radio contact with Nassau Police Headquarters, Mineola.

9.0 Acceptance Criteria

Satisfactory performance of security forces and measures during test drills and exercises.

10.0 Final Conditions

N/A

11.0 References

American National Standard N18.17-1973

12.0 Appendices

12.1 E.O.F. Site Plan

12.2 E.N.C. Site Plan

12.3 S.C.H. Site Plan

12.4 Emergency Operations Facility Sign-In Sheet

12.5 Emergency News Center Sign-In Sheet

Date: _____

EMERGENCY OPERATIONS FACILITY
APPENDIX 12.4
SIGN-IN SHEET

Name	Employment Affiliation	Purpose of Visit	Individual to be Visited	Citizenship	Time In	Time Out

Date: _____

EMERGENCY NEWS CENTER
APPENDIX 12.5
SIGN-IN SHEET

Name	Employment Affliation	Purpose of Visit	Individual to be Visited	Citizenship	Time In	Time Out

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Recovery

DRAFT - PRELIMINARY

1.0 Purpose

To outline the method by which the offsite emergency organizations shall be deactivated after the termination of an incident at the Shoreham Nuclear Power Station. This procedure shall set forth the guidelines to be used for returning the Emergency Operations Facility, Emergency News Center, and Support Corporate Headquarters to the pre-emergency condition.

2.0 Responsibility

The Response Manager shall have the overall responsibility for compliance with this procedure. No offsite organization shall enter the recovery stage or be deactivated without being directed to do so by the Response Manager. The Response Manager shall first ascertain from the Emergency Director that any actions taken by the offsite organizations will not hinder the recovery operations at the plant.

3.0 Discussion

Activation of this procedure is not essential for emergencies of a minor nature or for those situations that require little or no recovery efforts. For such minor emergencies, recovery may be accomplished on an informed basis using normal operating procedures.

3.1 Progression from Emergency to Termination/Recovery

3.1.1 Actions taken during an emergency can be categorized into two general phases: response and recovery. Response actions are the corrective and protective measures taken to mitigate the consequences of the event and to place the emergency under control. Recovery actions are longer-term actions taken to assist the onsite personnel in restoring the plant to its pre-emergency condition, and to return the offsite facilities to the standby mode.

3.1.2 The extent of the protective measures taken and the extent of recovery operations offsite will depend on

the nature of the emergency and the conditions at the plant. In many emergency situations, conditions may be resolved by onsite forces and the plant may be restored to a normal operation mode without extensive offsite assistance. In the event of more extensive damage to the plant, a long-term recovery operation may be necessary, requiring the establishment of an offsite recovery organization to assist in such efforts. This determination shall be made by the Response Manager.

3.1.3 At the onset of an emergency condition, response actions to mitigate the consequences of the accident shall take precedence over recovery actions. The Response Manager may initiate same limited recovery operations offsite during the response phase, when in his judgment, the response activities will not suffer. When the emergency situation has reached a point of resolution, it may be declared terminated, and the offsite recovery organization may be activated as necessary.

3.1.4 If, following the termination, an emergency situation reoccurs, the Response Manager may, at the request of the Emergency Director, reactivate the offsite emergency response organizations. Recovery operations will be temporarily suspended until such time as they can be safely resumed.

3.2 Termination Criteria

An emergency condition can be considered resolved, and an offsite recovery organization activated (if necessary) when the following guidelines have been met:

3.2.1 Radiation levels in-plant areas are stable or are decreasing with time.

3.2.2 The reactor and associated systems are considered to be a safe, stable condition.

3.2.3 Any fire, flooding, earthquake, or similar initiating events are either under control or have ceased.

3.2.4 Releases of radioactive material to the environment are either under control or have ceased.

3.2.5 For contaminated or injured personnel: when the victim(s) has (have) been transferred to a hospital, or received appropriate medical treatment.

3.2.6 For emergency conditions classified as unusual events: when the specified corrective action has been taken or when the plant has been placed in the

appropriate operating mode (LCO-related EALs), and when notifications are complete.

3.3 Authority

3.3.1 The Response Manager, based upon recommendations from the Emergency Director, shall make the determination as to when an emergency condition is resolved, and in accordance with the criteria described in Section 3.2 of this procedure, declare the termination of the emergency.

3.3.2 Upon termination of the emergency, the Response Manager shall either assume the responsibilies of, or appoint an individual to the position of Recovery Manager. The Recovery Manager shall review and approve the adoption of an offsite recovery organization if such is needed. The position and authority of the Recovery Manager may later be transferred to another qualified individual if necessary.

3.4 Recovery Organization

The extent to which an offsite recovery organization will be formed shall be determined by the nature of the specific emergency situation.

3.5 Recovery Operations

3.5.1 Recovery activities not covered by existing approved procedures shall be pre-planned by the Review of Operations Committee prior to implementation.

3.5.2 The Recovery Manager shall insure compliance with offsite radiation exposure limits via the Radiological Control Manager.

3.5.3 Should the activities of the onsite recovery organizations result in planned radioactive releases, the offsite organization shall be notified of such plans and shall in turn make the notifications to the appropriate agencies. Such notifications are required even if the release is within normal technical specifications.

3.5.4 The offsite recovery operation shall continue until the plant is returned to its pre-emergency status, or until such time as such operation is no longer required to support the onsite efforts.

4.0 Precautions

N/A

5.0 Prerequisites

5.1 The emergency has been declassified in accordance with SNPS Emergency Implementation Procedures and;

5.2 Any of the following conditions exist:

5.2.1 Extensive or significant damage is known to have occurred.

5.2.2 Repairs, decontamination, or radwaste disposal efforts are expected to be sizable and/or long-term (e.g. beyond three (3) weeks).

5.2.3 Re-licensing process is foreseen.

5.2.4 Advisory and/or technical support from outside sources (e.g. GE, S&W, NRC) is anticipated to be long-term.

5.2.5 Deficiencies in operational or safety related procedures or equipment are revealed in the course of the emergency.

6.0 Limitations and Actions

As dictated by the extent or severity of the accident.

7.0 Materials and Equipment

As required by the extent and severity of the accident.

8.0 Procedure

8.1 The offsite organization shall be notified that the emergency condition has been resolved at the plant and that the onsite emergency operations are terminated. If a recovery organization is being established, this should be included in the notification.

8.2 The Emergency Communications Director shall then make the appropriate press release, indicating the termination of the emergency and the commencement of the recovery effort.

8.3 Any offsite emergency radiation exposure limits shall be terminated and normal radiation control measures re-established.

8.4 Any procedure waivers instituted during the emergency shall be terminated, or formally documented by procedure changes.

8.5 Emergency organization personnel shall assemble all documents generated during the emergency and submit them to the Records Supervisor.

8.6 Any emergency equipment used during the emergency shall be serviced, as necessary, and returned to designated storage locations. Any damaged or defective equipment shall be brought to the attention of individuals responsible for its maintenance. These actions shall be documented.

8.7 If a long-term recovery operation is indicated, a recovery organization will be established in accordance with the SNPS Emergency Plan.

8.8 For Alert and higher emergency conditions, the Technical Support Manager, with the assistance of the Techanical Support Center staff will prepare a report of the emergency and submit this report to the Review of Operations Committee. For Unusual Events, the Licensee Event Report (LER) satisfies this requirement. Appendix 12.1 provides a suggested format.

8.9 The Review of Operations Committee, under the auspices of the Recovery Manager, will review the Technical Support Manager's report and will evaluate and assign responsibilities for corrective action.

8.10 The Review of Operations Committee, under the auspices of the Recovery Manager, shall review/approve procedures for offsite recovery operations that include, as applicable:

8.10.1 Procedures for decontamination

8.10.2 Procedures for repair

8.10.3 Recommendations for special inspections and tests that must be performed to assure the integrity of the area surrounding the plant.

8.10.4 Radioactive waste processing and handling procedures

8.10.5 An estimate of the radiation exposure offsite that will be accumulated by personnel in executing these procedures.

8.10.6 Exposure reduction methods (ALARA) to minimize the projected exposure of offsite personnel.

8.10.7 The Emergency Planning Coordinator #1 should review the various reports on the emergency to identify deficiencies in the Emergency Plan and implementing procedures, if any, and should initiate appropriate corrective action, if necessary, in a timely manner.

8.11 If the emergency involved radiological hazards in the plant, consider the following:

8.11.1 Extensive surveys of affected areas surrounding the plant should be performed. This should include direct radiation, contamination and airborne levels.

8.11.2 Posting, decontamination and shielding efforts should be initiated when hazardous and contaminated areas are identified. Posting should restrict access to hazardous areas. Decontamination should begin in least contaminated areas and progress toward most highly contaminated areas. Man-rem benefit of installing shielding should be considered.

8.11.3 Radiation exposure should be maintained as low as reasonably achievable during recovery operations.

8.11.4 Assessment of offsite operations effect on decontamination or other efforts should be considered. Offsite operations may result in elevated radiation levels or increased airborne and surface contamination.

8.11.5 Any personnel who used emergency self-contained breathing apparatus for radiological protection or was potentially exposed to airborne radioactivity should undergo bioassay analysis.

8.11.6 Personnel exposure assessment should be performed. Individual total man-rem, internal and external exposure should be considered.

8.11.7 Information gathered by reentry, rescue, damage assessment and repair teams may be useful for assessing radiological conditions and planning appropriate recovery operations.

8.12 If the emergency involved offsite release of radioactive effluents, consider the following:

8.12.1 Increased environmental monitoring should be performed. Increased monitoring should provide a means to assess the environmental impact of the release. SP 69.024.01, Environmental Sample Collection During an Emergency, gives guidance.

8.12.2 The site and environs should be surveyed for contamination, airborne and direct radiation levels. Any areas with levels above normal background should be decontaminated.

8.12.3 Equipment, vehicles, buildings and other structures that may have been in the effluent plume should be surveyed for contamination. If contamination is found, these areas should be decontaminated.

8.12.4 New York State Department of Health may request assistance from LILCO. LILCO personnel should be available for assistance in radiological matters.

8.12.5 It is unlikely that a member of the public would be exposed to substantial amounts of airborne contamination, but if this might have occurred, bioassay analysis and/or dose estimation should be considered.

9.0 Acceptance Criteria

N/A

10.0 Final Conditions

The station has been returned to a pre-emergency condition or the offsite recovery organizations are no longer required to support onsite activities.

11.0 References

11.1 Shoreham Nuclear Power Station Emergency Plan.

11.2 SNPS 69. . series Emergency Plan Implementing Procedures.

12.0 Appendices

12.1 Suggested Report Format

APPENDIX 12.1

SUGGESTED EMERGENCY REPORT FORMAT

1. Description of the emergency conditions (causes, pertinent events, etc.)
2. Plant radiological survey data
3. Site and environs radiological survey
4. Environmental monitoring, and projected impact
5. Damage assessment; plant/public
6. Radiation exposure data (plant and general public)
7. Personnel injuries
8. Plant operating and shutdown conditions
9. Emergency Organization operation critique
10. Corrective actions; start-up and repair schedules

Submitted: 1/2/82

Approved: _____

CIP Number: 11

Revision: 0

Date Eff.: _____

Administration

DRAFT - PRELIMINARY

1.0 Purpose

To establish an offsite administrative network that may be activated during an emergency situation at the Shoreham Nuclear Power Station. This administrative organization will be responsible for all administration functions required by the Response Manager during such an emergency.

2.0 Responsibility

The Administrative and Scheduling Manager (ASM) shall be responsible for ensuring compliance with this procedure.

3.0 Discussion

3.1 During an emergency situation a wide variety of administrative type services will be required to support the activities of the offsite Emergency Response Organization. This procedure shall delineate those administrative functions deemed necessary to provide such support.

3.2 The Administrative and Scheduling Support Staff shall include personnel in the areas of Purchasing and Stores, Personnel, Accounting, Liability, and Records Maintenance as deemed necessary by the Response Manager.

3.3 Figure 1 delineates the Administrative Support Organization.

3.4 This procedure describes the functional responsibilities of the Administrative Support organization in the following sections:

8.1 Administrative and Scheduling Manager
8.2 Purchasing and Stores
8.3 Personnel and Human Resources
8.4 Accounting and Financial Support
8.5 Liability and Claims
8.6 Records Supervision and Clerical Support

4.0 Precautions

N/A

5.0 Prerequisites

N/A

6.0 Limitations and Actions

N/A

7.0 Materials and Equipment

7.1 Records Supervision & Clerical Support shall be responsible to ensure that the dedicated equipment such as telephones, photocopy machines, typewriters, and clerical supplies are available and operational in the EOF.

8.0 Procedure

8.1 Administrative and Scheduling Manager (ASM)

8.1.1 The ASM shall have the overall responsibility for all functions/sevices required by the support organization throughout the duration of the emergency situation. The ASM reports directly to the Response Manager.

8.1.2 The ASM shall assist in the logistics of performing all administrative tasks, and shall delegate certain duties to those support organizations assigned for those purposes.

.1 At such time as certain tasks are no longer required, the ASM may re-assign specific tasks or release the affected portion of the organization, when and as directed by the Response Manager.

8.1.3 Tasks which are specifically administered by the ASM are as follows:

.1 Personnel Support arrangements
.2 Short term planning and scheduling
.3 Coordinating services by others (i.e. telephone, deliveries)
.4 Maintaining a liaison with the procurement support organization
.5 Arrangements for transportation of equipment & personnel

8.1.4 Appendix 12.2 lists the local Hotels, Restaurants, Laundries, Laundries-Self Service, Major Banks, Rent-A-Car, Limousine Services and Airline Schedules in the area of the Emergency Operations facility.

8.2 Purchasing and Stores

8.2.1 Purchasing and Stores support shall report to the ASM.

8.2.2 The tasks which are specifically assigned to the Purchasing and Stores support staff are as follows:

.1 Procurement or rental of required materials, equipment and supplies
.2 Providing the necessary contractual arrangements for the use of outside labor and equipment
.3 Maintaining appropriate records of all procurement transactions
.4 Arranging stores deliveries of stock materials
.5 Providing expediting services for deliveries
.6 Providing transportation routing and traffic management services for out of state deliveries
.7 Arranging accomodations (i.e. motel, airline, and travel

8.3 Personnel and Human Resources

8.3.1 Personnel and Human Resources Support shall report to ASM

8.3.2 Tasks which are specifically assigned to the Personnel and Human Resources Support Staff are as follows:

.1 Provide personnel scheduling services for the entire offsite Emergency Organization

.2 Make all necessary commissary arrangements

.3 Ensure the availability of additional personnel in each area of responsibility, as the emergecny situation may dictate

.4 Maintain a listing of company personnel qualified to fill key positions in the offsite organizations

8.4 Accounting and Financial Support

8.4.1 Accounting and Financial Support shall report to the ASM.

8.4.2 Tasks which are specifically assigned to the Accounting and Financial Support Staff are as follows:

.1 Set up and maintain appropriate accounting mechanism for all charges associated with the emergency.

.2 Maintain payroll records consistent with those used by the Company

.3 Provide petty cash funds as required, consistent with the guidelines established in company policies and procedures

.4 Provide accounting information to the Response Manager

8.5 Liability and Claims

8.5.1 Liability and Claims Support shall report to the ASM

8.5.2 Tasks which are specifically assigned to the Liability and Claims Support Staff are as follows:

.1 Be available to review all claims resulting from the emergency

.2 Be thoroughly knowledgeable reqarding the Company's liability during such an emergency.

.3 Maintian complete records of all transactions concerning claims agains the Company and the Company's liability to same.

.4 Maintain a liaison with the corporate Claims and Legal Departments

8.6 Records Supervisor and Clerical Support

8.6.1 Records Supervision and Clerical Support shall report to the ASM

8.6.2 Tasks which are specifically assigned to the Records Supervision and Clerical Support Staff are as follows:

.1 Typing and Stenographic services
.2 Reproduction
.3 Maintaining Office Supplies
.4 Secretarial Services
.5 Records Maintenance and filing
.6 Maintaining personnel at each telecommunications equiment station

9.0 Acceptance Criteria

N/A

10.0 Final Conditions

N/A

11.0 References

11.1 LILCO Corporate Nuclear Emergency Response Plan

11.2 LILCO Policy and Procedure Guide

12.0 Appendices

12.1 Administrative Schedule Manager Support Organization Chart

12.2 List of Local Services

APPENDIX 12.1

ADMINISTRATIVE SUPPORT ORGANIZATION

(Under Development)

APPENDIX 12.2

HOTELS

1) Colonie Hill Ltd.
1717 Motor Parkway
Hauppauge (516) 234-7800

2) Dutch Inn of Long Island
3845 Veterans Memorial Highway
Ronkonkoma (516) 585-9500

3) Holiday Inn of Hauppauge
1740 Express Drive South
Hauppauge (516) 234-3030

4) Old Mill Inn
3845 Veterans Memorial Highway
Ronkonkoma (516) 585-9500

5) Olympic Motor Lodge
650 Vanderbilt Motor Parkway
Hauppauge (516) 231-5050

6) Ramada Inn
1515 Veterans Memorial Highway
Hauppauge (516) 582-3600

7) Sheraton Smithtown Inn
110 Vanderbilt Motor Parkway
Smithtown (516) 231-1100

RESTAURANTS

1)	Airport Inn Islip MacArthur Airport Bohemia (516) 981-6400	Lunch Only
2)	Airport Restaurant 3760 Veterans Memorial Hwy. Bohemia (516) 585-8404	Breakfast, Lunch & Dinner Greek/Continental Menu Accepts All Major Credit Cards
3)	Barbary Coast Restaurant Holiday Inn of Hauppauge 1740 Express Drive South Hauppauge (516) 582-3334	Breakfast, Lunch & Dinner Continental Menu Accepts All Major Credit Cards
4)	Barons III Steak & Lobster House 3870 Veterans Memorial Hwy. Bohemia (516) 981-8181	Lunch & Dinner Open All Week Long Accepts All Major Credit Cards
5)	Bavarian Inn 422 Smithtown Blvd. Lake Ronkonkoma (516) 588-4632	Lunch (12-4) & Dinner (4-10) German/American Menu Accepts All Major Credit Cards
6)	Bon Homme Richard Restaurant 648 Vanderbilt Pkwy. Hauppauge (516) 273-0027	Lunch & Dinner Seafood & Steaks Accepts All Major Credit Cards
7)	Coggs Restaurant Ltd. 1575 Montauk Hwy. Oakdale (516) 567-9746	Lunch (40 Varieties of Sandwiches) & Dinner Accepts All Major Credit Cards
8)	Dragon Island Restaurant 1702 Middle Country Rd. Centereach (516) 732-4666	Lunch & Dinner Chinese Accepts All Major Credit Cards
9)	Fisherman's Net 296 West Main St. Sayville (516) 589-8936	Dinner Only Seafood Menu Accepts All Major Credit Cards

10)	Gondolier Restaurant 45 Foster Avenue Sayville (516) 589-7775	Lunch & Dinner Northern Italian Cuisine Accepts All Major Credit Cards
11)	Lake House 21 Montauk Hwy. West Sayville (516) 567-3838	Lunch & Dinner (Sat. & Sun. Dinner O Continental Menu Closed Mondays Accepts All Major Credit Cards
12)	Lamplighter Inn 465 Montauk Hwy. Sayville (516) 589-5050	Lunch & Dinner Seafood & Steaks Accepts All Major Credit Cards
13)	Luigina Italian Restaurant 710 Portion Road Ronkonkoma (516) 981-5879	Lunch & Dinner Accepts All Major Credit Cards
14)	Plankhouse 1995 Nesconset Hwy. Nesconset (516) 265-2077	Lunch & Dinner Continental Menu Accepts All Major Credit Cards
15)	Saxon Arms Restaurant Consul Place Oakdale (516) 589-2694	Lunch & Dinner Continental, but basically Seafood Closed Tuesdays Accepts All Major Credit Cards
16)	Tudor Room Restaurant 98 Main Sayville (516) 567-6345	Lunch & Dinner Continental Menu Closed Sundays Accepts All Major Credit Cards
17)	Yenan Restaurant 735 Hawkins Avenue Lake Ronkonkoma (516) 981-7464	Lunch & Dinner Chinese Cuisine Accepts All Major Credit Cards

LAUNDRIES

1) Kay's Cleaners & Launders Inc.
456 Hawkins Avenue
Lake Ronkonkoma (516) 588-3428

2) Lakeland Launderccnter Inc.
535 Hawkins Avenue
Lake Ronkokoma (516) 588-9628

LAUNDRIES - SELF-SERVICE

1) Happy Half-Hour Laundromat
1662 Middle Country Road
Centereach (516) 732-8541

2) Hawkins Launderette Inc.
717 Hawkins Avenue
Lake Ronkonkoma (516) 585-9537

3) Lake Grove Coin-Op
2673 Middle Country Road
Centereach (516) 588-9231

4) Sayville Coin-Op Laundromat
70-74 West Main
Smithtown (516) 265-9732

5) Smithtown Wash & Dry
279 West Main
Smithtown (516) 265-9732

MAJOR BANKS

1) Banker's Trust Co.
505 Hawkins Avenue
Lake Ronkonkoma (516) 588-8400

2) Chemical Bank
Islip Mac Arthur Airport
4295 Veterans Memorial Highway
Holbrook (516) 981-7073

3) Citibank N. A.
5801 Sunrise Highway
Holbrook (516) 752-5500

4) European American Bank
Veterans Memorial Highway
At Islip Mac Arthur Airport (516) 585-1472

5) Long Island Trust Co.
4110 Veterans Memorial Highway
Bohemia (516) 981-7800

6) Marine Midland

4040 Veterans Memorial Highway
Bohemia (516) 981-7272

395 Portion Road
Lake Ronkonkoma (516) 981-0400

7) National Bank of North America

4625 Sunrise Highway
Bohemia (516) 567-5107

3080 Middle Country Road
Lake Grove (516) 585-1700

RENT-A-CAR

1) American International Rent-A-Car (516) 981-1981
Mac Arthur Airport
1630 Lakeland Avenue
Bohemia

2) Avis Rent-A-Car (516) 588-6633
Mac Arthur Airport
Bohemia

3) Hertz Rent-A-Car (516) 585-9300
Mac Arthur Airport
Ronkonkoma

4) Thrifty Rent-A-Car (516) 981-3400
3845 Veterans Memorial Hwy.
Ronkonkoma
(½ Mile from Mac Arthur Airport)

LIMOUSINE SERVICE

1) L. I. Airport Limousine Service Corp. (516) 582-4077
25 Newton Place
Hauppauge

2) Suburban Airport Limousine Service Corp. (516) 234-6565
25 Newton Place
Hauppauge

3) Winston Limousine Service Inc. (516) 567-0055
1650 Sycamore Avenue
Bohemia

AIRLINES

Pilgrim Airlines, U.S. Air and Newair serve the Long Island MacArthur Airport to major connecting cities throughout the Northeast as listed below:

PILGRIM AIRLINES

[illegible]

To Hartford — $36.00 — **From Hartford**

221/58	6:35 PM	10:25 PM	ExSaSu	1*	Call Pilgrim for information				

To Manchester, N.H. — $50.00 — **From Manchester, N.H.**

221/58	6:35 PM	11:05 PM	ExSaSu	2*	Call Pilgrim for information				

To New London — $32.00 — **From New London**

652	9:00 AM	9:30 AM	ExSaSu	0	251/652	7:07 AM	8:55 AM	ExSaSu	1*
656	1:30 PM	2:00 PM	ExSaSu	0	220/221	5:10 PM	6:30 PM	ExSu	1*
220	4:30 PM	5:00 PM	ExSu	0					

To New York — $32.00 — **From New York**

221	6:35 PM	7:00 PM J	ExSu	0	652	8:30 AM J	8:55 AM	ExSaSu	0
					220	4:00 PM J	4:25 PM	ExSu	0

To Providence — $45.00 — **From Providence**

652	9:00 AM	10:05 AM	ExSaSu	1	652	10:10 AM	10:55 AM	ExSaSu	0
220	4:30 PM	5:30 PM	ExSu	1	221	5:45 PM	6:30 PM	ExSu	0
221/258	6:35 PM	8:30 PM	ExSu	1*					

NEWAIR

[illegible]

To Baltimore

11	7:45A	9:10A	ex. Sat & Sun	0
15	4:30P	5:55P	ex. Saturday	0

To Washington, D.C.

33	11:25A	12:45P	ex. Sat & Sun	0
29	1:30P	2:50P	Sunday only	0

To New Haven

12	11:05A	11:25A	ex. Sat & Sun	0
34	2:55P	3:15P	ex. Sat & Sun	0
30	4:45P	5:05P	Sunday only	0
16	7:45P	8:05P	ex. Saturday	0

U.S. AIR

LONG ISLAND/MACARTHUR, N.Y.

Mid Leave	Arrive	Flight No	Freq	Stops	Mid Leave	Arrive	Flight No	Freq	Stops
To Akron/Canton, Oh.					**From Akron/Canton, Oh.**				
Consult USAir Ticket or Reservations Office.					1 50p	5 45p	C805/272	6	Pit
To Albany/Schenectady/Troy, N.Y.					**From Albany/Schenectady/Troy, N.Y.**				
9 05a	9 41a	170		0	6 40a	7 16a	383	X7	0
8 50p	9 20p	224	X6	0	6 50p	7 26p	44	X6	0
To Allentown/Bethlehem/Easton, Pa.					**From Allentown/Bethlehem/Easton, Pa.**				
9 30a	12 20p	C935/C1107		Phl	8 50a	10 50a	C1106/C923	X67	Phl
1 55p	3 55p	C945/C1109	X67	Phl	8 50a	11 45a	C1106/C926	6	Phl
4 25p	7 25p	C926/C1115	X6	Phl	12 45p	4 05p	C1108/C995	X6	Phl
To Baltimore, Md.					**From Baltimore, Md.**				
7 48a	9 55a	383/C828	X7	Dca	8 25a	10 50a	C604/C923	X67	Phl
8 25a	11 15a	C923/C643	X67	Phl	9 25a	11 45a	C602/C926	6	Phl
9 30a	12 10p	C935/C600	X7	Phl	9 25a	12 35p	C602/C936	X67	Phl
1 55p	4 45p	C945/C630	X67	Phl	2 40p	5 45p	C616/272	6	Dca
4 25p	7 15p	C996/C826	X6	Phl					
8 00p	10 20p	44/C635	X6	Dca					
To Boston, Ma.					**From Boston, Ma.**				
6 50a	7 50a	C934	X7	0	8 10a	9 10a	C935	X7	0
11 15a	12 10p	C923	X67	0	12 35p	1 35p	C945	X67	0
1 05p	2 05p	C936		0	2 30p	3 30p	C937		0
4 05p	5 05p	C931		0	5 25p	6 25p	C932		0
6 45p	7 45p	C932	X6	0	8 05p	9 05p	C933	X6	0
To Buffalo/Niagara Falls, N.Y.					**From Buffalo/Niagara Falls, N.Y.**				
9 06a	12 12p	170/411		Alb	7 00a	10 50a	53/C923	X67	Phl
1 55p	5 00p	C945/152	X67	Phl					
To Charleston, Wv.					**From Charleston, Wv.**				
Consult USAir Ticket or Reservations Office.					6 20a	10 50a	200/C923	X67	Phl
To Chicago, Il.					**From Chicago, Il.**				
9 05a	11 15a D	170		1	11 55a D	5 45p	208/272	6	Pit
					3 30p D	7 28p	44	X6	1
To Cincinnati, Oh.					**From Cincinnati, Oh.**				
Consult USAir Ticket or Reservations Office.					1 45p	5 45p	272	6	2
					4 25p	8 25p	446/224	X6	Dca
To Cleveland, Oh.					**From Cleveland, Oh.**				
7 45a	2 00p	383/C523	X7	Cmh	7 10a	10 50a	456/C923	X67	Phl
4 25p	7 23p	C996/259	X6	Phl	5 00p	8 25p	164/224	X6	Cmh
To Columbus, Oh.					**From Columbus, Oh.**				
7 48a	11 37a	383		2	6 05p	8 25p	224	X6	1
4 25p	7 24p	C996/171	X6	Phl					
To Dayton, Oh.					**From Dayton, Oh.**				
7 48a	10 32a	383	X7	1	3 53p	8 25p	240/224	X6	Cmh
4 25p	8 20p	C995/431	X6	Phl					
To Detroit, Mi.					**From Detroit, Mi.**				
7 48a	12 29p D	383/478	X7	Day	9 59a D	12 35p	92/C936	X67	Phl
9 05a	1 32p D	170/411		Alb	12 30p D	4 05p	202/C995	X6	Phl
1 55p	6 30p D	C945/98	X67	Phl	5 00p D	8 25p	466/224	X6	Dca
To Erie, Pa.					**From Erie, Pa.**				
8 00p	11 18p	44/246	X6	Pit	Consult USAir Ticket or Reservations Office.				
To Flint, Mi.					**From Flint, Mi.**				
7 48a	3 15p	383/C512	X67	Cmh	Consult USAir Ticket or Reservations Office.				
To Franklin/Oil City, Pa.					**From Franklin/Oil City, Pa.**				
Consult USAir Ticket or Reservations Office.					1 15p	5 45p	C516/272	6	Pit
To Ft. Lauderdale/Hollywood, Fl.					**From Ft. Lauderdale/Hollywood, Fl.**				
Consult USAir Ticket or Reservations Office.					12 15p	5 45p	60/272	6	Pit

U.S. Air (Cont'd...)

LONG ISLAND/MACARTHUR, N.Y.

Meal/Leave	Arrive	Flight No	Freq	Stops	Meal/Leave	Arrive	Flight No	Freq	Stops
To Hagerstown, Md./ Martinsburg, Wv.					**From Hagerstown, Md / Martinsburg, Wv.**				
8 00p	11 05p	44/C635	X6	Dca	6 10a	8 34a	C627/170	X67	Dca
To Harrisburg/York, Pa.					**From Harrisburg/York, Pa.**				
9 30a	11 45a	C935/C724	X6	Phl	7 00a	10 50a	C742/C923	X67	Phl
1 55p	4 45p	C945/C767	X67	Phl	10 00a	12 35p	C724/C936	X6	Phl
4 25p	7 30p	C996/C750	X6	Phl	1 00p	4 05p	C717/C995	X6	Phl
To Houston, Tx.					**From Houston, Tx.**				
7 48a	3 34p	383/283		Cmh	Consult USAir Ticket or Reservations Office.				
To Indianapolis, In.					**From Indianapolis, In.**				
6 25a	1 47p	C928/199	X67	Phl	8 50a	11 45a	472/C926	6	Phl
9 30a	1 47p	C935/199		Phl	8 50a	12 35p	472/C936	X67	Phl
1 55p	7 30p	C945/48	X67	Phl	10 45a	4 05p	24/C995	X6	Phl
4 25p	9 10p	C996/499	X6	Phl	3 25p	8 25p	446/224	X6	Dca
To Kansas City, Mo.					**From Kansas City, Mo.**				
Consult USAir Ticket or Reservations Office.					11 00a	5 45p	272	6	3
To Lancaster, Pa.					**From Lancaster, Pa.**				
1 55p	5 17p	C945/C586	X67	Phl	8 40a	10 50a	C582/C923	X67	Phl
4 25p	7 00p	C996/C587	X6	Phl	8 40a	11 45a	C582/C926	6	Phl
					1 39p	4 05p	C586/C995	X6	Phl
To Louisville, Ky.					**From Louisville, Ky.**				
7 48a	1 54p	383/283		Cmh	11 45a	5 45p	270/272	6	Cvg
9 30a	12 50p	C935/199		Phl	11 50a	4 05p	24/C995	X6	Phl
1 55p	6 29p	C945/48	X67	Phl					
To Mansfield, Oh.					**From Mansfield, Oh.**				
7 48a	1 20p	383/C523	X7	Cmh	5 00p	8 25p	C525/224	X67	Cmh
To Memphis, Tn.					**From Memphis, Tn.**				
11 15a	4 35p	C923/215	X67	Bos	11 45a	5 45p	108/272	6	Pit
To Minneapolis/St. Paul, Mn.					**From Minneapolis/St. Paul, Mn.**				
9 30a	3 09p	C935/89		Phl	11 40a	5 45p	118/272	6	Pit
					12 40p	8 25p	446/224	X6	Dca
To New Orleans, La.					**From New Orleans, La.**				
Consult USAir Ticket or Reservations Office.					8 50a	4 05p	214/C995	X6	Phl
To Newport News/Williamsburg, Va.					**From Newport News/Williamsburg, Va.**				
7 48a	10 55a	383/C641	X7	Dca	6 10a	8 34a	C604/170	X67	Dca
8 25a	12 30p	C928/C643	X67	Phl	8 10a	11 45a	C602/C926	6	Phl
8 00p	10 30p	44/C819	X6	Dca	9 10a	12 35p	C602/C936	X67	Phl
					2 00p	5 45p	C920/272	6	Dca
					4 50p	8 25p	C611/224	X6	Dca
To Norfolk/Virginia Beach, Va.					**From Norfolk/Virginia Beach, Va.**				
4 25p	7 00p	C996/127	X6	Phl	4 40p	8 25p	435/224	X6	Dca
To Orlando, Fl.					**From Orlando, Fl.**				
7 48a	12 51p	383/109	X7	Dca	12 20p	5 45p	50/272	6	Pit
8 25a	12 17p	C928/73	X67	Phl	2 50p	7 26p	78/44	X6	Atl
9 05a	1 49p	170/79		Atl	4 15p	8 25p	82/224	X6	Dca
To Parkersburg, Wv./Marietta, Oh.					**From Parkersburg, Wv./Marietta, Oh.**				
Consult USAir Ticket or Reservations Office.					12 1p	5 45p	C531/272	6	Pit

U.S. Air (Cont'd...)

LONG ISLAND/MACARTHUR, N.Y.

Meal	Leave	Arrive	Flight No.	Freq.	Stops	Meal	Leave	Arrive	Flight No.	Freq.	Stops
To Philadelphia, Pa./Camden, N.J.						**From Philadelphia, Pa./Camden, N.J.**					
	8:25a	9:25a	C928	X67	0		7:10a	8:05a	C928	X67	0
	9:30a	10:25a	C935		0		9:55a	10:50a	C923	X67	0
	1:55p	2:50p	C945	X67	0		10:50a	11:45a	C926	6	0
	4:25p	5:20p	C996	X6	0		11:40a	12:35p	C936	X6	0
							3:10p	4:05p	C995	X6	0
To Pittsburgh, Pa.						**From Pittsburgh, Pa.**					
	9:30a	1:13p	C935/89		Phl		8:05a	10:50a	275/C923	X67	Phl
	1:55p	5:23p	C945/163	X67	Phl		1:30p	4:05p	214/C995	X6	Phl
	4:25p	8:03p	C996/235	X6	Phl		3:20p	5:45p	272	6	1
	8:00p	10:15p	44	X6	1						
To Raleigh/Durham, N.C.						**From Raleigh/Durham, N.C.**					
	1:55p	6:54p	C945/163	X67	Phl	Consult USAir Ticket or Reservations Office.					
To Reading, Pa.						**From Reading, Pa.**					
	9:30a	11:50a	C935/C572		Phl		8:15a	10:50a	C571/C923	X67	Phl
	1:55p	5:10p	C945/C575	X67	Phl		8:15a	11:45a	C571/C926	6	Phl
	4:25p	6:55p	C996/C576	X6	Phl		10:15a	12:30p	C572/C936	X6	Phl
							1:55p	4:05p	C574/C995	X6	Phl
To Richmond, Va.						**From Richmond, Va**					
	7:48a	10:15a	383/C641	X7	Dca		1:40p	5:45p	C616/272	6	Dca
	9:30a	1:15p	C935/C600	X7	Phl						
	1:55p	5:50p	C945/C630	X67	Phl						
To Rochester, N.Y.						**From Rochester, N.Y.**					
	1:55p	5:00p	C945/98	X67	Phl		8:30a	10:50a	25/C923	X67	Phl
	4:25p	7:37p	C996/418	X6	Phl		8:30a	11:45a	25/C926	6	Phl
To Shenandoah Valley, Va.						**From Shenandoah Valley, Va.**					
	7:45a	11:15a	383/C615	X7	Dca	Consult USAir Ticket or Reservations Office.					
	9:30a	2:15p	C935/C545	X7	Phl						
To St. Louis, Mo.						**From St. Louis, Mo.**					
Consult USAir Ticket or Reservations Office.							11:30a	5:45p	386/272	6	Pit
To Tampa/St. Petersburg, Fl.						**From Tampa/St. Petersburg, Fl.**					
Consult USAir Ticket or Reservations Office.							12:00p	5:45p	14/272	6	Pit
To Toronto, Ontario, Canada						**From Toronto, Ontario, Canada**					
	4:25p	8:43p	C996/418	X6	Phl	Consult USAir Ticket or Reservations Office.					
To Washington, D.C.						**From Washington, D.C.**					
	7:48a	8:45a N	383	X7	0		7:40a N	8:34a	170	X7	0
	8:25a	11:35a N	C928/C935	X67	Phl		7:55a N	11:45a	C951/C926	6	Phl
	9:30a	12:10p N	C935/C909	X67	Phl		8:40a N	10:50a	C901/C923	X67	Phl
	9:30a	1:20p N	C935/C953	X6	Phl		9:40a N	12:35p	C953/C936	X6	Phl
	1:55p	4:45p N	C945/C978	X67	Phl		12:40p N	4:05p	C903/C995	X67	Phl
	4:25p	7:00p N	C996/C957	X6	Phl		4:50p N	5:45p	272	6	0
	8:00p	9:00p N	44	X6	0		7:30p N	8:25p	224	X6	0
To West Palm Beach, Fl.						**From West Palm Beach, Fl.**					
	7:48a	2:12p	383/109	X7	Dca		12:15p	5:45p	12/272	6	Pit
	8:25a	12:27p	C920/25	X67	Phl		3:00p	8:25p	82/224	X6	Dca
To Wildwood/Cape May, N.J.						**From Wildwood/Cape May, N.J.**					
	9:30a	11:40a	C935/C855		Phl		5:25a	8:05a	C850/C928	X67	Phl
							12:25p	4:05p	C874/C995	X6	Phl
To Williamsport, Pa.						**From Williamsport, Pa.**					
	9:30a	12:55p	C935/C708		Phl		7:05a	10:50a	C707/C923	X67	Phl
	1:55p	4:00p	C945/C709	X67	Phl						
To Youngstown/Warren, Oh./ Sharon, Pa.						**From Youngstown/Warren, Oh./ Sharon, Pa.**					
Consult USAir Ticket or Reservations Office.							12:35p	5:45p	C809/272	6	Pit

Submitted: 2/17/82 CIP Number: 12

Approved: Revision: 0

Date Eff.:

Documentation and Record Keeping

DRAFT - PRELIMINARY

1.0 Purpose

To provide the method and format for maintaining complete, accurate and uniform records of all activities of a declared emergency.

2.0 Responsibility

The maintenance of logs and records of all offsite activities during an emergency shall be the responsibility of the Records Supervisor, located in the Emergency Operations Facility (EOF). Upon termination of the emergency the Records Supervisor shall forward all logs and records to the Emergency Planning Coordinator who will prepare an overall summary of the emergency.

3.0 Discussion

3.1 Emergency Function Logs

Emergency Function Logs shall be maintained for all emergency classifications (i.e. Unusual Event, Alert, Site Area Emergency and General Emergency) by all functions that are activated in response to such emergency.

During a declared emergency, all personnel assigned responsibilities in the offiste emergency response organization as described in Appendix 12.2 shall prepare and maintain an Emergency Function Log Form, Appendix 12.1. Logging of pertinent data shall continue throughout the emergency situation. Appendix 12.3 contains a listing of potential items to be included in the Emergency Function Log.

3.2 Communication Record Keeping Form

During a declared emergency all incoming and outgoing communications shall be recorded by the individual responsible for that communication. The Communication Record Keeping Form, Appendix 12.4, a three part, color coded form shall be used for recording all such communications as well as any applicable remarks. This

3.3 Emergency Summary

Upon the termination of a declared emergency the Records Supervisor shall collect all logs, records and other pertinent documents; place them in chronological order, and forward these to the Emergency Planning Coordinator. The Health Physics Engineer will prepare an Emergency Summary based upon the chronology of events of the emergency situation.

3.4 Other Records

Essential positions of the records of an emergency will be generated under existing operational procedures and other Emergency Implementation Procedures. A listing of anticipated sources of such records is included in other Emergency Records, Appendix 12.5, which also form a part of the Emergency Summary.

4.0 Precautions

N/A

5.0 Prerequisites

N/A

6.0 Limitations and Actions

N/A

7.0 Materials and Equipment

7.1 Emergency Function Logs

7.2 Communication Record Keeping Forms

7.3 Accurate Clock or Synchronized Watches

8.0 Procedure

8.1 Emergency Function Logs

The logger shall initiate the log by:

8.1.1 Using the Emergency Function Log form, Appendix 12.1, enter the appropriate title. Emergency Function Logs shall be prepared for each position shown in Appendix 12.2.

8.1.2 Enter name of the person preparing the log.

8.1.3 Enter date, time (24 hour clock), and location.

8.1.4 Enter page number for all pages.

8.1.5 Enter chronologically those events pertinent to the function, as recommended in Appendix 12.3. Emphasis should be placed on all decisions and recommendations.

8.1.6 If additional pages are needed, enter title using page 2 of the Emergency Function Log.

8.1.7 Upon termination of the event, submit the completed logs to the Records Supervisor (EOF).

8.2 Communication Record Keeping Form

The communicator shall initiate the form by:

8.2.1 Using the Communications Record Keeping Form, Appendix 12.4, circle RECEIVED or TRANSMITTED.

8.2.2 Enter time (use 24 hour clock time).

8.2.3 Enter the date in month, day and year.

8.2.4 Circle the location From which the message was transmitted.

8.2.5 Circle the location To which the message was transmitted.

8.2.6 Enter the message as accurately and completely as possible. If not totally clear on message have it repeated.

8.2.7 After communication is terminated, enter any remarks as applicable.

8.2.8 The communicator shall sign the form once it is completed.

8.2.9 The White Copy shall be submitted to the Response Manager at the EOF for information routing and record keeping.

8.2.10 The Canary copy shall be sent to Addressee.

8.2.11 The Pink copy shall be kept in the communications file.

8.2.12 The Response Manager shall submit all forms to the Records Supervisor for temporary filing.

8.3 Emergency Summary

The Records Supervisor shall:

8.3 Emergency Summary

The Records Supervisor shall:

8.3.1 Obtain the Emergency Function Logs and Communication Record Keeping Forms from the Response Manager.

8.3.2 Obtain any records and documents noted in Appendix 12.5.

8.3.3 Review all records, documents and logs for completeness.

8.3.4 Compile all items in chronological order and forward them to the Health Physics Engineer.

8.3.5 The complete Emergency Summary will then be prepared by the Health Physics Engineer, and reviewed and signed by the Plant Manager.

9.0 Acceptance Criteria

N/A

10.0 Final Conditions

All logs, records, and related documents shall be forwarded to the Administrative Section for filing in accordance with permanent plant procedures.

11.0 References

11.1 Shoreham Nuclear Power Station, Emergency Plan.

11.2 Emergency Plan Implementation Procedures.

12.0 Appendices

12.1 Emergency Function Log Form, page 1.

12.2 Emergency Function Logs, page 2.

12.3 Items that may be included in Emergency Functin Log.

12.4 Communication Record Keeping Form.

12.5 Other Emergency Records.

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FUTURE EXPANSION.

THIS SECTION INTENTIONALLY LEFT BLANK FOR
FUTURE EXPANSION.

Submitted: 2/26/82 CIP Number: 15

Approved: _____ Revision: 0

Date Eff.: _____

Thyroid Blocking

DRAFT - PRELIMINARY

1.0 Purpose

The purpose of this procedure is to provide guidlines and instructions for the administration of potassium iodide (KI) to offiste emergency workers.

2.0 Responsibility

The Radiation Control Manager shall be responsible for ensuring compliance with this procedure.

3.0 Discussion

Radioiodines inhaled or ingested by the thyroid gland may be blocked by the ingestion of stable iodine. The administration (oral) of approximately 130 milligrams of potassium iodine (KI) will result in sufficient accumulation of stable iodide in the thyroid gland to prevent significant uptake of radioiodine. KI as a thyroid blocking agent is only effective if the radiation exposure is from radioiodines and the administration of the stable iodine is accomplished shortly before or after uptake.

4.0 Precautions

KI, as a thyroid blocking agent, is normally administered by prescription and its distribution must be in accordance with existing New York State health laws.

5.0 Prerequisites

KI is administered when the calculated actual or potential thyroid absorbed dose is equal to or greater than 10 rad.

6.0 Limitations and Actions

N/A

7.0 Materials and Equipment

N/A

8.0 Procedure

8.1 Determination

8.1.1 The Radiation Protection Manager (TSC), the Radiological Control Manager (EOF) or their designees, shall determine the need for administration of potassium iodide (KI) as follows:

.1 Determine the I-131 concentration (uCi/cc) in the affected area(s).

.2 Divide the I-131 concentration by the protection factor of the respiratory equipment, if applicable.

.3 Determine the length of time (minutes) of the individual(s) in the affected area.

.4 Locate the intersection of these points on the thyroid graph (Attachment 1).

.5 If the projected dose is equal to or greater than 10 rad, KI administration is recommended.

8.2.1 Affected personnel will report to one of the locations that stock KI tablets (See Section 8.3).

8.2.2 Health Physics personnel at these locations shall ask if the person is known to have any allergic reactions to iodine. If no reaction is known, Health Physics personnel shall advise that taking of KI is voluntary.

8.2.3 Health Physics personnel at these locations shall log the person's name, social security number, employee number, company/department and date on the KI Administration Form, Appendix 12.2.

8.2.4 Administer one KI tablet (100 mg iodide per 130 mg tablet) to each individual who requires KI.

8.2.5 After administration, the names of persons who have received KI are reported to the Radiation Protection Manager (TSC) or the Radiological Control Manager (EOF).

8.2.6 The Radiation Protection Manager (TSC) or the Radiological Control Manager (EOF) shall notify the LILCO Medical Director of persons who have received KI.

8.2.7 KI is administered daily to each person on the form until the accumulated dose is 1 gm of iodine or as otherwise directed by the LILCO Medical Director. The time required to accumulate 1 gm of iodine is 10 days.

8.3 Location of KI Supplies

8.3.1 KI supplies are stored in the following locations:

.1 Emergency Operations Facility (EOF).

.2 Technical Support Center (TSC).

.3 First Aid Room.

.4 Downwind Survey Kit.

8.3.2 Potassium Iodide (KI) tablets to be administered are generically equivalent to Potassium Iodine, U.S.P., 130 mg each (100 mg iodide).

8.4 Maintenance

8.4.1 KI tablets have a shelf life of approximately two years. The Radiation Protection Manager (TSC) or the Radiological Control Manager (EOF) is responsible for ensuring that inventories are maintained and that tablets whose shelf life has been exceeded are replaced.

9.0 Acceptance Criteria

N/A

10.0 Final Conditions

All records shall be forwarded to the Administrative Section for filing in accordance with permanent plant procedures.

11.0 References

NCRP Report No. 55, Protection of the Thyroid Gland in the Event of Releases of Radiodine, (National Council on Radiation Protection and Measurements, Washington 1977).

12.0 Appendices

12.1 Thyroid Dose Graph
12.2 KI Administration Form

APPENDIX 12.1

KI ADMINISTRATION FORM

NAME	SOC. SEC .NO.	EMPLOYEE NO.	COMPANY/DEPT.	DATE	SUBSEQUENT DATES

Submitted: _____

Approved: _____

DRAFT - PRELIMINARY

CIP Number 16
Revision 0
Date Eff. _____

EMERGENCY NOTIFICATION PROCEDURES

EMERGENCY

NOTIFICATION PROCEDURES

FOR:

1. UNUSUAL EVENT

2. ALERT

3. SITE AREA EMERGENCY

4. GENERAL EMERGENCY

CLASSIFICATION OF EMERGENCIES (NUREG 0654)

The Company's Emergency Communications Plan is designed to notify promptly local, state and federal government officials and the public of any significant event at any of its nuclear power plants. Those events have been designated by the Nuclear Regulatory Commission as falling into one of four categories: (1) unusual event, (2) alert, (3) site area emergency and (4) general emergency. The primary purpose for this classification is to ensure that the plant operating staff recognizes initiating conditions, takes appropriate action and comes to a state of readiness to respond in the event that the condition becomes more significant. The categories may be defined as follows:

1. NOTIFICATION OF UNUSUAL EVENT

Class Description

Unusual events are in process or have occurred which indicate a potential degradation of the level of safety of the plant. No releasesof radioactive material requiring offsite response or monitoring are expected unless further degradation of safety systems occurs.

2. ALERT

Class Description

Events are in process or have occurred which involve an actual or potential substantial degradation of the level of safety of the plant. Any releases expected to be limited to small fractions of the EPA Protective Action Guideline exposure levels.

3. SITE AREA EMERGENCY

Class Description

Events are in process or have occurred which involve actual or likely major failures of plant functions needed for protection of the public. Any releases not expected to exceed EPA Protective Action Guideline exposure levels except near site boundary.

4. GENERAL EMERGENCY

Class Description

Events are in process or have occurred which involve actual or imminent substantial core degradation or melting with potential for loss of containment integrity. Releases can be reasonably expected to exceed EPA Protective Action Guideline exposure levels offsite for more than the immediate site area.

Hypothetical examples of the four emergency classifications can be found in Appendix 1.

A Glossary of nuclear and emergency planning terminology can be found in Appendix 2.

UNUSUAL EVENT EMERGENCIES

Notification Procedure

Definition of Unusual Event: Unusual events are in process or have occurred which indicate a potential degradation of the level of safety of the plant. No releases of radioactive material requiring offsite response or monitoring are expected unless further degradation of safety systems occurs.

An Unusual Event situation does not warrant the activation of the Emergency Operations Facility (EOF) or the Emergency News Center (ENC).

A. Notification Procedure for "Off-Normal" Hours

If an Unusual Event is declared, the LILCO Emergency Communications Organization will be activated in the following manner:

I The Emergency Director will notify the Gas Systems Operator, (on duty 24 hrs. a day), and inform him of the nature of the emergency.

II The Gas Systems Operator will then notify the following:

1. Emergency Communications Director who will assess the situation, and determine the extent of Public Information required. The Emergency Communications Director will then notify the
2. Emergency News Manager, who will prepare, at the direction of the Emergency Communications Director, a Media Release relevant to the declared Unusual Event.
3. Emergency Communications Liaison

III The Gas System Operator will only describe the nature of the event, its classification and time of occurrence

IV The ECD, ECL, and ENM will then immediately report to their emergency locations, as described on Page C-6.

B. Notification Procedure for "Normal - Working" Hours

If an Unusual Event is declared, the LILCO Emergency Communications Organization will be activated in the following manner:

1. The Emergency Director will notify via Beeper or Pager the Emergency Communications Liaison, (who is on site during Normal - Working Hours), and he will be informed of the nature of the emergency.

2. The Emergency Communications Liaison will then notify the Emergency Communications Director, who will assess the situation, and determine the extent of public information required.

3. The Emergency Communications Director will then notify the Emergency News Manager, who will prepare, at the direction of the Emergency Communications Director, an appropriate media announcement.

UNUSUAL EVENT EMERGENCIES

NOTIFICATION PROCEDURE

NOTIFICATION PROCEDURE FOR "OFF-NORMAL" HOURS

Emergency Director Shoreham Station	Notifies:	Gas Systems Operations
Gas Systems Operators	Notifies:	Emergency Communications Director I. Freilicher
	Alt. -	G. Soos
	Reports to:	Mineola Office
		Emergency News Manager M. Patterson
	Alt. -	D. Lankford
	Reports to:	Mineola Office
		Emergency Communications Liaison D. Lankford
	Alt. -	T. Forte
	Reports to:	Shoreham Station

UNUSUAL EVENT EMERGENCIES

NOTIFICATION PROCEDURE

NOTIFICATION PROCEDURE FOR "NORMAL WORKING" HOURS

Emergency Director Shoreham Station	Notifies:	Emergency Communications Liaison (on-site	
		D. Lankford	(on-site)
	Alt. -	T. Forte	(on-site)
Emergency Communications Liaison	Notifies:	Emergency Communications Director	
		I. Freilicher	
	Alt. -	G. Soos	
Emergency Communications Director	Notifies:	Emergency News Manager	
		M. Patterson	
	Alt. -	D. Lankford	

In the event of any Unusual Event declaration, which might include, among other initiating events, the partial or total destruction or disruption of any equipment, apparatus, installation and facility; any contaminated personnel requiring off-site transportation and medical attention; or any illegal attempted entry on the site, security threat, attempted sabotage, vandalism, etc.; the Shoreham Emergency Communications Liaison will promptly prepare a written report and submit such report to:

1. I. Freilicher Emergency Communications Director

2. M. Patterson Emergency News Manager

3. D. Stoller Emergency Planning Coordinator

ALERT EMERGENCIES

Notification Procedure

Definition of Alert: Events are in process or have occurred which involve an actual or potential substantial degradation of the level of safety of the plant. Any releases expected to be limited to small fractions of the EPA Protective Action Guideline exposure levels.

When an Alert Emergency Classification is declared, the Emergency Operations Facility (EOF), and the Emergency News Center (ENC), will not be activated, unless extraordinary circumstances (at the discretion of the Response Manager and the recommendation of the Emergency Director) warrant activation of the EOF, which would also automatically trigger activation of the ENC.

1. If it is determined that the Alert condition declared does not require activation of the EOF and ENC, then the preceding pages labeled, Unusual Event - Notification Procedure will be applicable and executed.
2. If it is determined that the Alert condition declared requires activation of the EOF and the ENC, then the procedure described in the following pages entitled Site and General Emergencies - Notification Procedure will be applicable and controlling.

SITE AND GENERAL EMERGENCIES

NOTIFICATION PROCEDURE

Site Area Emergency: Events are in process or have occurred which involve actual or likely major failures of plant functions needed for protection of the public. Any releases not expected to exceed EPA Protective Action Guideline exposure levels except near site boundary.

General Emergency: Events are in process or have occurred which involve actual or imminent substantial core degradation or melting with potential for loss of containment integrity. Releases can be reasonably expected to exceed EPA Protective Action Guideline exposure levels offsite for more than the immediate site area.

The above classifications will require the activation of the Emergency Operations Facility in Hauppauge, (EOF), and the Emergency News Center, (ENC), located in the Old Mill Inn in Ronkonkoma. Also activated will be the Corporate Emergency Communications Center in Mineola, the Customer and Government Communications Center in Hicksville, Room 210, and the Special Services Center in Garden City.

SITE AND GENERAL EMERGENCIES

NOTIFICATION PROCEDURES

NOTIFICATION PROCEDURE FOR "OFF-NORMAL" HOURS

Emergency Director Shoreham Station	Notifies:	Gas Systems Operations
Gas Systems Operations	Notifies:	Emergency Communications Director I. Freilicher
	Alt. -	G. Soos
NOTE: (Alternates are not called unless primary contact is unavailable.)		Emergency Communications Liaison D. Lankford
	Alt. -	T. Forte
		Emergency News Manager M Patterson
	Alt. -	D. Lankford
		Public Affairs Duty Officer R. Hodson
	Alt. -	_____

SITE AND GENERAL EMERGENCIES

NOTIFICATION PROCEDURES

NOTIFICATION PROCEDURE FOR "NORMAL WORKING" HOURS

Emergency Director Shoreham Station	Notifies:	- Emergency Communications Liaison - D. Lankford (on-site) Alt. - T. Forte (on-site)
Emergency Communications Liaison	Notifies:	- Emergency Communications Director I. Freilicher Alt. - G. Soos
NOTE: (Alternates are not called unless primary contact is unavailable.)		Emergency News Manager M. Patterson Alt. - D. Lankford
		Public Affairs Duty Officer R. Hodson Alt. - ---------

SITE AND GENERAL EMERGENCIES

NOTIFICATION PROCEDURES
"ALL HOURS" NOTIFICATION

PUBLIC AFFAIRS DUTY OFFICER Notifies: The following emergency personnel:

NOTE: EOF = Emergency Operations Facility
ENC = Emergency News Center

NOTE: (Alternates are not called unless primary contact is unavailable.)

	NAME	EMERGENCY POSITION	HOME TEL.	OFFICE TEL.	REPORTING LOCATION
1.	D. Stoller	Emer. Comm. Plan. Coord.			EOF
Alt.	T. Forte				EOF
2.	M. Sacca	Comm. Logistics Coord.			ENC
3.	T. Forte	Comm. Logistics Coord.			ENC
4.	E. Ricioppo	Comm. Logistics Coord.			ENC
5.	J. Hickman	Press Announcement Writer			EOF
Alt.	W. Sherrard				EOF
6.	C. Clawson	Media Information Supervisor			ENC
7.	J. Brabham	Public Information Staff			ENC
8.	C. Salit	Public Information Staff			ENC
9.	N. Macenko	Public Information Staff			ENC
10.	D. Mudar	Public Information Staff			ENC
11.	K. Clayton	Public Information Staff			ENC
12.	K. Oliva	Public Information Staff			ENC
13.	J.Bruce	Corporate Comm. Manager			Mineola Off.
Alt.	W. Edwards				Mineola Off.
14.	K. Simons	Employee Comm. Coord.			Mineola Off.
Alt.	V. Scibilia				Mineola Off.
15.	J. Sheehan	Media Information Monitor			Mineola Off.
16.	E. Robinson	N.Y.S. Information Liaison			Albany, N.Y.

NAME	EMERGENCY POSITION	HOME TEL.	OFFICE TEL.	REPORTING LOCATION
17. G .Soos	Special Services Manager			EOF
18. H. Doebler	Gov't Communications Manager			Hix. Rm. 210
Alt. W. Edwards				Hix. Rm. 210
19. J. Faller	Customer Comm. Manager			Hix. Rm. 210
Alt. S. Maslak				Hix. Rm. 210
20. M. Fitzgerald	Suffolk County Liaison			Yaphank-EOC

Government Communications Manager — Notifies: The Following Emergency Personnel:

1. R. Duffy	Gov't Comm. Coord. - Nassau			Hix. Rm. 210
Alt. J. Rofrano				Hix. Rm. 210
2. A. Fogelstrom	Gov't Comm. Coord. - Suffolk			Hix. Rm. 210
Alt. M. Fitzgerald				Hix. Rm. 210

Customer Communications Manager — Notifies: The Following Emergency Personnel:

1. S. Turley	Cust. Comm. Coord. - Nassau			Hix. Rm. 210
Alt. D. Plimley				Hix. Rm. 210
2. J. Fitzpatrick	Cust. Comm. Coord. - Suffolk			Hix. Rm. 210
Alt. T. Voigt				Hix. Rm. 210

Manager of Special Services — Notifies: The Following Emergency Personnel:

1. D. Kestel	Coord. of Comm. Services			Garden City
2. B. Gualtieri	Comm. Services Staff			Garden City
3. R. Bailey	Comm. Services Staff			Garden City

Emergency Comm. Planning Coordinator — Notifies: The Following Emergency Personnel:

1. M. Eisenbud	Scientific Advisor	--- ----	--- ----	ENC
2. V. Bond	Scientific Advisor	--- ----	--- ----	ENC
3. M. Mullarkey	Technical Advisor			ENC
4. J. Cox	Technical Advisor			ENC
J. Buechler	Technical Advisor			ENC

	NAME	EMERGENCY POSITION	HOME TEL.	OFFICE TEL.	REPORTING LOCATION
6.	C. Conboy	Technical Advisor			ENC
7.	R. Driscoll	Technical Advisor			ENC
8.	J. Novarro	Technical Advisor			ENC

Submitted: _____

Approved: _____
(Plant Manager)

DRAFT - PRELIMINARY

CIP Number 17
Revision 0
Date Eff. _____

EMERGENCY COMMUNICATION CENTERS ACTION SEQUENCE

EMERGENCY

COMMUNICATIONS

CENTERS

ACTION SEQUENCE

Staffing Requirements (Does not include clerical staff)

I Shoreham Station - Shoreham, N. Y. Phone --- ----

1.	Emergency Communications Liaison	D. Lankford
	Alternate	T. Forte

II Emergency Operations Facility (EOF) - Hauppauge, N. Y.
Phone --- ----

1.	EmergencyCommunications Director	I. Freilicher
	Alternates	G. Soos
		M. Patterson
2.	Emergency Comm. Planning Coordinator	D. Stoller
	Alternate	T. Forte
3.	Press Release Writer	J. Hickman
	Alternate	W. Sherrard
4.	Special Services Manager	G. Soos
	Alternate	----------

III Emergency News Center (ENC) - Old Mill Inn - Ronkonkoma, N. Y.
Phone --- ----

1.	Emergency News Manager	M. Patterson
	Alternate	D. Lankford
2.	Emergency Information Supervisor	D. Lankford
	Alternate	W. Sherrard
3.	Scientific Advisors	M. Eisenbud
		V. Bond
4.	Technical Advisors -Briefers	J. Novarro
		M. Mullarkey
		J. Cox
		J. Buechler
		C. Conboy
		R. Driscoll
5.	Communications Logistics Coord.	R. Hodson
		M. Sacca
		E. Ricioppo
		T. Forte
6.	Media Information Supervisor	C. Clawson
		J. Brabham
		C. Salit
7.	Message Desk - Rumor Control	N. Macenko
		D. Mudar
8.	Status Board/Press Release Monitors	K. Clayton
		K. Oliva

IV Corporate Communications Office - Mineola, N. Y.
Phone No. --- ----

1.	Corporate Communications Manager	J. Bruce
	Alternate	W. Edwards
2.	Employee Communications Coordinator	K. Simons
	Alternate	V. Scibilia
3.	Media Information Monitor	J. Sheehan
4.	N.Y.S. Information Liaison - Albany	E. Robinson

V Emergency Communications Office - Hicksville, N. Y. Rm. 210
Phone No. --- ----

1.	Government Communications Manager	H. Doebler
	Alternate	V. Edwards
2.	Government Comm. Coord. - Nassau	R. Duffy
	Alternate	J. Rofrano
3.	Government Comm. Coord. - Suffolk	A. Fogelstrom
	Alternate	M. Fitzgerald
4.	Customer Communications Manager	J. Faller
	Alternate	S. Maslak
5.	Customer Comm. Coord. - Nassau	S. Turley
	Alternate	D. Plimley
6.	Customer Comm. Coord. - Suffolk	J. Fitzpatrick
	Alternate	T. Voigt
7.	Suffolk County Liaison - Yaphank	M. Fitzgerald

VI Special Services Center - Garden City, N. Y.
Phone No. --- ----

1.	Coord. of Communications Services	D. Kestel
2.	Communications Services Staff	B. Gualtieri
		R. Belley

EMERGENCY COMMUNICATIONS CENTER

NO. 1

SHOREHAM STATION

SHOREHAM, N. Y.

Shoreham Station - Emergency Communications Center 1

1. When an Unusual Event is declared to be in progress at Shoreham Station, the Emergency Communications Liaison, reports to his post at the Shoreham site.
2. When an Alert is declared to be in progress at Shoreham Station, (which does not require activation of the EOF or ENC) the Emergency Communications Liaison will proceed to the Technical Support Center (TSC) on-site, and serve as a communications link in the dissemination of information to the Corporate Communications Office in Mineola.
3. If an Alert, Site Area, or General Emergency is declared to be in progress at Shoreham Station which requires activation of the (EOF), the Emergency Communications Liaison will proceed directly to the off-site Emergency News Center, (ENC).

PROCEDURE

Emergency (Or Drill) Checklist

	Time/Date	Initials
D. Lankford or T. Forte Emergency Communications Liaison	1. Receive notification from the Emergency Director as to the status and nature of the declared emergency in progress.	
	2. Notify the Emergency Communications Director.	

3. For ALERT proceed to the TSC and aid in dissemination of information to the Corporate Communications Office in Mineola.
4. If the EOF is activated on a declared ALERT, Site or General Emergency, then proceed to the ENC.
5. At the ENC, serve as Emergency Information Supervisor reporting to the Emergency News Manager.
6. Provide technical information support for the Emergency News Manager and LILCO Emergency staff at the ENC.
7. Be available to help clarify the information being relayed to the members of the media and other officials.
8. Aid in ensuring the overall accuracy of any information being provided.
9. Maintain constant communication via a dedicated telephone with the Technical Advisor at the EOF, Information Section.

10. Be present and available for consultation during all news briefings given by LILCO, State and Local officials, and assist in answering technical questions.

Emergency (Or Drill) Remarks: _____

_____

Signed: _____ Time/Date _____

EMERGENCY COMMUNICATIONS CENTER

NO. 2

OFF-SITE

EMERGENCY OPERATIONS FACILITY (EOF)

HAUPPAUGE, N. Y.

Off-Site Emergency Operations Facility (EOF)

Information Section

The function of the off-site Emergency Operations Facility Information Section is to gather and process emergency information arriving from SNPS, prepare news releases, obtain approval of the Recovery Manager, and transmit approved information to the Emergency News Center (ENC) for release. NO INFORMATION SHALL BE RELEASED TO THE PUBLIC DIRECTLY FROM THE EOF.

Professional Staffing:

- o Emergency Communications Director
- o Emergency Communications Planning Coordinator
- o Press Release Writers (2)

Clerical Staffing that will be provided at the EOF shall include:

- o Secretarial - Log Recorder (1)
  - Copier Operations (1)
  - General Secretarial (1)

PROCEDURES

Emergency (Or Drill) Checklist

	Time/Date	Initials

Emergency Communications Director

I. Freilicher
G. Soos

1. Report to the EOF and maintain constant contact with senior Company officials.
2. Supervise collection and transmission of all information regarding the emergency.
3. Consult with Recovery Manager about new emergency information as it develops, and obtain approval of Recovery Manager for any press announcement before it is transmitted to the ENC.
4. Maintain constant communications with the ENC, and the other emergency centers.
5. Arrange in consultation with the Emergency News Manager, periodic news conferences at the ENC and be available to participate in these conferences.

Emergency (Or Drill) Remarks: _____

_____

Signed: _____ Time/Date: _____

EMERGENCY COMMUNICATIONS PLANNING COORDINATOR

PROCEDURES

Emergency (Or Drill) Checklist

	Time/Date	Initials
D. Stoller T. Forte	1. Report initially to Emergency Operations Facility (EOF), Public Information Section.	
	2. Support the Emergency Communications Director as required.	
	3. Ensure that the Emergency Communications Organization's functions are being carried out properly. (Use Checklist).	
	4. Establish and maintain contact with the several LILCO Emergency Communications Centers, identified in Table 3, and ensure that any particular needs which arise are taken care of.	

Emergency (Or Drill) Remarks: _____

_____

Signed: _____ Time/Date _____

EMERGENCY COMMUNICATIONS CENTER

NO. 3

OFF-SITE

EMERGENCY NEWS CENTER (ENC)

OLD MILL INN

RONKONKOMA, N. Y.

OFF-SITE EMERGENCY NEWS CENTER (ENC)

The function of the off-site Emergency News Center is to coordinate and control all relations with the media over the entire course of the Shoreham Station emergency, and to serve as the sole point of release for all public information regarding the emergency.

All emergency news information will originate in the EOF and will be transmitted to the ENC for release via hard copy and continuous verbal communication.

The Emergency News Manager will supervise all action at the ENC and be responsible for the scheduling and conduct of all news conferences which will be held periodically.

Working space and conference facilities will be made available for all local, state, and federal information officials at the ENC. The ENC will provide continuous information via telephone, telecopier and CRT's to the Emergency Information Centers in Mineola and Hicksville for further dissemination. The ENC also will monitor all EBS and other broadcasts related to the emergency.

The Emergency News Center will be prepared to provide any logistical support, (motel/hotel and restaurant facilities; maps of the area; bus, train and flight schedules; etc.), to members of the news media, Federal, State and County representatives.

Press information kits will be distributed to all media representatives properly credentialed.

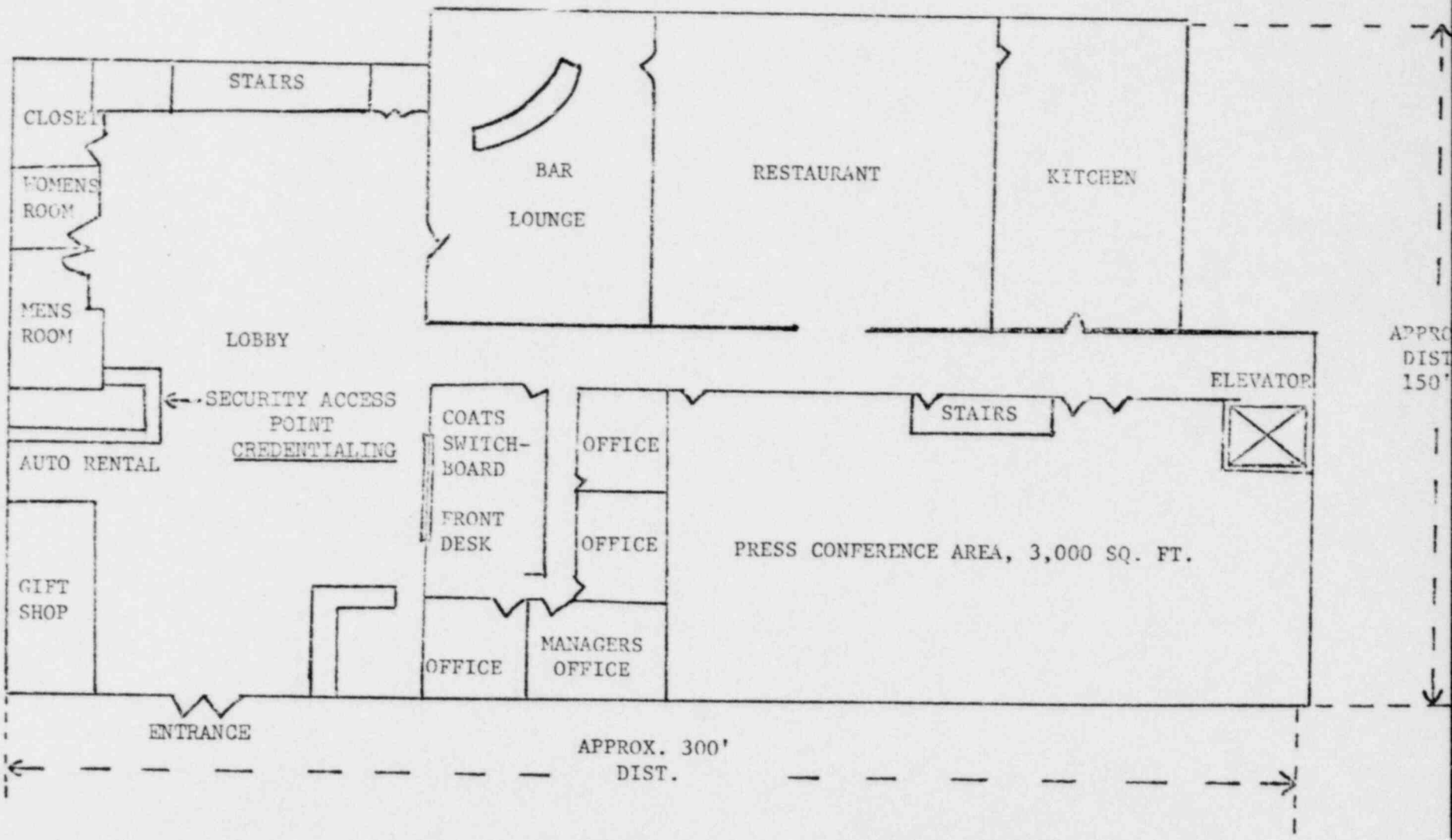
Figures 4, 5, 6 on the following pages indicate the Emergency News Center layout.

OLD MILL INN, RONKONKOMA, N. Y.

1ST FLOOR, MAIN BUILDING

Figure 4

EMERGENCY NEWS CENTER - ENC



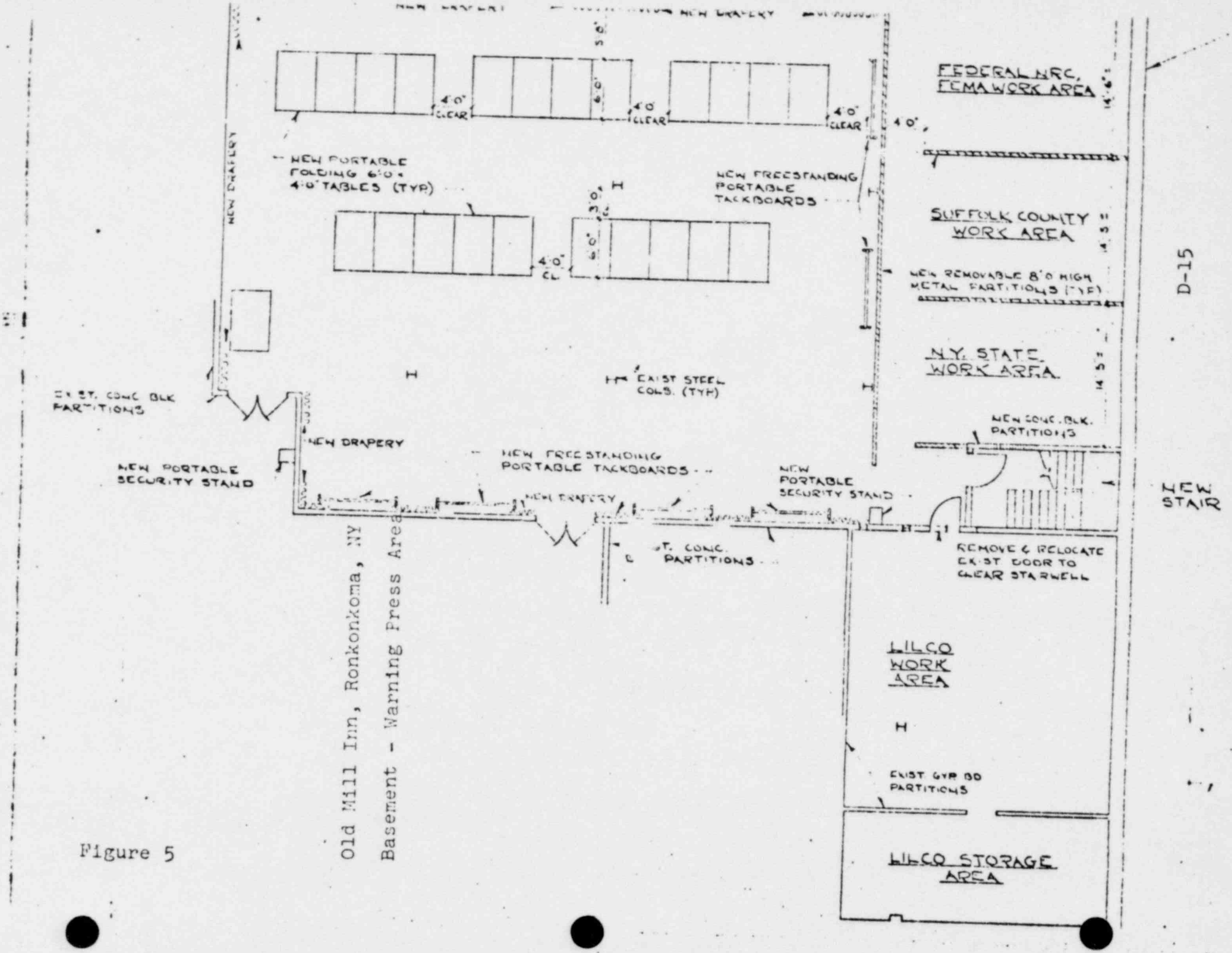
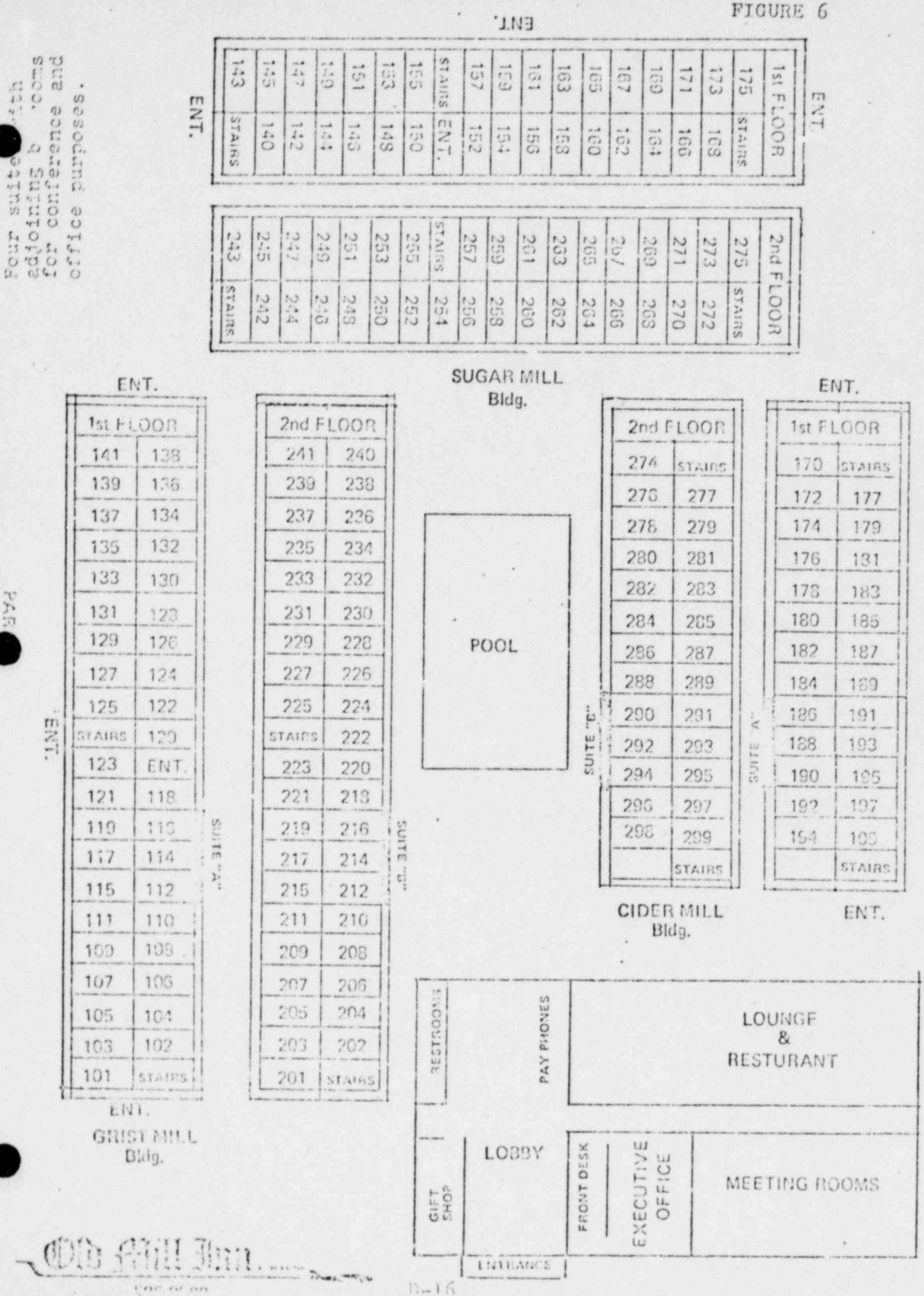


Figure 5

Old Mill Inn, Ronkonkoma, NY
Basement - Warning Press Area

FIGURE 6


ENT.
1st FLOOR
175 STAIRS
173 169
171 166
169 164
167 162
165 160
163 158
161 156
159 154
157 152
STAIRS ENT.
155 150
153 148
151 146
149 144
147 142
145 140
143 STAIRS
ENT.
2nd FLOOR
275 STAIRS
273 272
271 270
269 268
267 266
265 264
263 262
261 260
259 258
257 256
STAIRS 254
255 252
253 250
251 248
249 246
247 244
245 242
243 STAIRS
SUGAR MILL
Bldg.
ENT.
1st FLOOR
141 138
139 136
137 134
135 132
133 130
131 128
129 126
127 124
125 122
STAIRS 120
123 ENT.
121 118
119 116
117 114
115 112
111 110
109 108
107 106
105 104
103 102
101 STAIRS
ENT.
SUITE "A"
GRIST MILL
Bldg.
2nd FLOOR
241 240
239 238
237 236
235 234
233 232
231 230
229 228
227 226
225 224
STAIRS 222
223 220
221 218
219 216
217 214
215 212
211 210
209 208
207 206
205 204
203 202
201 STAIRS
SUITE "B"
POOL
2nd FLOOR
274 STAIRS
276 277
278 279
280 281
282 283
284 285
286 287
288 289
290 291
292 293
294 295
296 297
298 299
STAIRS
SUITE "B"
CIDER MILL
Bldg.
ENT.
1st FLOOR
170 STAIRS
172 177
174 179
176 181
178 183
180 185
182 187
184 189
186 191
188 193
190 195
192 197
194 199
STAIRS
SUITE "A"
ENT.
PARK
PARK
RESTROOMS
PAY PHONES
LOUNGE
&
RESTURANT
GIFT SHOP
LOBBY
FRONT DESK
EXECUTIVE OFFICE
MEETING ROOMS
ENTRANCE

Professional Staffing:

- o Emergency News Manager
- o Media Information Coordinator
- o Communications Logistics Coordinator
- o Technical Advisor
- o Public Information Staff (7)
- o Technical Briefers (5)
- o Scientific Advisors (2)

Clerical Staffing:

- o General Secretarial (4)

PROCEDURES

Emergency (Or Drill) Checklist

		Time/Date	Initials
	EMERGENCY NEWS MANAGER		
M. Patterson D. Lankford	1. Call off-site Emergency Operations Facility (EOF) and establish communications link. Verify with Emergency Communications Director.		

2. Call Information Centers, (Mineola and Hicksville) and Special Services Center (GC) and establish communications links. Verify with respective Managers.

3. Supervise distribution of approved news releases to media, at the news center, to other media outlets not present, and to the Emergency Information Centers in Mineola and Hicksville.

4. Organize preparation of news briefings, conferences, and interviews with media at the center.

5. Direct the Emergency Logistics Coordinator to arrange for office space, conference areas, telephone, materials, sleeping rooms, food services, etc., as required.

6. Ensure that all prominent news media representatives not already present at the ENC are notified of the emergency situation.

7. Assign table space and telephone access for members of the news media, and ensure distribution of press information kits.

8. Supervise the presentation, by assigned technical briefers of detailed technical information regarding the emergency.

9. Ensure that all press and broadcast announcements relating to the Emergency are being monitored at the Mineola Information Office.

10. Maintain continuous communication with the Emergency Communications Director at the EOF.

11. Arrange taping of press conferences, briefings and interviews and transcription of tapes.

Emergency (Or Drill) Remarks: _____

_____

Signed: _____ Time/Date _____

PROCEDURES

EMERGENCY INFORMATION SUPERVISOR

Emergency (Or Drill) Checklist

		Time/Date	Initials
D. Lankford W. Sherrard	1. Report to the ENC.		
	2. Provide technical/information support for the Emergency News Manager and LILCO Emergency staff at the ENC.		
	3. Be available to help clarify the information being relayed to the members of the media and other officials.		
	4. Aid in ensuring the overall accuracy of any information being provided.		
	5. Maintain constant communication via a dedicated telephone with the Technical Advisor at the EOF, Information Section.		
	6. Be present and available for consultation during all news briefings given by LILCO, State and Local officials, and assist in answering technical questions.		

Emergency (Or Drill) Remarks: _____

_____

Signed: _____ Time/Date: _____

PROCEDURES

MEDIA INFORMATION COORDINATOR

Emergency (Or Drill) Checklist

		Time/Date	Initials
C. Clawson N. Macenko	1. Report directly to Emergency News Manager.		
	2. Supervise, under his direction, dissemination of approved press announcements and statements to the media assembled at the ENC, and ensure that all announcements are posted in chronological order.		
	3. Ensure that all communications logs are carefully maintained during the emergency, and keep track of all press announcements being distributed (including those from County and State officials).		
	4. Make sure that LILCO Public Information staff persons and technical briefers are available to the press at all times.		
	5. Ensure that the message desk and status boards are being properly attended to.		

Emergency (Or Drill) Remarks: _____

_____

Signed: _____ Time/Date: _____

PROCEDURES

Emergency (Or Drill) Checklist

Time/Date Initials

LOGISTICS COORDINATOR

R. Hodson
M. Sacca

1. Report directly to Emergency News Manager.
2. Supervise logistical requirements of the emergency communications operation.
3. Secure food and housing for all LILCO emergency information staff.
4. Ensure adequate transportation and message services.
5. Ensure provision of needed office supplies and equipment.
6. Set up working press area, and conference rooms, and ensure that all required telephones are installed and operational.
7. Ensure that press conference area is set up properly with all necessary materials, i.e. television, PA system, overhead projector, charts, etc.
8. Supervise placement and maintenance of status boards and other display materials.

Emergency (Or Drill) Remarks: _____

_____

Signed: _____ Time/Date: _____

EMERGENCY NEWS CENTER - MEDIA BRIEFING PROCEDURE

1. During the course of the emergency, as significant emergency becomes available, the Emergency News Manager, in consultation with the Emergency Communications Director will announce and officiate over general media briefings in the press conference room at the ENC. Present during these media briefings will be the following people:

   1. LILCO Technical Spokesperson.
   2. Emergency Communications Director.
   3. Emergency News Manager.
   4. Representatives from the following governmental emergency organizations:

      a) State of New York

      b) Suffolk County

      c) NRC District Office - Region 1

      d) FEMA - Region 2

      The federal officials from the NRC and FEMA will probably not participate directly in a news briefing, unless their involvement is requested or considered necessary. Space will be available for them if they wish to conduct their own press conferences.

2. Prior to conducting any media briefing, all of the above mentioned participants will, if possible, meet privately first and make one another aware of their respective positions.

3. The press conference area can be sectioned off and made available for smaller briefings, or other activities.

4. For drill and exercise purposes, each press conference will begin and close with a distinction that "this is only a drill".

EMERGENCY NEWS CENTER - STATUS BOARD PROCEDURE

AND GRAPHIC DISPLAYS

In order to provide a constant written source of current emergency information to Government Agency, LILCO and media personnel; large Emergency Status Cards will be posted in a conspicuous area in the LILCO Work Area, the Working Press Area, and the Press Conference Area. These cards will be updated at least once an hour. Various plant parameters, radiological information, and protective action levels pertinent to the emergency will be displayed on these cards.

PROCEDURE

1. Emergency information will be arriving in the LILCO Work Area from the Emergency Operations Facility in Hauppauge. Then, pre-designated personnel will transcribe this information onto an 8 x 11 in. pad which is an exact duplicate of the full size Emergency Status Card.
2. This information will then be transferred verbatim onto the large Emergency Status Cards in the various locations described above.
3. The ESC's will be updated at least once an hour.
4. A log will be maintained of each change of the ESC's.
5. As press releases are issued from the organizations listed below, they will be posted on separate information boards in chronological order.

    1. Long Island Lighting Company
    2. Nuclear Regulatory Commission
    3. State of New York

4. Suffolk County

5. FEMA

6. Also displayed in a conspicuous location in the Press Conference and Working Press Areas will be large graphics depicting the following:

   1. Suffolk County Emergency Response Planning Areas
   2. A 5, 10, and 50 mile Emergency Planning Zone Map
   3. Large displays indicating aerial view of site, emergency facilities diagram, reactor cutaway, emergency core cooling system, and specific plant systems will be provided.

7. A large backdrop, i.e., curtains, will be placed behind the center podium in the Press Conference Area which will be suitable for a background scene during television coverage and news photographs.

NEWS MEDIA CREDENTIALING - EMERGENCY NEWS CENTER

Upon activation of the Emergency News Center in Ronkonkoma, the following procedures must be implemented to ensure the overall security of the ENC and orderly coordination of the duties of the ENC staff and members of the News Media.

1. Upon arrival at the Old Mill Inn, (ENC), the visitor will show proper identification and state his business.

2. If his business falls into one of the pre-designated categories approved for ENC entrance, he will then be allowed to register his name and the organization he represents.

3. The visitor will then r d to the next table where he will have his picture and affixed to the appropriate Photo ID Badge which w. . delineate his status. The Photo ID Badge must be worn and visible for the duration of his stay. Armbands, if applicable, will also be issued at this table.

4. At all security checkpoints throughout the ENC the visitor will display his Photo ID Badge to the security officer in charge.

5. The security officer will then determine, from a pre-designated list, if the status of that visitor will allow him entrance into that particular area of the ENC.

6. Upon leaving the ENC, even if he plans to return shortly, the visitor will surrender his Photo ID Badge at the registration desk and sign out. When and if he returns, he can simply sign in again and pick up his Badge.

EMERGENCY NEWS CENTER - MESSAGE DESK/RUMOR CONTROL

A combination Message Desk/Rumor Control Area will be established near the entrance of the Working Press Area. Four (4) phones will be dedicated to this function.

All incoming messages for Government Agency and Media personnel in the ENC will be written down and posted on a designated bulletin board in this area.

The telephone numbers for the Message Desk/Rumor Control phones will be established and publicized to the media at pre-exercise press conferences and through announcements, both verbal and written, during an actual incident.

In addition, all incoming rumor related calls to the LILCO corporate offices will be directed to the Message Desk/Rumor Control phones in the Working Press Area in the ENC.

EMEGENCY COMMUNICATIONS CENTER

NO. 4

CORPORATE COMMUNICATIONS OFFICE

MINEOLA, N. Y.

CORPORATE COMMUNICATIONS OFFICE (MINEOLA)

The function of the Corporate Communications Office is to act as the sole media center for an Unusual Event or Alert Event at Shoreham until the Emergency Operations Facility is activated.

Upon activation of the EOF, media operations will shift to the ENC. The Corporate Communications Office will provide support to the ENC, forward media inquiries to the ENC, and monitor all Emergency Broadcast System releases for purposes of Rumor Control and accuracy of information disseminated. In addition, all non-emergency related media information will be directed from the Mineola Office.

Professional Staffing:

- Corporate Communications Manager
- Employee Communications Coordinator (1)
- Emergency broadcast monitor and media response person (1)

Clerical Staffing:

- General Secretarial services in place

PROCEDURES

CORPORATE COMMUNICATIONS MANAGER

Emergency (Or Drill) Checklist

		Time/Date	Initials
J. Bruce W. Edwards	1. Serve as Manager - Corporate Communications Office.		
	2. On a declared Unusual Event or Alert; receive information from Shoreham Station and with the guidance and approval of the Emergency News Manager prepare emergency information announcements to the News Media.		
	3. On a declared Site or General Emergency, which will activate the ENC direct calls from the media to the ENC, and/or relay latest approved bulletins as received from the ENC to the media callers.		
	4. Support the ENC as requested.		
	5. Ensure that all Emergency Broadcast System (EBS) announcements are monitored.		
	6. Continue to serve as the Corporate Communications Office for all non-nuclear public information emergencies, i.e., storms, power failures, etc.		

Emergency (Or Drill) Remarks: _____

_____

Signed: _____ Time/Date _____

EMPLOYEE COMMUNICATIONS COORDINATOR

The Employee Communications Coordinator will operate out of the Corporate Communications Office in Mineola and will be under the supervision and direction of the Corporate Communications Manager.

The function of the Employee Communications Coordinator will be to distribute as rapidly as possible, approved Shoreham Station emergency news bulletins to all District Offices and Power Stations within LILCO's service area.

PROCEDURES

Emergency (Or Drill) Checklist

	Time/Date	Initials
K. Simons V. Scibilia	1. Report to Corporate Communications Office in Mineola; serve as Employee Communications Coordinator.	
	2. Work under the supervision and direction of the Corporate Information Coordinator.	

3. Receive approved news bulletins and statements from the Corporate Information Coordinator, enter them into the CRT and transmit to all District Offices and Power Stations.
4. Use verbal telephone communications if there is a problem with the CRT.
5. Follow up periodically with approved releases on "TODAY" bulletins to be distributed to all Company facilities.
6. Assist the Corporate Information Coordinator as needed.

Emergency (Or Drill) Remarks: _____

_____

Signed: _____ Time/Date _____

EMERGENCY COMMUNICATIONS CENTER

NO. 5

EMERGENCY COMMUNICATIONS OFFICE
FOR GOVERNMENT COMMUNICATIONS AND CUSTOMER COMMUNICATIONS

HICKSVILLE, N. Y.

ROOM 210

GOVERNMENT COMMUNICATIONS CENTER

The function of the Government Communications Office located in Room 210 in the Emergency Communications Office in Hicksville is to provide accurate and timely Shoreham Station emergency information to the offices of designated Local, State, and Federal officials.

All information relayed to the designated government officials will have been approved for release from the Emergency News Center and will be relayed verbatim.

No protective or safety related measures will be advised from this or any LILCO office.

Professional Staffing:

- o Government Communications Manage
- o Government Communications Coordinators for Nassau and Suffolk Counties.

Clerical Staffing:

- o General Secretarial

PROCEDURES

GOVERNMENT COMMUNICATIONS MANAGER

Emergency (Or Drill) Checklist

	Time/Date	Initials
H. Doebler W. Edwards	1. Receive alert and notification from Emergency Communications Director.	
	2. Alert and notify Government Communications Coordinators for Nassau and Suffolk Counties.	
	3. Proceed to Room 210 - Emergency Communications Office, Hicksville and activate the Government Communications Office. Ensure that all communications links to the EOF and ENC are operational.	
	4. Initiate and maintain communications with the Emergency News Center.	

5. Ensure that all emergency information relayed to the designated government officials originates only from the ENC, and has been approved for release.
6. Ensure that no protective or safety related measures are advised or recommended.
7. Provide feedback to the Emergency Communications Director on the needs and inquiries of the government officials.

Emergency (Or Drill) Remarks: _____

_____

Signed: _____ Time/Date _____

CUSTOMER COMMUNICATIONS CENTER

The Customer Communications Center will provide information to all District Offices and Call Board Operators during a Shoreham Station Nuclear Emergency, in order to meet what might well be a flood of phone calls from the entire LILCO service area requesting information about the reported nuclear emergency. If the decision is made to activate the Customer Communications Procedure, the Manager of Customer Communications, after consultation with the Emergency Communications Director, will mobilize the Customer Communications Organization, using essentially the same procedures developed for storm emergencies. For more information to this affect, refer to the Emergency Communications Manual for Conditions White, Blue and Red.

Importantly the Customer Communications Control Procedure is solely to be implemented for the purposes of disseminating information and only the information released from the Emergency News Center. No protective action or other recommendations will be made by the Customer Communications Control emergency personnel manning the telephones.

For staffing requirements for the call board operation, refer to the Emergency Communications Manual for Conditions White, Blue and Red.

Professional Staffing: Customer Communications Manager
Customer Communications Coordinators for Nassau and Suffolk counties

Clerical Staffing: General Secretarial

PROCEDURES

CUSTOMER COMMUNICATIONS MANAGER

Emergency (Or Drill) Checklist

	Time/Date	Initials
J. Faller S. Maslak	1. After notifying and mobilizing Customer Communications Coordinators for Nassau and Suffolk Counties; proceed to Hicksville Room 210.	
	2. Establish and confirm operational communications links with Emergency News Center and Corporate Communications Office in Mineola.	
	3. Ensure that all telephone coordinators are receiving approved news releases via telecopier, CRT, telephone and/or verbally from the ENC or Mineola, and are dispensing only such information to all district offices and the customer call board operators located in Hicksville, Hewlett, Brentwood and Riverhead.	
	4. Ensure that a chronological file is established at Room 210 and each district office and call board, in which a copy of each statement, bulletin and news release is inserted so that the latest statement or news release is the first one seen when the file is opened and the information relayed.	

5. Continue to communicate current status of the emergency to all district offices and call board operators. Obtain confirmation that correct information is being timely received.

6. Monitor telephone emergency answering personnel backup requirements and relief needs, and supply personnel as needed.

7. Advise the Emergency Communications Director as to any additional needs, and provide feedback concerning any unusual developments.

Emergency (Or Drill) Remarks: _____

_____

Signed: _____ Time/Date _____

EMERGENCY COMMUNICATIONS CENTER

NO. 6

SPECIAL SERVICES CENTER

GARDEN CITY

SPECIAL SERVICES CENTER

The Special Services Center, located at LILCO's Garden City Office, will provide the following support to the LILCO Emergency Communications Organization in the event of a Nuclear Emergency at Shoreham:

a) The Communications Services Department will produce displays, charts, graphics, camera-ready materials, etc., to be used for media briefings, signs, status boards, and other emergency information purposes.

b) The Special Services Manager will provide additional security personnel to serve at the Emergency News Center, as required.

Professional Staffing:

- o Manager of Special Services
- o Communications Services Coordinator
- o Graphics Professionals (2)

Clerical Staffing:

- o General Secretarial

PROCEDURES

SPECIAL SERVICES MANAGER

Emergency (Or Drill) Checklist

		Time/Date	Initials
G. Soos Alternate:	1. Upon direction from the Emergency Communications Director, alert all emergency		

personnel assigned to the Special Services Center about the emergency.

2. Establish a communications link with the Emergency News Center and prepare to provide whatever support is required.

3. Through the Security Supervisor, dispatch additional security personnel to the Emergency News Center, and wherever else required.

4. Authorize the Communications Services Coordinator to provide and deliver whatever graphics and display products are needed over the course of the emergency.

Emergency (Or Drill) Remarks: _____

_____

Signed: _____ Time/Date _____

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FUTURE EXPANSION.

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FUTURE EXPANSION.

Submitted: _____

Approved: _____
(Plant Manager)

DRAFT - PRELIMINARY

CIP Number 21
Revision _____
Date Eff. _____

EMERGENCY ORGANIZATIONS

1.0 PURPOSE

The purpose of this procedure is to define the person responsible for each functional area at each classification level and to describe the job function of all assigned emergency response personnel.

2.0 RESPONSIBILITY

The assignment of emergency response organization personnel is the responsibility of the Response Manager.

3.0 DISCUSSION

3.1 Responsibility Matrix

A Responsibility Matrix (Attachment 1) is provided in this procedure that defines the person who is responsible for each functional area at each classification level.

3.2 Title Description

Attachment 2 is a compilation of title descriptions for each person assigned to an emergency response function.

3.3 Organization Charts

Attachment 3 provides the organization for different levels of activities; i.e., On-Shift, Alert, and Site Area and General Emergency.

4.0 PRECAUTIONS

N/A

5.0 PREREQUISITES

N/A

6.0 LIMITATIONS AND ACTIONS

N/A

7.0 MATERIALS AND EQUIPMENT

N/A

8.0 PROCEDURE 1.56

This procedure is an administrative guideline to be used for information 1.58
and reference. 1.59

It shall be observed that when an emergency level changes (i.e., increases 2.2
or decreases) certain actions shall be taken to ensure an orderly transfer 2.3
of control from one responsibility to another for each functional area. 2.4
These actions listed here are generic in nature and may be expanded to 2.6
reflect the specific area of responsibility. 2.7

8.1 Notification of transfer of control for change of one emergency level 2.9
to another.

8.2 Brief oncoming responsible person as to what transpired during 2.10
outgoing emergency level as to the following:

.1 Status of emergency. 2.12

.2 Relevent communications with other functions. 2.13

8.2 Close out and initiation of all logs and forms as applicable to the 2.15
functional area being deactivated or activated, respectively. 2.16

9.0 ACCEPTANCE CRITERIA 2.18

N/A 2.20

10.0 FINAL CONDITIONS 2.22

N/A 2.24

11.0 REFERENCES 2.26

11.1 Shoreham Nuclear Power Station, Emergency Plan, May 1981 2.28

12.0 ATTACHMENTS 2.30

12.1 Responsibility Matrix 2.32

12.2 Title Descriptions 2.33

12.3 Organization Charts 2.34

12.3.1 On Shift 2.36

12.3.2 Alert Emergency Augment 2.37

12.3.3 Site Area and General Emergency Augment. 2.38

RESPONSIBILITY MATRIX

FUNCTIONAL AREA → / CLASSIFICATION ↓	EMERGENCY DIRECTION & CONTROL	PLANT OPERATIONS	CORRECTIVE ACTIONS AND SUPPORT OF OPERATIONS	TECHNICAL SUPPORT	RADIOLOGICAL ACCIDENT ASSESSMENT	ONSITE RADIATION PROTECTION	ADMINISTRATIVE SUPPORT	COMMUNICATIONS	PUBLIC AFFAIRS
UNUSUAL EVENT	EMERGENCY DIRECTOR (WATCH ENGINEER) (CR)	OPERATIONS MANAGER (CR)	EMERGENCY DIRECTOR (CR)	SHIFT TECHNICAL ADVISOR (CR)	INPLANT RADIATION MONITORING TECH. NO.1 (OSC)	INPLANT RADIATION MONITORING TECH. NO.1 (OSC)	EMERGENCY DIRECTOR (TSC)	COMMUNICATOR (EQUIPMENT OPERATOR) (CR)	EMERGENCY COMMUNICATIONS LIAISON (CR)
ALERT	EMERGENCY DIRECTOR (PLANT MANAGER) (TSC)	OPERATIONS MANAGER (CR)	OSC SUPERVISOR (OSC)	PLANT TECHNICAL MANAGER (TSC)	DOSE ASSESSMENT STAFF MEMBER NO. 1 (TSC)	RADIATION PROTECTION MANAGER (TSC)	ADMINISTRATIVE SUPERVISOR (TSC)	COMMUNICATOR (CR) PLUS ADMINISTRATIVE SUPERVISOR (TSC)	EMERGENCY COMMUNICATIONS LIAISON (TSC)
SITE AREA EMERGENCY AND GENERAL EMERGENCY	RESPONSIBLE MANAGER (EOF)	OPERATIONS MANAGER (CR)	OSC SUPERVISOR (OSC)	TECHNICAL SUPPORT MANAGER (EOF)	RADIATION CONTROL MANAGER (EOF)	RADIATION PROTECTION MANAGER (TSC)	ADMINISTRATION & SCHEDULING MANAGER (EOF)	ADMINISTRATION & SCHEDULING MANAGER (EOF) PLUS RADIATION CONTROL MANAGER (EOF) PLUS ADMINISTRATIVE SUPERVISOR (TSC)	EMERGENCY COMMUNICATIONS DIRECTOR (EOF)

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ATTACHMENT 2 2.42

TITLE DESCRIPTIONS 2.44

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RESPONSE MANAGER A1

Location: Emergency Operations Facility (EOF)

The Response Manager has the overall responsibility for management and technical support of on-site and off-site emergency response and recovery operations during a SITE AREA EMERGENCY or a GENERAL EMERGENCY. He has the same responsibility if he elects to activate the EOF during an ALERT.

The Response Manager has the authority to utilize the technical and financial resources of the company to mitigate an emergency event and limit radiological exposure to the public.

An authorized Response Manager will be available at the EOF 24 hours a day for the duration of the emergency. The Response Manager may designate any of his alternates to act on his behalf whenever he sees fit to do so.

Specific Duties:

1. The Response Manager will upon activation of the EOF, assume responsibility for emergency direction and control, emergency classification, the decision to notify and recommend offsite protective actions and commitment of corporate resources.

2. He will implement corporate policy and make decisions on all aspects of emergency mitigation or plant recovery operations without the need for consulation with higher management.

3. He will report to the President of the Long Island Lighting Company (LILCO) for the duration of the emergency and will keep corporate management advised of plant status and emergency response operations.

4. He will function as the principal corporate interface between the company and all other organizations.

5. He will request or authorize the request of any and all Federal assistance considered appropriate for the given situation.

6. He will have the option of acting as the principal media spokesman and may leave the EOF for a press conference at the ENC provided that he has appointed an interim Response Manager to take over his functions at the EOF during his absence.

7. He will decide which information concerning plant conditions and emergency response operations will be disseminated to the news media.

8. He will decide, once an ALERT has been called, whether or not to activate the Emergency Operations Facility (EOF) organization.

A1

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9. The Response Manager will keep a log of all his actions starting with the first notification of an emergency.

Candidates to fulfill this emergency function are as follows:

	Company Title
First Shift:	
Second Shift:	
Alternates:	

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EMERGENCY DIRECTOR A2

Location: Control Room (CR)
Technical Support Center (TSC)

The responsibility for emergency direction and control, emergency classification, the decision to notify and recommend offsite protective actions and commitment of corporate resources is held initially by the Emergency Director and passes to the Response Manager as this individual augments the emergency organization. The responsibilities associated with this position are non-delegatable.

The Emergency Director is responsible for the overall management and implementation of all on-site operations and procedures in support of the objectives of the emergency response and recovery operations. The Emergency Director has the authority to immediately and unilaterally initiate any emergency actions that plant conditions may warrant.

The Emergency Director is responsible for all on-site emergency reponse personnel and for the training of on-site personnel in the various emergency plans and procedures.

Specific Duties:

1. Activates the TSC and EOF as necessary.

2. Calls in additional personnel as needed.

3. Assigns his "communicators" to receive and sort all incoming calls and place outgoing calls as required.

4. Maintains the on-site security program in support of the recovery operations.

5. Provides a single source point of contact with the NRC personnel or their contacts.

6. Approves the analysis and the development of plans and procedures which are conducted in direct support of operations personnel.

7. Provides information and recommendations to the Response Manager concerning future operations that could affect the plant or the environment.

8. Determines the locations to be used to assemble emergency personnel and ensure that communications are established.

9. Evaluates plant and radiological conditions.

10. Orders any required protective actions for on-site personnel.

A2

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11. Reviews and approves plans and procedures to process and control liquid and solid wastes in a manner consistent with overall emergency response and recovery operations.

12. Ensures that all injured personnel receive proper aid and medical attention.

13. Authorizes radiation doses to emergency workers in excess of normal operational limits when required.

14. The Emergency Director will keep a log of all his actions starting with the first notification of an emergency.

Candidates to fulfill this emergency function are as follows:

	Company Title
First Shift:	
Second Shift:	
Alternates:	

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WATCH ENGINEER ,13

Location: Control Room (CR)

The Watch Engineer is responsible for initially determining the emergency classification as either an UNUSUAL EVENT, ALERT, SITE AREA EMERGENCY or GENERAL EMERGENCY. Upon declaration of the emergency the Watch Engineer shall become the Emergency Director until relieved.

The Watch Engineer will be responsible for initiating the necessary immediate actions to limit the consequences of the accident and bring it under control.

The Watch Engineer is responsible for interfacing with the emergency response organization in support of the emergency response operations.

The Watch Engineer is responsible for the operation of the plant in compliance with all normal plant procedures, directives and technical specifications in addition to the emergency response procedures.

Specific Duties:

1. While acting as the Emergency Director, directs the activities of the emergency response organization personnel.

2. The Watch Engineer notifies and briefs the Plant Manager of an emergency and determines the need for summoning additional personnel.

3. While acting as the Emergency Director he has the authority to activate the Technical Support Center (TSC) if he feels conditions warrant this.

4. Initiates the required telephone notifications of off-site agencies while acting as the Emergency Director. When making these notifications he will ensure timely completion of all message forms.

5. Continually keeps the Operations Manager informed of the plant status.

6. Makes recommendations on accident response to the Operations Manager when required.

7. The Watch Engineer will keep a log of all his actions for the period of time that he acted as Emergency Director.

Candidates to fulfill this emergency function are as follows:

A3

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Company Title 33

First Shift: 34

Second Shift: 35

Alternates: 36

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EMERGENCY PLANNING ADVISOR #1 A4

Location: Emergency Operations Facility

The Emergency Planning Advisor is a designated employee who is specifically qualified in the details of the Shoreham Emergency Plan. He shall be the Recovery Managers aide and assist in the implementation of the emergency plan.

Specific Duties

1. Establish communications with Emergency Planning Advisor #2 in the TSC.

2. Maintain an awareness of the progress of the emergency response and make regular reports to the Response Manager.

3. Advise appropriate LILCO emergency response personnel of emergency plan details that require implementation.

4. ~~Maintain~~ Ensure emergency response status boards in the EOF are maintained.

5. Perform other duties as directed by the Response Manager.

6. At the termination of the event develop initial recovery plan for Response Manager's approval.

7. Coordinate emergency plan exercises, drills and incorporation of critique comments.

8. Provide coordination, plans and schedules for post-emergency investigations.

Candidates to fulfill this emergency function are as follows:

	Company Title
First Shift:	
Second Shift:	
Alternates:	

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EMERGENCY PLANNING ADVISOR #2 AS

Location: Technical Support Center

The Emergency Planning Advisor is a designated employee who is specifically qualified in the details of the Shoreham Emergency Plan. He shall be the Emergency Directors aide and assist in the implementation of the emergency plan.

Specific Duties:

1. Establish communications with Emergency Planning Advisor ~~#2~~ #1 in the ~~TSC.~~ EOF

2. Maintain an awareness of the progress of the emergency response and make regular reports to the Emergency Director.

3. Advise appropriate LILCO emergency response personnel of emergency plan details that require implementation.

4. ~~Maintain~~ Ensure emergency response status boards in the ~~EOF.~~ TSC are maintained.

5. Perform other duties as directed by the Emergency Director.

6. At the termination of the event assist the Emergency Planning Advisor #1 in developing initial recovery plan for Response Manager's approval.

Candidates to fulfill this emergency function are as follows:

Company Title

First Shift:

Second Shift:

Alternates:

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OPERATIONS MANAGER B1

Location: Control Room (CR)

The Operations Manager is responsible for advising and/or directing the Watch Engineer in the emergency operation of the plant including reactor operations. He is also responsible for coordinating repair and corrective actions and plant operations to ensure safe conditions for emergency response personnel.

The Operations Manager reports to the Emergency Director and keeps him informed of the status of the plant during the emergency response period.

Specific Duties:

1. Upon arrival in the Control Room, contact the Watch Engineer and receive a briefing on the plant status and repair actions that are underway.

2. Communicate with the Maintenance Manager in the TSC to coordinate Control Room activities, plant repair and corrective actions.

3. If required, relieve the Watch Engineer and take over the operation of the reactor.

4. Facilitate communications between the Emergency Director and the Control Room.

5. Ensure that the Control Room relief crews are available and informed of the status of plant conditions.

6. The Operations Manager will keep a log of all his actions starting with the first notification of an emergency.

Candidates to fulfill this emergency function are as follows:

Company Title

First Shift:

Second Shift:

Alternates:

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WATCH SUPERVISOR B2

Location: Control Room (CR)

The Watch Supervisor will direct plant operations under the auspices of the Watch Engineer. This will allow the Watch Engineer to attend to his emergency response duties. If necessary, the Watch Supervisor will leave the Control Room and provide on-scence direction of repair and corrective action activities and make reports to the Watch Engineer.

Specific Duties:

1. Assists the Watch Engineer in plant emergency response operation procedures.

2. Provides on-scence direction and control of emergency operation and implementing procedures until additional emergency response support arrives.

3. Assists the Watch Engineer with on-scence reports of plant conditions and recommendations for plant emergency control.

4. Directs fire fighting procedures as the on-shift fire brigade leader.

5. The Watch Supervisor will keep a log of all his actions starting with the first notification of an emergency.

Candidates to fulfill this emergency function area as follows:

Company Title

First Shift:

Second Shift:

Alternates:

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NUCLEAR STATION OPERATOR B3

Location: Control Room (CR)

Specific Duties:

1. Perform plant operations and emergency response duties as directed by the Watch Supervisor.

2. Provide additional assistance as directed by the Watch Engineer to mitigate the effects of the emergency situation.

3. Perform plant manipulations for routine and, if necessary, emergency operations in accordance with the operating and the emergency instructions.

Candidates to fulfill this emergency function are as follows:

Company Title

First Shift:

Second Shift:

Alternates:

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B4 B5

NUCLEAR ASSISTANT STATION OPERATOR Nos. 1 & 2

Location: Control room (CR)

Specific Duties:

1. Perform plant manipulations for routine and, if necessary, emergency operations under the direction of the Nuclear Station Operator.

2. Provide assistance to the Nuclear Station Operator as required.

3. Perform in-plant repair and corrective actions as directed by the Watch Engineer.

Candidates to fulfill this emergency function are as follows:

Company Title

First Shift:

Second Shift:

Alternates:

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B6, B7

EQUIPMENT OPERATOR Nos. 1 & 2

Location: Control Room (CR)

Specific Duties:

1. Assist the Watch Supervisor in accident assessment and emergency response operations.

2. Operate plant equipment in support of emergency response and recovery operations.

3. Respond to an on-site fire as a member of the on-shift fire brigade.

Candidates to fulfill this emergency function are as follows:

	Company Title
First Shift:	
Second Shift:	
Alternates:	

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OSC SUPERVISOR CT

Location: Operations Support Center

The OSC Supervisor has the responsibility of directing the available personnel for assignment in the Operations Support Center at the request of the Emergency Director and the emergency organization managers in the TSC.

Specific Duties

1. Activate Operations Support Center.

2. Coordinate with the Maintenance Manager and Radiation Protection Manager the assignment of plant personnel in support of repair and corrective actions.

3. Provide the Emergency Director with status reports of repair and corrective actions.

4. Ensure repair and corrective action team personnel receive proper briefings and are equipped to perform their corrective action function.

5. Ensure that necessary Radiation Work Permits have been issued to personnel entering restricted areas.

6. Maintain an accounting of available and assigned emergency response personnel onsite.

Candidates to fulfill the emergency function are as follows:

Company Title

First Shift:

Second Shift:

Alternates:

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MAINTENANCE MANAGER C2

Location: Technical Support Center

The Maintenance Manager has the responsibility for assessing plant conditions and taking necessary corrective actions as directed and coordinated by the Operations Manager.

Specific Duties

1. Assess plant conditions and determine appropriate corrective actions.

2. Evaluate capabilities of available personnel and equipment to perform corrective actions.

3. Coordinate proposed corrective actions with the Emergency Director, Technical Manager, Operations Manager and the Radiation Protection Manager.

4. Contact OSC Supervisor with manpower requirements.

5. Report the status of corrective actions in progress to the Operations Manager on a regular basis.

Candidate to fulfill this emergency function are as follows:

Company Title

First Shift:

Second Shift:

Alternates:

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MECHANIC C3

Location: Operations Support Center

The Mechanic has the responsibility of supporting repair and corrective actions of mechanical equipment as well as operation of equipment during emergency response and/or recovery operations. He shall receive direction from the Maintenance Manager.

Specific Duties

1. Operate mechanical systems and equipment in support of emergency response and recovery operations.

2. Perform repair and corrective actions as directed.

3. Report arrival onsite and coordinate emergency response activities with Operations Support Center Supervisor.

Candidates to fulfill this emergency function are as follows:

Company Title

First Shift:

Second Shift:

Alternates:

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C4 C5

ELECTRICIANS Nos. 1 & 2

Location - Operations Support Center

The Electricians Nos. 1 & 2 have the responsibility of supporting repair and corrective actions of electrical systems and equipment, as well as operation of the equipment during emergency response and/or recovery operations. They shall receive direction from the Maintenance Manager.

Specific Duties:

1. Operate electrical systems and equipment in support of emergency response and recovery operations.

2. Perform repair and corrective actions as directed.

3. Report arrival onsite and coordinate emergency response activities with Operations Support Center Supervisor.

Candidates to fulfill this emergency function are as follows:

Company Title

First Shift:

Second Shift:

Alternates:

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INSTRUMENT AND CONTROL TECHNICIAN C6

Location: Operations Support Center

The Instrument and Control Technician is responsible for assessing damage to I&C equipment and providing appropriate repairs and corrective actions as directed by the Maintenance Manager.

Specific Duties

1. Analyze instrument and controls problems and develop plans for how the plant operations personnel can continue to monitor and control plant parameters.

2. Design and coordinate the repair and/or modifications of instrumentation and control equipment.

3. Report arrival onsite and coordinate emergency response activities with OSC Supervisor.

Candidates to fulfill this emergency function are as follows:

Company Title

First Shift:

Second Shift:

Alternates:

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RADWASTE OPERATOR C7

Location: Operation Support Center

The Radwaste Operator has the responsibility of repair and operation of radioactive waste control equipment during the emergency response as directed by the Maintenance Manager.

Specific Duties

1. Operate radioactive waste control systems in support of emergency response and recovery operations.

2. Perform repair and corrective actions as directed.

3. Report arrival onsite and coordinate emergency response activities with Operations Support Center Supervisor.

Candidates to fulfill this emergency function are as follows:

Company Title

First Shift:

Second Shift:

Alternates:

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C8 C9 C10 C11 C12

FIRE BRIGADE NOS. 1, 2, 3, 4, & 5

~~Location~~: Operations Support Center

The Fire Brigade has the responsibility for providing fire watches as well as fighting fires as directed by the Maintenance Manager.

Specific Duties

1. Support firefighting efforts during emergency response operations.

2. Perform fire watch duties in support of repair and corrective actions when not involved in fighting fires.

3. Perform search and rescue as well as first aid efforts as required.

4. Report arrival onsite and coordinate emergency response activities with Operations Support Center Supervisor.

Candidate to fulfill this emergency function are as follows:

	Company Title
First Shift:	
Second Shift:	
Alternates:	

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DESIGN AND CONSTRUCTION SUPPORT MANAGER C 13

Location: Emergency Operations Facility

The Design and Construction Support Manager has the overall responsibility of coordinating the design and construction activities of LILCO's engineering personnel, architect engineers, nuclear steam supply system engineers, specialists and consultants.

Specific Duties

1. Determine the need for and provide engineering and technical specialists to support design and construction efforts.

2. Ensure that any design and construction projects are adequately staffed and equipped to provide timely support.

3. Establish which engineering, design, and construction activities, if any, shall conform to LILCO specifications, or be documented by LILCO's quality assurance procedures.

4. Identify the required equipment, parts and services needed for design and construction to support the recovery plans and arrange for their timely delivery.

5. Ensure that the conceptual designs and programs developed by other organizations within the recovery staff are translated into properly engineered systems in support of recovery objectives.

Candidates to fulfill this emergency function are as follows:

Company Title

First Shift:

Second Shift:

Alternates:

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PLANT TECHNICAL MANAGER D1

Location: Technical Support Center (TSC)

The Plant Technical Manager shall be responsible for analysis and development of plans and procedures in direct support of operations personnel with the objective of placing the plant in a safe shutdown condition in a manner which minimizes any adverse health and safety effects on the public. He shall also be responsible for tracking and trending plant conditions and identifying plant condition emergency action levels.

The Plant Technical Manager shall report to the Emergency Director for the duration of the emergency.

Specific Duties:

1. Provide a central facility (the TSC) for the collection, retention, retrieval and transmittal of plant parameters (which includes the coordination of data processing, document control and communications) to all concerned personnel within the recovery organization.

2. Evaluate the potential for an off-site radiological release based upon plant conditions in accordance with emergency action levels and, depending upon the status of the EOF, provide these evaluations to the following personnel:

   1. BEFORE activation of the EOF - The Emergency Director for action
   2. AFTER activation of the EOF - The Technical Support Manager for action
      - The Emergency Director for information

3. Request additional engineering support via the Technical Support Manager from corporate engineering groups as needed.

4. Develop operating and emergency procedures in direct support of operations shift personnel who must deal with abnormal conditions.

5. Analyze instrument and controls and system operations problems, determine alternatives and coordinate the installation of short term instrument and controls modifications and system modifications.

6. Determine alternatives and develop plans and guidance for normal operating and emergency procedures for the protection of the reactor core in direct support of identified problems.

7. Advise the Emergency Director of priorities for plant maintenance and corrective actions.

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8. The Plant Technical Manager will keep a log of all his actions starting with the first notification of an emergency.

Candidates to fulfill this emergency function are as follows:

	Company Title
First Shift:	
Second Shift:	
Alternates:	

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SHIFT TECHNICAL ADVISOR D2

Location: Control Room

The Shift Technical Advisor is the accident assessment and emergency operations advisor during the emergency response.

Specific Duties

1. Provides technical operational advice to the Watch Engineer and/or Watch Supervisor.

2. He shall not be assigned or assume duties which would in any way inhibit his accident assessment adivsory function during an emergency.

Candidates to fulfill this emergency function are as follows:

Company Title

First Shift:

Second Shift:

Alternatives:

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TECHNICAL SUPPORT MANAGER D3

Location: Emergency Operations Facility (EOF)

The Technical Support Manager reports to the Response Manager and is responsible for providing an engineering interface between the EOF and the TSC. The Technical Support Manager is also responsible for providing information to the Response Manager on plant conditions which may effect the Protective Action Recommendations to offsite authorities.

Specific Duties:

1) Communicate with the Emergency Director and the Response Manager and be knowledgeable of the current plant status.

2) Provide plant condition input information to the Response Manager regarding Protective Action Recommendations.

3) Upon notification of an emergency, notify any additional individuals that are necessary to support his functions.

4) Regularly consult with the Emergency Director on the current plant status with regard to the need for additional corporate assistance.

5) Communicate with the Technical Support Coordinator on an as needed basis to request additional corporate assistance when required.

6) Coordinate and assign off-site support to individuals within the emergency response organization as needed.

7) The Technical Support Manager will keep a log of all his actions starting with the first notification of an emergency.

Candidates to fulfill this emergency function are as follows:

Company Title

First Shift:

Second Shift:

Alternates:

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CORE/THERMAL HYDRAULICS ENGINEER 04

Location: Technical Support Center

The Core-Thermal Hydraulics Engineer has the responsibility of providing assistance and advice as requested by the Plant Technical Manager. He shall make recommendations for plant operations to place the reactor core in a safe condition.

Specific Duties:

1. Analyzes core parameters to determine current conditions of the reactor core.

2. Review proposed plant operations with respect to the effect on core conditions.

Candidate to fulfill this emergency function are as follows:

Company Title

First Shift:

Second Shift:

Alternates:

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ELECTRICAL ENGINEER DS

Location: Technical Support Center

The Electrical Engineer has the responsibility of analyzing the plant electrical system and equipment to determine current operating conditions. He shall ensure that available electrical power is distributed appropriately to support vital emergency response activities.

Specific Duties:

1. Provides electrical system accident assessment.

2. Analyzes plant electrical systems requiring troubleshooting during an emergency.

3. Develops engineering recommendations concerning the impact of the emergency event upon electrical systems.

4. Support plant electrical repair and corrective actions by advising the Plant Technical Manager.

Candidates to fulfill this emergency function are as follows:

Company Title

First Shift:

Second Shift:

Alternates:

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CHEMICAL ENGINEER D6

Location: Technical Support Center

The Chemical Engineer has the responsibility of analyzing plant chemical materials, environment and equipment supply, as well as operational advisory functions. He shall report to and receive instructions from the Plant Technical Manager.

Specific Duties:

1. Control and analyze reactor coolant and plant water chemistry, in support of rad/chem.

2. Support planning and review functions in connecting with corrective actions and repairs which involve plant chemistry.

3. Advise Plant Technical Manager on various plant gases (nitrogen, hydrogen, oxygen, compressed air, etc.) liquids (various solidifying agents boron, decon agents, cleansing detergents, etc.), assist in securing of any unusual types of chemicals needed during the emergency response and/or recovery operations.

Candidates to fulfill this emergency function are as follows:

	Company Title
First Shift:	
Second Shift:	
Alternates:	

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QUALITY ASSURANCE D7

Location: Technical Support Center

The Quality Assurance Engineer has the responsibility of supporting the procurement of any items or services which would apply to the Quality Assurance Program. The Q.A. program shall be independent of the emergency response organization.

Specific Duties:

1. Support any required emergency changes to safety-related procedures.

2. Receive instruction from the Plant Technical Manager.

3. Provide Quality Assurance support to applicable engineering or construction activities.

4. Report any non-resolved quality assurance problems to the Vice President-Nuclear.

Candidates to fulfill this emergency function are as follows:

Company Title

First Shift:

Second Shift:

Alternates:

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MECHANICAL ENGINEER D8

Location: Technical Support Center

The Mechanical Engineer has the responsibility for analyzing assessed damage to mechanical systems to determine current operating conditions. He shall also support plant mechanical repair and corrective actions by advising the Plant Technical Manager.

Specific Duties:

1. Analyzes plant mechanical systems and equipment to determine current operating conditions.

2. Develops recommendations concerning plant operations relating to mechanical system.

3. Receives instructions from and reports findings to the Plant Technical Manager.

Candidates to fulfill this emergency function are as follows:

Company Title

First Shift:

Second Shift:

Alternates:

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TECHNICAL SUPPORT COORDINATOR D9

Location: Corporate Headquarters (Hicksville)

The Technical Support Coordinator has the responsibility of supervising the corporate engineering staff in providing engineering analysis support for design changes and plant modifications. He shall receive direction from, and report to the Technical Support Manager.

Specific Duties

1. Report activation of corporate engineering support group to Technical Support Manager (TSM) in the EOF.

2. Obtain from TSM an emergency status report and determine type of engineering support necessary. Notify appropriate LILCO personnel.

3. Contact and obtain appropriate support from General Electric and Stone & Webster.

4. Coordinate and direct the analysis of plant systems in support of the emergency response as requested by the plant Technical Manager and approved by the Technical Support Manager.

Candidates to fulfill this emergency function are as follows:

Company Title

First Shift:

Second Shift:

Alternates:

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CORPORATE ENGINEERING STAFF D10 - 20

Location: Corporate Headquarters (Hicksville)

The Corporate Engineering Staff has the responsibility of analyzing plant systems impacted by an emergency event as requested by the Technical Support Coordinator. They shall also provide engineering and construction support for engineering, design changes, and plant modifications as directed by the Technical Support Manager or Technical Support Coordinator.

Candidates to fulfill this emergency function are as follows:

Company Title	
D10	Nuclear Systems
D11	Nuclear Engineering & Fuel Management
D12	Core Physics Design & Control
D13	Electrical Power Systems
D14	Process Computers
D15	Instrument & Control Systems
D16	Mechnical Engineering Design
D17	Thermo-Hydraulic & Transient Analysis
D18	Plant Structural Design
D19	Metallurgy
D20	Radwaste Engineering
G9	Administrative

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LICENSING ENGINEER 021

Location: Emergency Operations Facility (EOF)

The Licensing Engineer is responsible for providing Licensing Department support to the Technical Support Manager.

Specific Duties:

1. Direct the Licensing Department effort to support the emergency response activities including licensing review of proposed radioactive releases and plant modifications when requested by the Technical Support Manager.

2. Work with NRC representatives to resolve questions concerning FSAR and Technical Specifications commitments in light of existing plant conditions.

3. Work with NRC representatives to resolve license requirements associated with proposed abnormal operating modes or plant modifications.

Candidates to fulfill this emergency function are as follows:

Company Title

First Shift:

Second Shift:

Alternates:

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QUALITY ASSURANCE

Location: Corporate Headquarters (Hicksville) D 2a

The Quality Assurance Engineer has the responsibility of supporting the procurement of any items or services which would apply to the Quality Assurance Program. The Q.A. program shall be independent of the emergency response organization.

Specific Duties:

1. Support any required emergency changes to safety-related procedures.

2. Receive instruction from the Technical Support Coordinator

3. Provide Quality Assurance support to applicable engineering or construction activities.

4. Report any non-resolved quality assurance problems to the Vice President-Nuclear.

Candidates to fulfill this emergency function are as follows:

Company Title

First Shift:

Second Shift:

Alternates:

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RADIOLOGICAL CONTROL MANAGER E1

Location: Emergency Operations Facility (EOF)

The Radiological Control Manager is responsible upon activation of the EOF for the off-site assessment of potential or actual radiological consequences to the public. The Radiological Control Manager will take over this responsibility for off-site dose assessment from the Radiological Protection Manager or other on-site personnel who held this responsibility prior to the activation of the EOF.

The Radiological Control Manager shall report to the Response Manager.

Specific Duties:

1. Upon notification of an emergency the Radiological Control Manager will notify any additional individuals he deems necessary to support him in carrying out his functions.

2. Once the Radiological Control Manager is fully able to assume his functions he shall inform the Recovery Manager of his state of readiness.

3. Provide assistance to the Radiological Protection Manager as needed before and after activation of the EOF.

4. Make required radiological dose calculations.

5. Calculate off-site dose projections for actual and/or potential radiological releases and provide associated protective action recommendations to the Response Manager. Once the Response Manager makes his decision regarding the type of protective actions to be recommended to the off-site agencies, the Radiological Control Manager will communicate directly with the State of New York and Suffolk County and will relay these protective action recommendations.

6. Organize and dispatch field radiological monitoring teams for off-site radiological evaluation as required, interpret the radiological data obtained and update the recovery organization.

7. Maintain control over LILCO off-site radiation monitoring and survey personnel and provide for any considerations for their radiation protection.

8. Arrange for and dispatch special assistance or services requested regarding radiological measurement or protection equipment.

9. Establish communication with the medical assistance facilities and personnel of Radiation Management Corporation to put the radiological emergency medical assistance plan into operation if necessary.

E1

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RADIOLOGICAL CONTROL MANAGER

Specific Duties (cont'd)

10. Provide off-site health physics support by coordinating utility off-site environmental sampling programs, dose assessments, dose management and radiation protection programs.

11. Initiate long term environmental monitoring and coordinate such monitoring with on-site actions and conditions.

12. After the emergency is under control and evacuation of the public is no longer likely to be necessary, assist station personnel to determine efforts which may be used to further reduce exposure to the station operating personnel and to the public.

13. The Radiological Control Manager will keep a log of all his actions starting with the first notification of an emergency.

Candidates to fulfill this emergency function are as follows:

Company Title

First Shift:

Second Shift:

Alternates:

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E2 E3

DOSE ASSESSMENT STAFF (Staff Members Nos. 1 & 2)

Location: Technical Support Center (TSC) (During an Alert)
Emergency Operations Facility (EOF)

The Dose Assessment Staff will be responsible for calculating off-site doses based upon release data, ambient meteorology and field radiation monitoring results.

Specific Duties:

1. At the Alert level of the emergency and before the EOF is activated, Dose Assessment Staff Member No. 1 will report to the TSC. He will relieve In-Plant Radiation Monitoring Technician No. 1 of his off-site dose assessment duties. He will transfer to the EOF when it is activated.

2. Assess the radiation releases and doses to the general public surrounding the power plant and determine whether or not shelter or evacuation is to be recommended to the appropriate state and federal agencies.

3. Assist station personnel to determine efforts which may be used to further reduce exposures to the station operating personnel and to the public.

4. Maintain contact with off site monitoring personnel and assign monitoring locations.

Candidates to fulfill this emergency function are as follows:

Company Title

First Shift:

Second Shift:

Alternates:

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OFF-SITE RADIATION MONITORING TECHNICIANS Nos. 1,2 & 3

Location: Technical Support Center (TSC) (Prior to activation of EOF)
Emergency Operations Facility (EOF)

The three off-site Radiation Monitoring Technicians will serve as the senior members of the three two-man field monitoring teams. They will report to the TSC to pick up equipment and be dispatched to locations designated by the Radiation Control Manager in the EOF. Prior to the activation of the EOF, one field monitoring team will report to the Radiation Protection Manager at the TSC.

Specific Duties:

1. Perform off-site radiation and air sampling surveys as directed by the Radiation Control Manager.

2. Monitor gaseous release by taking radiation readings in or near the plume pathway as directed by the Radiation Control Manager or the Radiation Protection Manager.

3. Inform the EOF via radio of the survey results immediately after the measurement has been recorded.

4. Retrieve air, soil and water samples for laboratory analysis as required.

5. Retrieve and replace permanently located thermo-luminescent dosimeters (TLD's) as needed.

6. Place additional TLD's in designated locations as required.

7. Support radiological assessment procedures as designated by the Radiation Control Manager.

Candidates to fulfill this emergency function are as follows:

	Company Title
First Shift:	
Second Shift:	
Alternates:	

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E7 E8 E9

OFF-SITE RADIATION MONITORING ASSISTANTS Nos. 1, 2 & 3

Location: Emergency Operations Facility (EOF)

Specific Duties:

1) The Off-Site Radiation Monitoring Assistants will serve as the junior members of the three two-man field monitoring teams.

2) Under certain field conditions such as the temporary unavailability of the Off-Site Radiation Monitoring Technician to perform his functions, the Off-Site Radiation Monitoring Assistant shall be prepared to take over all or some of the Technician's duties as directed by the Technician and/or the Radiation Control Manager or the Radiation Protection Manager.

Candidates to fulfill this emergency function are as follows:

Company Title

First Shift:

Second Shift:

Alternates:

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RADIATION PROTECTION MANAGER F1

Location: Technical Support Center (TSC)

The Radiation Protection Manager has the responsibility for all on-site radiation protection, monitoring and radiological accident analysis. He will keep the Emergency Director fully informed of the status of the emergency plan implementation and the on-site radiation protection measures being undertaken. He is responsible for assisting the Emergency Director in all matters relating to radiological problems that occur during the emergency.

Specific Duties:

1. Perform the emergency functions of the Radiological Control Manager until that time that the Emergency Operations Facility (EOF) is activated and the Radiological Control Manager assumes his emergency functions.

2. Properly implement the on-site radiation protection measures specified in the Emergency Plan Implementing Procedures.

3. Ensure that all radiological emergency equipment is properly calibrated.

4. Evaluate on-site radiation levels.

5. Determine the habitability of the TSC and the Control Point.

6. Initiate and supervise the required on-site dose calculations.

7. Initiate the forming and dispatching of the on-site and in-plant radiation survey teams when required and ensure that communications are maintained with these teams.

8. Ensure that adequate personnel are available to properly perform the functions of radiation protection and radioisotope assessment.

9. Provide radiological assessment and recommendations for on-site Protection Action Recommendations to the Emergency Director.

10. Communicate directly with the Radiological Control Manager at the EOF in coordinating on-site and off-site dose assessment and environmental monitoring.

11. Direct the medical care of contaminated injured personnel both on-site and in transit to off-site medical facilities.

12. Advise off-site medical personnel regarding radioactive contamination matters.

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13. Maintain dose records of all station personnel and emergency workers brought on-site.

14. Review radiation work permits for ALARA considerations and the needs of the Emergency Response efforts.

15. The Radiation Protection Manager will keep a log of all his actions starting with the first notification of an emergency.

Candidates to fulfill this emergency function are as follows:

	Company Title
First Shift:	
Second Shift:	
Alternates:	

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F2 FSF4 F5

RADIATION PROTECTION TECHNICIANS Nos. 1,2,3 & 4

Location: Operational Support Center (OSC)

The ation Protection Technicians are responsible for providing health physics support during the emergency response. They will report to the Radiation Protection Manager and will brief him as often as necessary.

Specific Duties:

1. The Radiation Protection Technicians will report their arrival on site to the Radiation Protection Manager and will coordinate their emergency response activities with the Operational Support Center Supervisor.

2. Evaluate radiological hazards, set up required shielding, determine exposure time limits, provide decontamination and provide for the radiological escorting of emergency workers as necessary.

3. Assist in access control of radiologically contaminated areas.

4. Provide health physics coverage for repair and corrective actions, search and rescue, first aid and firefighting.

5. Direct personnel monitoring and dosimetry for emergency response personnel.

6. Assist with radiation protection tasks as directed by the Radiation Protection Manager.

7. Provide for personnel monitoring during an evacuation of site personnel.

Candidates to fulfill this emergency function are as follows:

	Company Title
First Shift:	
Second Shift:	
Alternates:	

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RADWASTE SUPERVISOR F6

Location: Operational Support Center (OSC)

The Radwaste Supervisor is responsible for the storage and handling of liquid and solid radwaste material during an emergency.

Specific Duties:

1. Develop plans and procedures to process liquid and solid radioactive wastes during an emergency.

2. Maintain an updated status of all liquid and solid radwaste inventories.

3. Develop plans to reduce all radwaste levels to a normal inventory.

4. Ensure that all radioactive waste storage areas are properly posted and secured.

5. Evaluate the establishment of long-term storage areas for radioacitve wastes on site.

6. Ensure that laundry supplies are maintained and disposed of properly.

7. Develop plans and procedures for the sampling of liquid, gaseous and solid radioactive wastes.

8. Brief the Radiation Protection Manager on all work and provide information and recommendations to him concerning future operations that could affect the plant or the environment.

9. Assist in the development of modifications to plant radwaste systems and conceptual designs of new systems and equipment.

Candidates to fulfill this emergency function are as follows:

Company Title

First Shift:

Second Shift:

Alternates:

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F7 F8

RADIATION CHEMISTRY TECHNICIANS Nos. 1&2

Location: Operational Support Center (OSC)

Specific Duties:

1. The Radiation Chemistry Technicians will report their arrival on-site to the Radiation Protection Manager and will coordinate their emergency response activities with the Operational Support Center Supervisor.

2. Support accident assessment efforts by performing isotopic analysis on reactor coolant samples.

3. Report all significant radiochemical and chemical findings to the Radiation Protection Manager.

4. Assist the Radiation Protection Technician in performing his duties such as area and personnel monitoring when requested.

Candidates to fulfill this emergency function are as follows:

	Company Title
First Shift:	
Second Shift:	
Alternates:	

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OFFICIAL USE

F9 F10

ON-SITE RADIATION MONITORING TECHNICIANS Nos. 1 & 2

Location: Operational Support Center (OSC)

Specific Duties:

1) The On-Site Radiation Monitoring Technicians will report their arrival on site to the Operational Support Center Supervisor and will coordinate their emergency response activities with him.

2) Perform out of plant on-site radiation and air sampling surveys and brief the Radiological Protection Manager on the findings of these surveys.

3) Monitor out of plant on-site radiation levels for determination of contaminated areas and ambient radiation.

4) Retrieve and replace thermo-luminescent dosimeters (TLD's) from the site boundary.

5) Assist in radiation monitoring of site personnel.

Candidates to fulfill this emergency function are as follows:

Company Title

First Shift:

Second Shift.

Alternates:

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FH FH FH

IN-PLANT RADIATION MONITORING TECHNICIANS Nos. 1,2 & 3

Location: Operational Support Center (OSC)

The In-Plant Radiation Monitoring Technicians have the responsibility for initially providing off-site dose calculations, radiological hazards evaluations, personnel monitoring and health physics coverage on an as needed basis until relieved of these tasks by other arriving emergency response personnel.

Specific Duties:

1.) Perform in-plant radiation and air sampling surveys and brief the Radiological Protection Manager on the findings of the surveys.

2.) Monitor in-plant areas for determination of contaminated areas and assist when needed in access control.

3.) Support accident assessment procedures by determination of amount and extent of radiation released.

4.) Provide health physics coverage of on-site firefighting, repairs and corrective actions as needed.

5.) Support emergency response activities as directed by the Radiological Protection Manager.

Candidates to fulfill this emergency function are as follows:

Company Title

. First Shift:

. Second Shift:

Alternates:

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ADMINISTRATION AND SCHEDULING MANAGER G-1

Location: Emergency Operations Facility (EOF)

The Administrative and Scheduling Manager is responsible for managing the administration of the required emergency support related to accident mitigation and recovery operations.

He is also responsible for contract negotiations and administration and material control, including procurement expediting.

The Administration and Scheduling Manager reports to the Response Manager.

Specific Duties:

1. Provide short-term logistical planning and scheduling for recovery operations.

2. Provide for general office support functions including typing, reproduction, office supplies and office furniture as well as special items such as photographic services and facility/area maps when required.

3. Direct Record Supervisor in the handling of record material and data.

4. Direct and coordinate services provided by corporate liability personnel.

5. Handle the travel arrangements for the emergency response personnel, including motel, hotel, airline and trailer arrangements.

6. Supervise the registration at the EOF of all emergency response personnel arriving there and arrange for personnel orientation of the EOF for those unaccustomed with the facility.

7. Supervise the usage and/or issuance of special radio facilities such as mobile units and radio pagers.

8. Maintain an emergency/recovery organization telephone directory.

9. Develop special delivery service arrangements to support rapid transfer of information and documents.

10. Function as the emergency and recovery organization purchasing agent.

11. Administer the necessary petty cash funds and expense accounts and provide the necessary handling of payroll matters.

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12. Make the necessary commissary arrangements in support of a potential twenty-four hour per day recovery operation, including provisions for food deliveries and trash disposal for the plant, the EOF and the ENC.

13. Coordinate the manpower requests of the Response Manager and meet the manpower needs of the emergency and recovery organization both in the technical and craft disciplines and ensure that required clerical support is available.

14. Provide labor relations assistance as needed.

15. Staff the motor pool facility and provide required vehicles for the emergency and recovery organization.

16. Provide special transportation such as helicopters and buses when needed.

17. Maintain shuttle services between surrounding hotels, motels, airports and emergency response centers.

18. Coordinate purchasing, personnel and accounting services with Corporate Headquarters.

19. The Administration and Scheduling Manager will keep a log of all his actions starting with the first notification of an emergency.

Candidates to fulfill this emergency function are as follows:

Company Title

First Shift:

Second Shift:

Alternates:

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CORPORATE ADMINISTRATIVE STAFF G2-5

Location - Corporate Headquarters (Hicksville)

The Corporate Administration Staff has the responsibility of supporting the emergency operations as well as the recovery operation. They may be requested to report to any of the following facilities: EOF, TSC, OSC or Corporate Headquarters. Their specific duties shall be as requested by the Administrative and Scheduling Manager.

Candidates to fulfill these emergency functions are as follows:

	Company Title
G2	Purchasing
G3	Personnel
G4	Accounting
G5	Liability

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RECORDS SUPERVISOR

Location: Emergency Operations Facility (EOF)

Specific Duties:

1.) Provide for the accumulation, retention and retrieval of plant information.

2.) Transmit information needed by the emergency response organization.

3.) Provide a single location for the acquisition of data, resulting in minimum interference with plant operations.

4.) The Records Supervisor will keep a log of all his actions starting with the first notification of an emergency.

Candidates to fulfill this emergency function are as follows:

Company Title

First Shift:

Second Shift:

Alternates:

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ADMINISTRATIVE SUPERVISOR G7

Location: Technical Support Center

The Administrative Supervisor has the responsibility for directing his staff and TSC Communicators, and for providing typing, filing, document retrieval, and office equipment operation to all personnel within the TSC. He shall also have the responsibility for accountability of all persons onsite, he shall coordinate this effort with the Security Chief. He receives instructions from and reports to the Emergency Director.

Specific Duties

1. Report arrival at the TSC to the Emergency Director.

2. Provide the necessary administrative support personnel to meet the needs of the TSC.

3. Direct communicators to implement necessary notification procedures.

4. Ensure that there is enough office equipment, office supplies, and communications equipment.

5. Provide regular written reports to Emergency Director with regards to accountability.

Candidates to fulfill this emergency function are as follows:

Company Title

First Shift:

Second Shift:

Alternates:

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H1 H2 H3 H5 H4 H6 H7

COMMUNICATORS 1, 2, 3, 4, 5, 6 & 7

Location: Communicators 1 - Control Room
Communicators 2, 3 & 4 - TSC
Communicators 5, 6 & 7 - EOF

The Communicators shall be reponsible for notification and communications.

Specific Duties:

1. Implement emergency notification procedures.

2. Establish and maintain communication with onsite groups, and other emergency response facilities.

3. Maintain contact with offsite authorities and relay appropriate information concerning plant status.

4. Relay inquiries from offsite authorities to plant officials.

5. Call in off-shift and other personnel as directed.

6. Maintain communications log book.

Candidates to fulfill this emergency function are as follows:

Company Title

	Control Room	TSC	EOF
First Shift:			
Second Shift:			
Alternates:			

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EMERGENCY COMMUNICATIONS DIRECTOR II

Location: EOF

The Emergency Communications Director has the responsibility for management and direction of the public affairs organizations for onsite and offsite emergency response. An authorized Emergency Communications Director shall be available at the EOF 24 hours a day for emergency response and recovery operations.

Specific Duties

1. Establish communications with Senior Company Officials and keep them informed on a regular basis.

2. Direct the collection and transmission of all media information.

3. Establish schedule for periodic News Conferences in coordination with the Emergency News Manager, and be available to participate.

Candidates to fulfill this emergency function are as follow:

Company Title

First Shift:

Second Shift:

Alternates:

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EMERGENCY COMMUNICATIONS LIAISON #2

Location - Emergency Operations Facility

The Emergency Communication Liaison has the responsibility for obtaining current technical information and relaying this to the Emergency Communication Director.

Specific Duties

1. Report to the TSC prior to the activation of the EOF and prepare press releases for the Emergency Director's and corporate approval.

2. Upon arrival at the EOF report to the Emergency Communications Director.

3. Upon activation of the ENC establish a communications link with the ENC and relay emergency information as directed.

4. Assist in writing press releases to be forwarded to the ENC.

Candidates to fulfill this emergency function are as follows:

	Company Title
First Shift:	
Second Shift:	
Alternatives:	

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GOVERNMENT COMMUNICATIONS MANAGER I3

~~Location: Corporate~~ Headquarters (Hicksville)

The Government Communications Manager has the responsibility for keeping government officials informed of emergency status.

Specify Duties

1. Ensure that all information relayed to government officials originated from the ENC.

2. Ensure that no communicators give any recommended protective actions to government officials.

3. Relay all inquiries from the government officials to the Emergency Communications Director.

Candidates to fulfill this emergency function are as follows:

	Company Title
First Shift:	
Second Shift:	
Alternates:	

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SPECIAL SERVICES MANAGER I4

Location: Corporate Headquarters (Mineola)

The Special Services Manager has the responsibility of activating the Special Services Center so that they can provide the necessary graphics and display support.

Specific Duties

1. Upon activation of the ENC establish a communication link with the ENC.

2. Request from the Corporate Security Supervisor the neccessary security personnel to man the Emergency News Center, as requested by the Emergency News Manager.

Candidates to fulfill this emergency function are as follows:

	Company Title
First Shift:	
Second Shift:	
Alternates:	

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CUSTOMER COMMUNICATIONS MANAGER I5

Location: Corporate Headquarter (Hicksville)

The Customer Communication Manager has the responsibility for establishing communications link with the ENC and Corporate Communications Office in Mineola.

Specific Duties

1. Ensure that only the most recent approved news releases are being disseminated to all district offices and customer call board operator.

2. Ensure that the files of press releases are maintained in chronological order.

3. Supply necessary personnel requirements to telephone emergency answering staff.

Candidates to fulfill this emergency function are as follows:

	Company Title
First Shift:	
Second Shift:	
Alternates:	

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EMERGENCY NEWS MANAGER I6

Location: Emergency News Center

The Emergency News Manager has the responsibility of establishing communications with the EOF and off-site media services. As well as directing the proper personal to acquire adequate office equipment and establish schedule of news briefings.

Specific Duties

1. Establish communications with EOF, Information Center (Mineola, Hicksville) and Special Services Center.

2. Supervise the distribution of approval news releases.

3. Ensure that the appropriate amount of office space, equipment and materials are available.

4. Coordinate the presentation of detailed technical information by assigned technical briefers.

5. Ensure that all press and broadcast releases are being logged and recorded at the releases are being logged and recorded at the Mineda Information Office.

6. Arrange for the taping of all press conferences briefings and interview as well as transcripts of all tapes.

Candidates to fulfill this emergency function are as follows:

Company Title

First Shift:

Second Shift:

Alternates:

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COMMUNICATIONS AND LOGISTICS COORDINATOR I7

Location: Emergency News Center

The Communications and Logistics Coordinator has the responsibility of fulfilling all the logistics requirements of the emergency communications operations.

Specific Duties:

1. Ensure that there is adequate message services for timely response.

2. Ensure that housing and food requirements are available for all Lilco emergency information staff.

3. Lay-out and set-up ENC prior to emergency.

4. Augment lay-out of ENC with all necessary office supplies, telephones, status boards, etc.

Candidates to fulfill this emergency function are as follows:

	Company Title
First Shift:	
Second Shift:	
Alternates:	

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OFFICIAL USE

MEDIA INFORMATION COORDINATOR 29

Location: Emergency News Center

The Media Information Coordinator has the responsibility coordinating all media inquiries and arranging for interviews and press briefings. This person shall receive instructions from and report to the Emergency News Manager.

Specific Duties:

1. Dissemination of approved press releases and statements to media, customers, and Lilco personnel.

2. Ensure that all communications logs all carefully maintained during the emergency.

3. Maintain status board of all press releases include those from County and State officials.

Candidates to fulfill this emergency function are as follows:

Company Title

First Shift:

Second Shift:

Alterntaes:

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SECURITY

Location: Guard House

The Security force is responsible for providing site access control and accountability. They shall report to and receive instruction from the Emergency Director.

Specific Duties:

1. Maintain plant security in accordance with plant security procedures and institute appropriate contingency measures.

2. Assist Administrative Supervisor on accounting for all visitors, construction/contractors, and plant personnel onsite.

3. Assist Administrative Supervisor with personnel evacuation and restricting access to secured areas.

4. Provide on shift fire brigade members in the event of an onsite fire.

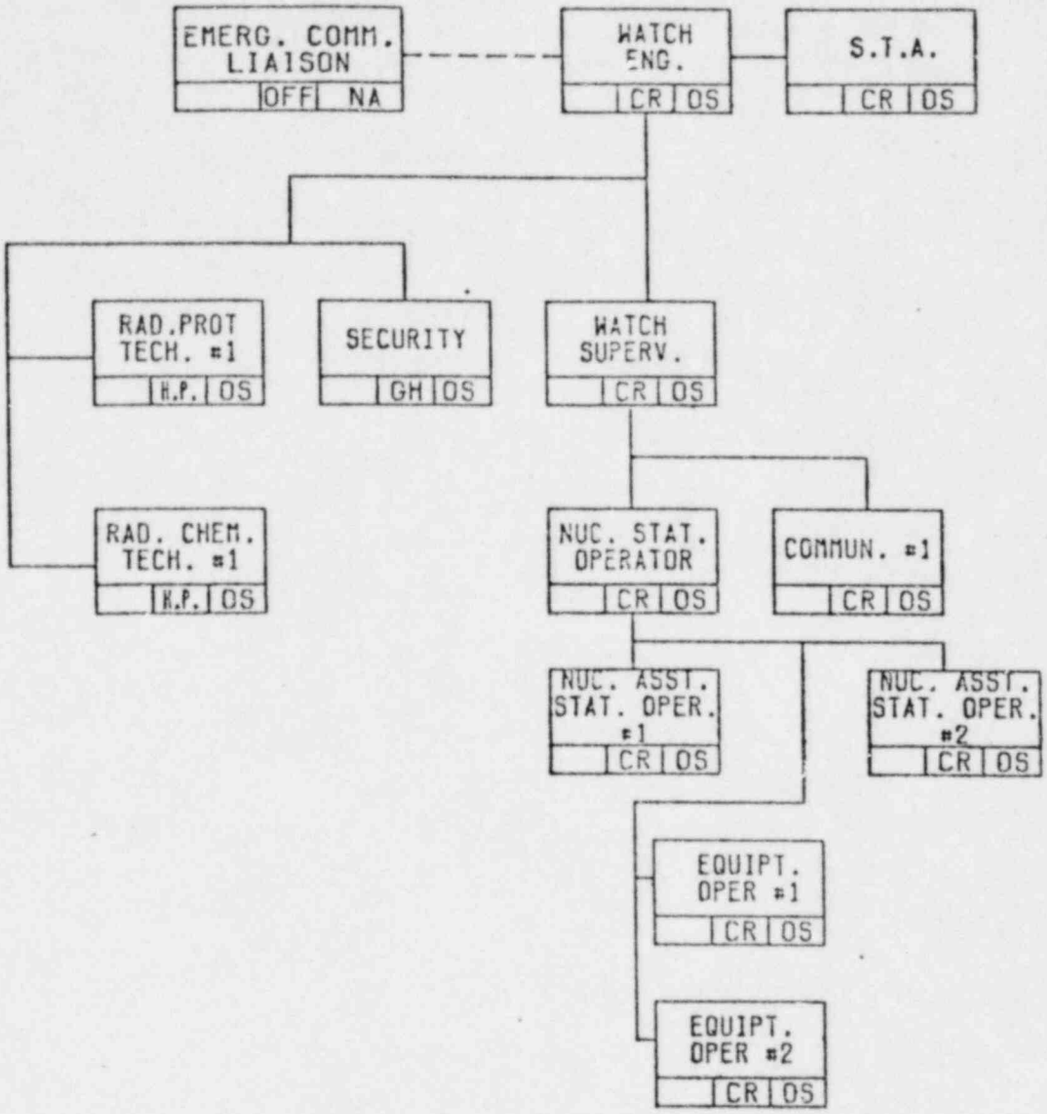
Candidates to fulfill this emergency function are as follows:

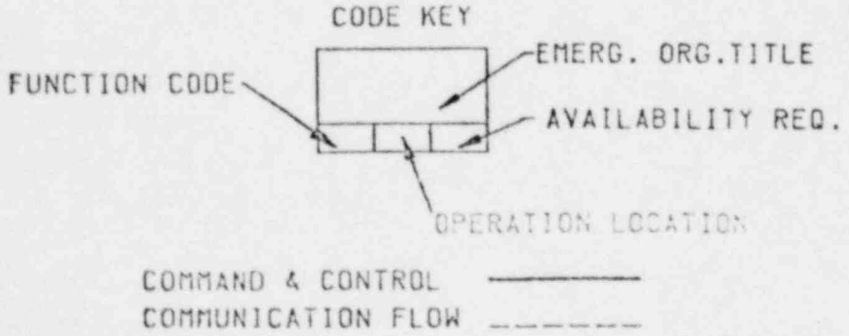
Company Title

First Shift:

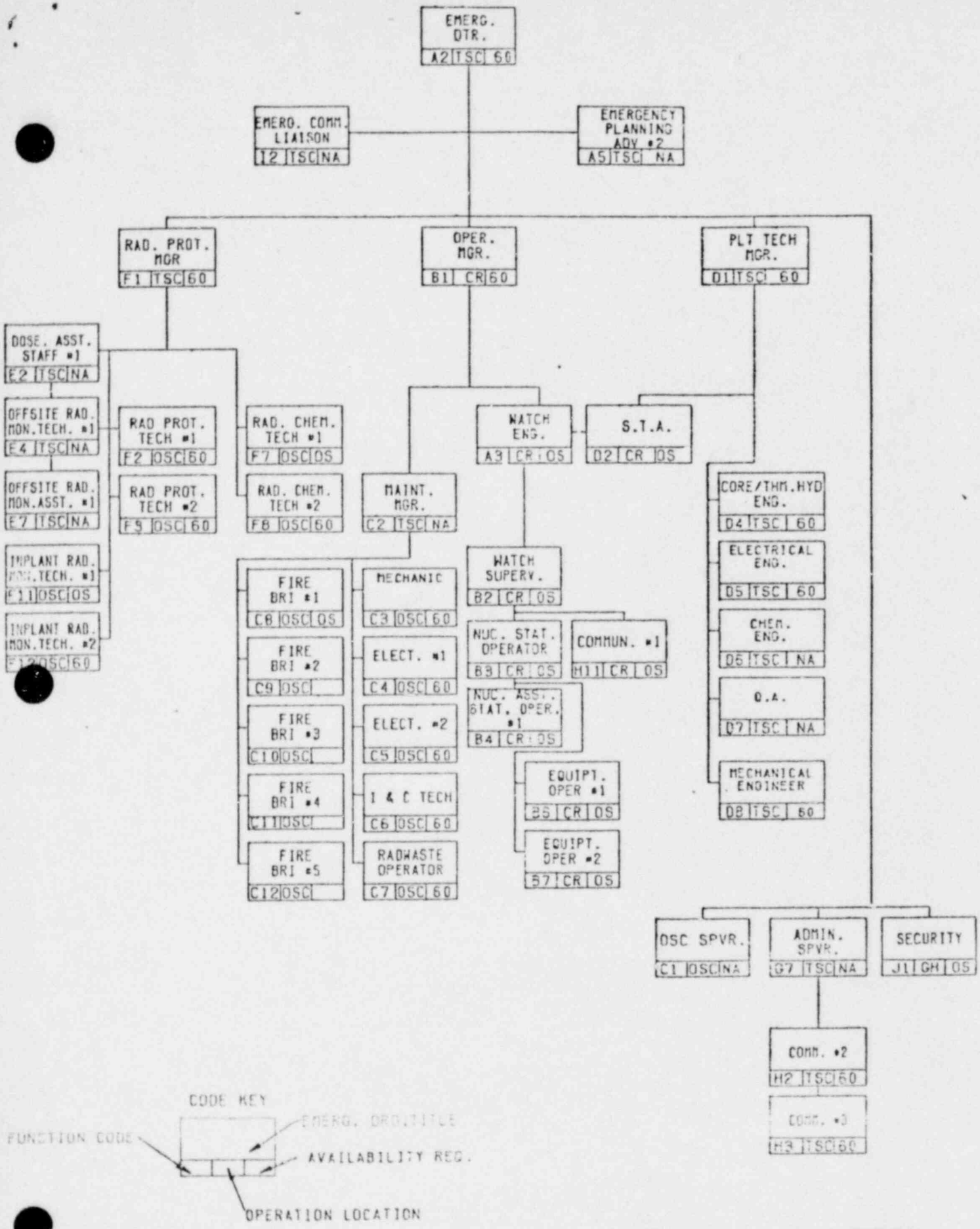
Second Shift:

Alternates:

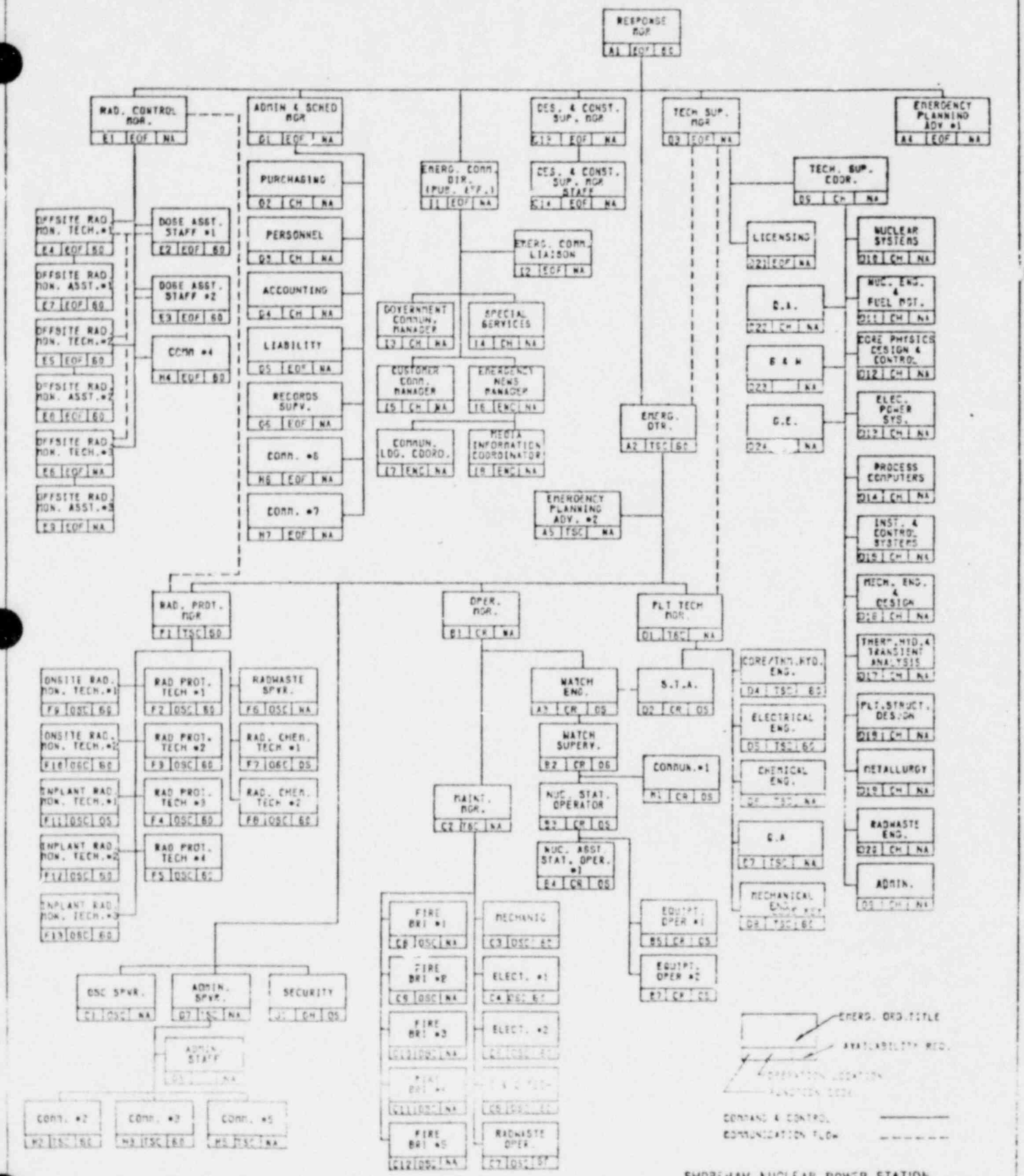




SHOREHAM NUCLEAR POWER STATION
ON SHIFT
EMERGENCY RESPONSE ORGANIZATION



SHOREHAM NUCLEAR POWER STATION
ALERT EMERGENCY AUGMENT
EMERGENCY RESPONSE ORGANIZATION



SHOREHAM NUCLEAR POWER STATION
SITE AREA AND GENERAL
EMERGENCY AUGMENT
EMERGENCY RESPONSE ORGANIZATION

DRAFT - PRELIMINARY

Submitted: 2/26/82 CIP Number: 22

Approved: _____ Revision: 0

Date Eff.: _____

Revision and Approval of Plans and Procedures

1.0 Purpose

This procedure details the methods for reviewing and approving the Shoreham Nuclear Power Station Emergency Plan, Emergency Plan Procedures and Emergency Plan Training Manual.

2.0 Responsibility

The responsibility for the maintenance of the Emergency Plan, the Emergency Plan Implementing Procedures, and the Emergency Plan Training Manual rests with the Emergency Plan Coordinate.

3.0 Discussion

N/A

4.0 Precautions

On-the-spot changes to any portion of the Emergency Plan, Procedures or Training Manual, are not permitted.

5.0 Prerequisites

N/A

6.0 Limitations and Actions

N/A

7.0 Materials and Equipment

7.1 Revision Request Form
7.2 Emergency Planning Revision Log

8.0 Procedure

8.1 Revision to Manuals

8.1.1 Any holder of a manual may prepare revision(s) to any section or procedure included in one of the manuals.

8.1.2 Preparer completes Revision Request Form, Appendix 12.1 and contacts Emergency Planning Coordinator (EPC) for revision number. The EPC fills out the Emergency Planning Revision Log (Appendix 12.2) for each request.

8.1.3 Preparer transmits completed Revision Request Form, edited manual copies, and supporting documentation as appropriate to the responsible Reviewer. See Appendix 12.3.

8.1.4 The responsible reviewer will return the revision to the preparer if revision request is disapproved or further information in needed.

8.1.5 If the responsible reviewer approves, submit the revision to the Review of Operations Committee (ROC) and the Emergency Planning Coordinator as indicated on Appendix 12.3.

8.1.6 ROC and the Emergency Planning Coordinator review the proposed change and makes it recommendation to the Plant Manager.

8.1.7 If the Plant Manager approves the procedure, it is forwarded to the Emergency Planning Coordinator for revision to the appropriate documentation.

8.1.8 The Emergency Planning Coordinator will insure that each revision will be indicated by a revision number to the procedure and that each revision will be indicated by a vertical line in the right margin. Furthermore, he will review other emergency plan documents to insure consistency.

9.0 Acceptance Criteria

N/A

10.0 Final Conditions

All changes will be documented and revisions will be distributed in accordance with CIP-_____.

11.0 References

N/A

12.0 Appendices

12.1 Emergency Planning Revisions Request Form
12.2 Emergency Planning Revision Log

12.3 Revision Review Responsibility Flow Chart

EMERGENCY PLAN REVISION REQUEST FORM
SHOREHAM NUCLEAR POWER STATION

Plan
Procedure Manual
Training Manual
Revision No._____

Section_____
Procedure No._____
Section_____
Obtain revision number from Energency Planning and Security Engineer (201) 430-6748.

Brief Description of Revision Proposed:

Reason For Revision:

_____
Plant Manager's Signature

Responsible Individual	Name	Date Received	Date Transmitted	Signature
Prepare		NA		
Responsible Reviewer (See Table CIP-_____				
EP Review (See Table 6-1.1)				
ROC Meeting Number				
Emergency Planning Coordinator				

Appendix 12.2

Emergency Planning Revision Log

Number	Requested By	Date	Approval Date	Received Date	Issued Date

Submitted: 2/26/82 CIP Number: 23

Approved: _____ Revision: 0

Date Eff.: _____

Distribution of Plans and Procedures

DRAFT - PRELIMINARY

1.0 Purpose

This procedure details the method for distribution of the Shoreham Nuclear Power Station Emergency Plan, Emergency Plan Implementing Procedures and the Emergency Plan Training Manual.

2.0 Responsibility

The Emergency Planning Coordinator shall be responsible for ensuring compliance with this procedure.

3.0 Discussion

N/A

4.0 Precautions

Where the manual is to be located in a particular location, vehicle, locker, etc., a person shall be designated who is responsible for the maintenance of that manual.

5.0 Prerequisites

Revisions must be previously approved as stated in CIP .

6.0 Limitations and Actions

N/A

7.0 Materials and Equipment

N/A

8.0 Procedure

8.1 Approved Emergency Plan Revision shall be forwarded from the Plant Manager to the Emergency Planning Coordinator.

8.2 Distribution will be made in accordance with the Distribution Log, See Appendix 12.1. Included with each revision will be a Emergency Planning Revision Signoff

Form, see Appendix 12.2 and a revised plan index indicating the date of the revision and the plan section(s) or procedure(s).

8.3 When the distribution sheets are returned by the manual holders the revision status of each manual will be recorded, see Appendix 12.3. The distribution sheets shall be retained on file by the Emergency Planning Coordinator.

8.4 If more than a one month lapse occurs between issuance of a revision to distribution and return of a revision check a clerk will be made with the manual holder to insure prompt entry of the revision.

9.0 Acceptance Criteria

N/A

10.0 Final Conditions

N/A

11.0 References

N/A

12.0 Appendices

12.1 Distribution Log

12.2 Emergency Planning Revision Signoff Form

12.3 Verification Sheet

DISTRIBUTION LOG
APPENDIX 12.1

Manual Number	Assigned Location	Assigned Individual

CIP-

EMERGENCY PLAN REVISION SIGNOFF FORM
APPENDIX 12.2

Manual No. _____

Revision No. _____ To: Plan

Procedures Manual

Training Manual

Revise your copy of the plan by inserting the attached section(s) in the appropriate place, as specified below, and destroying the old section(s). Revisions are identified by a vertical line in the right margin.

Note: Complete the following information and return this sheet to the Emergency Planning Coordinator.

Manual No. _____ Date This Change Entered _____

Date This Information Reviewed With Subordinates: _____

Signature: _____

CIP-

EMERGENCY PLAN DISTRIBUTION
APPENDIX 12.3
VERIFICATION SHEET

Manual No.	Rev.	Rev.	Rev.	Rev.	Rev.	Rev.	Rev.	Rev.	Rev.	Rev.	Rev.

DRAFT - PRELIMINARY

THE LONG ISLAND LIGHTING COMPANY 1

SHOREHAM NUCLEAR POWER STATION 2

UNIT 1 3

EMERGENCY PLAN PROCEDURE 4

CLASSIFICATION 5

PROCEDURE NO. _____ 6

REVISION: 00 7

PREPARED BY: _____ DATE: _____ 8

REVIEWED BY: _____ DATE: _____ 9

STATION QUALITY ENG: _____ DATE: _____ 10

STATION SUPERINTENDENT: _____ DATE: _____ 11

EMERGENCY CLASSIFICATION

1.0 PURPOSE

The purpose of this procedure is to provide a means of classifying an event at the Shoreham Nuclear Power Station into one of four emergency classifications as described in the Shoreham Nuclear Power Station Emergency Plan.

2.0 RESPONSIBILITY

The Watch Engineer has the responsibility and authority to declare an emergency and select the appropriate emergency classification. Responsibility for reclassification is held initially by the Emergency Director and passes to the Response Manager as this individual augments the emergency organization. The Shift Technical Advisor and/or Plant Technical Advisor will provide advisory support as requested.

3.0 PREREQUISITES

3.1 Either:

A. An Emergency Operations Procedure has been initiated.

B. An initiating condition exists at or near the station.

C. A declared emergency already exists and the changing situation requires reclassification.

4.0 PRECAUTIONS

4.1 Do not let this procedure delay implementation of appropriate corrective actions.

5.0 PROCEDURE

5.1 Classification

5.1.1 On-duty Watch Engineer evaluates the event and selects the appropriate Event Category on Attachment 1.

5.1.2 For each Event Catergory checked on Attachment 1, refer to Attachment 2 and locate that Event Category as identified by its numbered index tab. On the page immediately behind that tab is a list of the initiating conditions assigned to the category. The on-duty Watch Engineer will review this list and select the appropriate initiating condition(s). Examine the corresponding Emergency Action Level (EAL) sheets, which are located immediately following this list, for the emergency classification.

5.1.3 On-duty Watch Engineer records the emergency classification at this time on Attachment 1.

5.1.4 On-duty Watch Engineer initiates the appropriate Emergency Plan Procedure as follows:

A. UNUSUAL EVENT - initiate EP-13(69.013.01) "Unusual Event Implementing Procedures".

B. ALERT - initiate EP-14(69.014.01) "Alert Implementing Procedures".

C. SITE AREA EMERGENCY - initiate EP-15(69.015.01) "Site Area Emergency Implementing Procedures".

D. GENERAL EMERGENCY - initiate EP-16(69.016.01) "General Emergency Implementing Procedures".

5.2 Reclassification

5.2.1 If reclassification to another level is necessary, Emergency Director or Response Manager is to repeat the classification steps shown above. Record information in the appropriate subsequent classification column on Attachment 1. Use additional sheets as necessary.

5.2.2 Upon termination of the emergency forward the Event Classification Record Sheet, Attachment 1, to the Emergency Planning Advisor.

5.2.3 Write in the word 'termination', date, time, when the plant has been restored to a safe condition and the emergency has been terminated.

6.0 ATTACHMENTS

Event Classification Record Sheet, Attachment 1

Emergency Action Levels arranged by Category, Attachment 2

END

ATTACHMENT 1 - EVENT CLASSIFICATION RECORD SHEET

EVENT CATEGORY	INITIAL CLASSIFICATION EAL/DATE/TIME	SUBSEQUENT CLASSIFICATION EAL/DATE/TIME	SUBSEQUENT CLASSIFICATION EAL/DATE/TIME	SUBSEQUENT CLASSIFICATION EAL/DATE/TIME
1. Abnormal Primary Leak Rate	_____	_____	_____	_____
2. Abnormal Core Conditions and Fuel Damage	_____	_____	_____	_____
3. Steam Line Break or MS RV/SV Failure	_____	_____	_____	_____
4. Other LCO's	_____	_____	_____	_____
5. Abnormal Radiological Effluent or Radiation Levels	_____	_____	_____	_____
6. Loss of Shutdown Functions: Decay Heat or Reactivity	_____	_____	_____	_____
7. Electrical or Power Failures	_____	_____	_____	_____
8. Fire	_____	_____	_____	_____
9. Control Room Evacuation	_____	_____	_____	_____
10. Loss of Monitors, Alarms, etc.	_____	_____	_____	_____
11. Fuel Handling Accident	_____	_____	_____	_____
12. Hazards to Plant Operation	_____	_____	_____	_____
13. Security Threats	_____	_____	_____	_____
14. Natural Events	_____	_____	_____	_____
15. Others	_____	_____	_____	_____

/SHORE
EMERGENCY

EVENT CATEGORY	UNUSUAL EVENT	
1) ABNORMAL PRIMARY LEAK RATE	EXCEEDING EITHER PRIMARY/SECONDARY LEAK RATE TECHNICAL SPECIFICATION OR PRIMARY SYSTEM LEAK RATE TECHNICAL SPECIFICATION	PRIMAR GREATE
2) ABNORMAL CORE CONDITIONS AND FUEL DAMAGE	FUEL DAMAGE INDICATION	SEVERE
	ABNORMAL COOLANT TEMP. AND /OR PRESSURE OR ABNORMAL FUEL TEMPS. WHICH EXCEED TECH. SPEC. LIMITS.	COOLA TO FU
3) STEAM LINE BREAK OR MS RV/SV FAILURE	FAILURE OF A SAFETY OR RELIEF VALVE IN A SAFETY RELATED SYSTEM TO CLOSE FOLLOWING A REDUCTION OF APPLICABLE PRESSURE	STEAM MALFU
4) OTHER LCO'S	LOSS OF CONTAINMENT INTEGRITY RESULTING IN IMMEDIATE SHUTDOWN BY TECH. SPEC.	
	LOSS OF ENGINEERED SAFETY FEATURE OR FIRE PROTECTION FUNCTION REQUIRING SHUT DOWN BY TECH. SPEC.	
	EMERGENCY CORE COOLING SYSTEM (ECCS) INITIATED AND DISCHARGED TO VESSEL	
5) ABNORMAL RADIOLOGICAL EFFLUENT OR RADIATION LEVELS.	RADIOLOGICAL EFFLUENT TECHNICAL SPECIFICATION LIMITS EXCEEDED.	RADIAT CONTA SEVER OF RA
		RADIO THAN INSTA
6) LOSS OF SHUTDOWN FUNCTIONS: DECAY HEAT OR REACTIVITY		FAILU SYSTE A SCR SUBCR
		COMPL NEEDE
7) ELECTRICAL OR POWER FAILURES	LOSS OF OFFSITE POWER OR LOSS OF ONSITE AC POWER CAPABILITY	LOSS OF AL
		LOSS
8) FIRE	FIRE WITHIN THE PLANT LASTING MORE THAN 10 MINUTES.	FIRE SYSTE
9) CONTROL ROOM EVACUATION		EVACU ANTIC CONTR ESTAB
10) LOSS OF MONITORS, ALARMS, ETC.	INDICATIONS OR ALARMS ON PROCESS OR EFFLUENT PARAMETERS NOT FUNCTION IN CONTROL ROOM TO AN EXTENT REQUIRING PLANT SHUTDOWN OR OTHER SIGNIFICANT LOSS OF ASSESSMENT OF COMMUNICATION CAPABILITY.	MOST
11) FUEL HANDLING ACCIDENT		FUEL RADIO HANDL
12) HAZARDS TO PLANT OPERATIONS	HAZARDS BEING EXPERIENCED OR PROJECTED THAT AFFECT PLANT OPERATIONS.	SEVER OR PR AFFEC
13) SECURITY THREATS	SECURITY THREAT, ATTEMPTED ENTRY OR ATTEMPTED SABOTAGE	ONGOI
14) NATURAL EVENTS	NATURAL PHENOMENA BEING EXPERIENCED OR PROJECTED BEYOND USUAL LEVELS	SEVER EXPER
15) OTHERS	OTHER PLANT CONDITIONS EXIST THAT WARRANT INCREASED AWARENESS ON THE PART OF A PLANT OPERATING STAFF OR STATE AND/OR LOCAL OFFSITE AUTHORITIES OR REQUIRE PLANT SHUTDOWN UNDER TECNICAL SPECIFICATION REQUIREMENTS OR INVOLVE OTHER THAN NORMAL CONTROLLED SHUTDOWN.	OTHER WARRA ACTIV
	TRANSPORTATION OF CONTAMINATED INJURED INDIVIDUAL FROM SITE TO OFFSITE HOSPITAL.	

HAM NUCLEAR POWER STATION
CLASSIFICATION GUIDE FLOWCHART

ALERT	SITE AREA EMERGENCY	GENERAL EMERGENCY
Y COOLANT LEAK RATE R THAN 50 GPM	KNOWN LOSS OF COOLANT ACCIDENT (LOCA) GREATER THAN MAKE-UP CAPACITY	SMALL OR LARGE BREAK LOCA OCCURS AND CONTAINMENT PERFORMANCE IS UNSUCCESSFUL AFFECTING LONGER TERM SUCCESS OF THE ECCS. COULD LEAD TO CORE DEGRADATION OR MELT IN SEVERAL HOURS WITHOUT CONTAINMENT BOUNDARY
LOSS OF FUEL CLADDING NT PUMP SEIZURE LEADING L FAILURE	DEGRADED CORE WITH POSSIBLE LOSS OF COOLABLE GEOMETRY	LOSS OF 2 OF 3 FISSION PRODUCT BARRIERS WITH POTENTIAL LOSS OF THE THIRD BARRIER SMALL OR LARGE LOCA'S WITH FAILURE OF ECCS TO PERFORM LEADING TO CORE MELT DEGRADATION OR MELT IN MINUTES TO HOURS. LOSS OF CONTAINMENT INTEGRITY MAY BE IMMINENT
LINE BREAK WITH MSIV NCTION CAUSING LEAKAGE.	STEAM LINE BREAK OUTSIDE CONTAINMENT WITHOUT ISOLATION	
ION LEVELS OR AIRBORNE MINATION WHICH INDICATES DEGRADATION IN CONTROL DIOACTIVE MATERIAL. GOICAL EFFLUENTS GREATER 0 TIMES TECH. SPECS. TANEOUS LIMITS.	EFFLUENT MONITORS DETECT LEVELS CORRESPONDING TO GREATER THAN 50 MR/HR FOR 1/2 HOUR OR GREATER THAN 500 MR/HR W.B. FOR TWO MINUTES AT THE SITE BOUNDARY FOR ADVERSE METEOROLOGY THESE DOSE RATES ARE PROJECTED BASED ON OTHER PLANT PARAMETERS OR ARE MEASURED IN THE INVIRONS EPA PROTECTIVE ACTION GUIDELINES ARE PROJECTED TO BE EXCEEDED OUTSIDE THE SITE BOUNDARY.	EFFLUENT MONITORS DETECT LEVELS CORRESPONDING TO 1 REM/HR W.B. OR 5 REM/HR THYROID AT THE SITE BOUNDARY UNDER ACTUAL METEOROLOGICAL CONDITIONS. THESE DOSE RATES ARE PROJECTED BASED ON OTHER PLANT PARAMETERS OR ARE MEASURED IN THE ENVIRONS.
E OF REACTOR PROTECTION M TO INITIATE AND COMPLETE AM WHICH BRINGS THE REACTOR TICAL TE LOSS OF ANY FUNCTION D FOR PLANT COLD SHUTDOWN	TRANSIENT REQUIRING OPERATION OF SHUTDOWN SYSTEMS WITH FAILURE TO SCRAM (CONTINUED POWER GENERATION WITH NO CORE DAMAGE IMMEDIATELY EVIDENT) LOSS OF ANY FUNCTION NEEDED FOR PLANT HOT SHUTDOWN	TRANSIENT (E.G. LOSS OF OFFSITE POWER) PLUS FAILURE OF REQUISITE CORE SHUT DOWN SYSTEMS (E.G., SCRAM). COULD LEAD TO CORE MELT IN SEVERAL HOURS WITH CONTAINMENT FAILURE LIKELY. MORE SEVERE CONSEQUENCES IF PUMP TRIPS DOES NOT FUNCTION. SHUTDOWN OCCURS BUT REQUISITE DECAY HEAT REMOVAL SYSTEM (E.G., RHR) OR NONSAFETY SYSTEMS HEAT REMOVAL MEANS ARE RENDERED UNAVAILABLE. CORE DEGRADATION OR MELT COULD OCCUR IN ABOUT TEN HOURS WITH SUBSEQUENT CONTAINMENT FAILURE.
OF OFFSITE POWER AND LOSS ONSITE AC POWER OF ALL ONSITE DC POWER	LOSS OF OFFSITE POWER AND LOSS OF ALL ONSITE AC POWER FOR MORE THAN 15 MIN. LOSS OF ALL VITAL ONSITE DC POWER FOR MORE THAN 15 MIN.	
OTENTIALLY AFFECTING SAFETY MS	FIRE COMPROMISING THE FUNCTIONS OF SAFETY SYSTEMS.	ANY MAJOR INTERNAL OR EXTERNAL EVENTS (EG. FIRES, EARTHQUAKES SUBSTANTIALLY BEYOND DESIGN BASIS) WHICH COULD CAUSE MASSIVE COMMON DAMAGE TO PLANT SYSTEMS
ATION OF CONTROL ROOM PATED OR REQUIRED WITH OL OF SHUTDOWN SYSTEMS LISHED FROM LOCAL STATIONS	EVACUATION OF CONTROL ROOM AND CONTROL OF SHUT DOWN SYSTEMS NOT ESTABLISHED FROM LOCAL STATIONS IN 15 MIN.	
OR ALL ALARMS (ANNUNICATORS) LOST	MOST OR ALL ALARMS (ANNUNCIATORS) LOST AND PLANT TRANSIENT INITIATED OR IN PROGRESS.	
DAMAGE ACCIDENT WITH RELEASE OF ACTIVITY TO CONTAINMENT OR FUEL ING BUILDING.	MAJOR DAMAGE TO SPENT FUEL IN CONTAINMENT OR FUEL HANDLING BUILDING.	
E HAZARDS BEING EXPERIENCED OJECTED POTENTIALLY YING SAFETY SYSTEMS	SEVERE HAZARDS BEING EXPERINCED OR PROJECTED THAT COMPROMISE THE FUNCTIONS OF SAFETY SYSTEMS. REACTOR NOT IN COLD SHUTDOWN	
NG SECURITY COMPROMISE	IMMINENT LOSS OF PHYSICAL CONTROL OF PLANT	LOSS OF PHYSICAL CONTROL OF THE FACILITY
E NATURAL PHENOMENA BEING ENCED OR PROJECTED	SEVERE NATURAL PHENOMENA BEING EXPERIENCED OR PROJECTED THAT COMPROMISE THE FUNCTIONS OF SAFETY SYSTEMS. REACTOR NOT IN COLD SHUTDOWN.	ANY MAJOR INTERNAL OR EXTERNAL EVENTS (EG. FIRES, EARTHQUAKES SUBSTANTIALLY BEYOND DESIGN BASIS) WHICH COULD CAUSE MASSIVE COMMON DAMAGE TO PLANT SYSTEMS
PLANT CONDITIONS EXIST NTING PRECAUTIONARY ATION OF THE TSC	OTHER PLANT CONDITIONS EXIST WARRANTING ACTIVATION OF EOF, EMERGENCY CENTERS AND MONITORING TEAMS, OR ISSUANCE OF A PRECAUTIONARY NOTIFICATION TO THE PUBLIC NEAR THE SITE	OTHER PLANT CONDITIONS EXIST, FROM WHATEVER SOURCE, THAT MAKE RELEASE OF LARGE AMOUNTS OF RADIOACTIVITY IN A SHORT TIME PEROID POSSIBLE. E.G. ANY CORE MELT SITUATION.

EMERGENCY CLASSIFICATION GUIDE

FLOWCHART

EVENT CATEGORY 1 1.9

ABNORMAL PRIMARY LEAK RATE 1.11

	INITIATING CONDITIONS 1.15	
UNUSUAL EVENT NO. 5	Exceeding either primary/secondary leak rate technical specification or primary system leak rate technical specification.	1.18 1.19 1.20
ALERT NO. 5	Primary coolant leak rate greater than 50 gpm.	1.21
SITE AREA EMERGENCY NO. 1	Known loss of coolant accident greater than makeup pump capacity.	1.23 1.24
GENERAL EMERGENCY NO. 6c	Small or large LOCA occurs and containment performance is unsuccessful affecting longer term success of the ECCS. Could lead to core degradation or melt in several hours without containment boundary.	1.26 1.28 1.29

UNUSUAL EVENT No. 5 4.54

Initiating Conditions: (NUREG 0654, Appendix 1) 4.57

Exceeding a primary system leak rate Technical Specification. 5.1

Emergency Action Levels 5.3

1. Drywell Leakage 5.5

   a. Drywell Equipment Drain Tank Pump P-032 A or B running more often than once every _____ minutes; indicated by a Drywell Equipment Drain Tank Pump Frequent Start or Excessive Run Alarm on 1G11-PNL-047 and a Rad Waste Sump Trouble Alarm on 1H11 * MCB-01. 5.7 5.8 5.10 5.11

   OR 5.13

   b. Drywell Floor Drain Tank Pump P-161 A or B running more often than once every _____ minutes; indicated by a Drywell Floor Drain Tank Pump Frequent Start or Excessive Run Alarm on 1G11-PNL-047 and a Rad Waste Sump Trouble Alarm on 1H11 * MCB-01 . 5.16 5.17 5.18 5.19

   OR 5.21

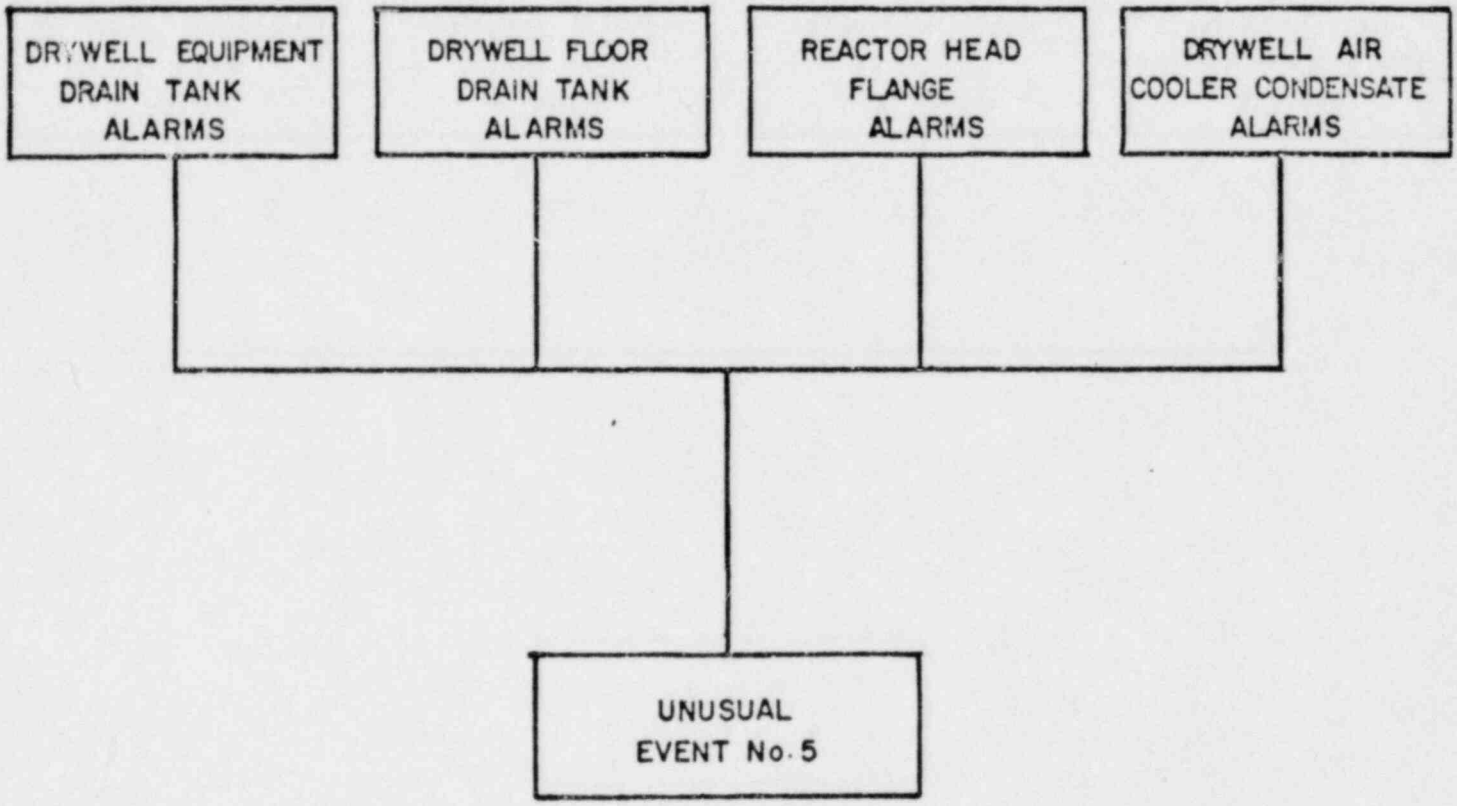
   c. Vessel Head Seal Leak Alarm at 600 psig pressure at panel 1H11 * PNL-603. 5.25

   OR 5.27

   d. High Drywell Air Cooler Condensate Leakoff Flow Alarm on panel 1H11 * PNL-VC2. (Alarm .4 GPM) 5.30 5.32

UNUSUAL EVENT No. 5

LOGIC DIAGRAM



ALERT NO. 5 5.35

Initiating Conditions (NUREG 0654, Appendix 1) 5.38

Primary coolant leak rate greater than 50 gpm with the reactor at operating temperature and pressure. 5.42

Emergency Action Levels 5.44

1. Drywell Leakage 5.47

a.1) Drywell Equipment Drain Tank Hi Level Alarm at 61 inches on panel 1H11*MCB-01. 5.49 5.50

AND 5.52

2) Indication on panel _____ that the Drywell Equipment Drain Tank Pump is running. 5.55 5.56

OR 5.58

b. Drywell Equipment Drain Tank Pump _____ running continuously, longer than _____ minutes as indicated by a Drywell Equipment Drain Tank Pump Frequent Start or Excessive Run Alarm on 1G11-PNL-047 and a Rad Waste Pump Trouble Alarm on 1H11*MCB-01. 6.2 6.3 6.4 6.5

OR 6.7

c.1) Drywell Floor Drain Tank Hi Level Alarm at 61 inches on panel 1H11*MCB-01. 6.10 6.11

AND 6.13

2) Indication on panel _____ that the Drywell Floor Drain Tank Pump is running. 6.16 6.17

OR 6.19

d. Drywell Floor Drain Sump Pump _____ running continuously longer than _____ minutes as indicated by a Drywell Equipment Drain Tank Pump Frequent Start or Excessive Run Alarm on 1G11-PNL-047 and a Rad Waste Sump Trouble Alarm on 1H11*MCB-01. 6.22 6.23 6.24 6.26

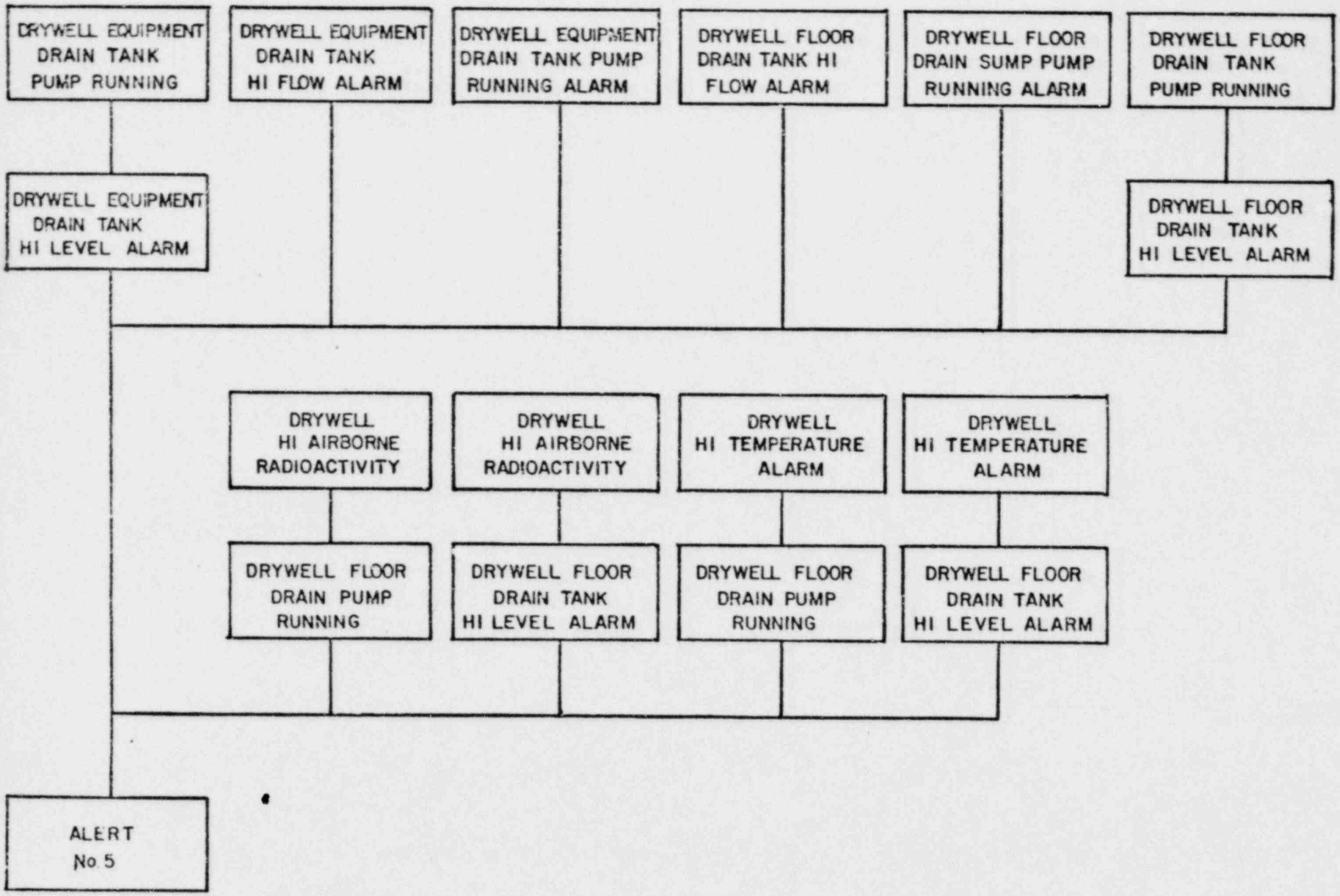
OR 6.28

e. Drywell Equipment Drain Tank Hi Flow Alarm at _____ gpm as indicated on panel _____. 6.31 6.32

OR 6.34

f. Drywell Floor Drain tank Hi Flow Alarm at _____ gpm as indicated on panel _____. 6.37 6.38

ALERT
LOGIC DIAGRAM



SITE AREA EMERGENCY NO. 1 9.27

Initiating Conditions: (NUREG-0654, Appendix 1) 9.30

Known loss of coolant accident greater than make up pump capacity. 9.33

Emergency Action Levels 9.35

1. a. High Drywell Pressure Alarm at 1.69 psig on panel 1H11 * PNL - 601. 9.39

OR 9.41

b. Drywell Containment Area Temp Hi Alarm at ___ °F on panel 1H11 * PNL - VC2. 9.45

OR 9.47

c. Radiation Monitoring System Common Alarm on 1H11 * MCB - 01 and/or * PNL - 080 with indication on Recorders * RR105 or * RR106 or * PNL - 080 of high gaseous or high particulate radiation in the Drywell. 9.50 9.51 9.52

OR 9.54

d. Indication of rapidly decreasing reactor water level on instrument LI-0040 on 1H11 * PNL - 603 with a rapid succession of the following alarms: 9.57 9.58

1) Reactor Water Level Hi/Lo Alarm at + 33.5 inches or 1H11 * PNL-603 10.1

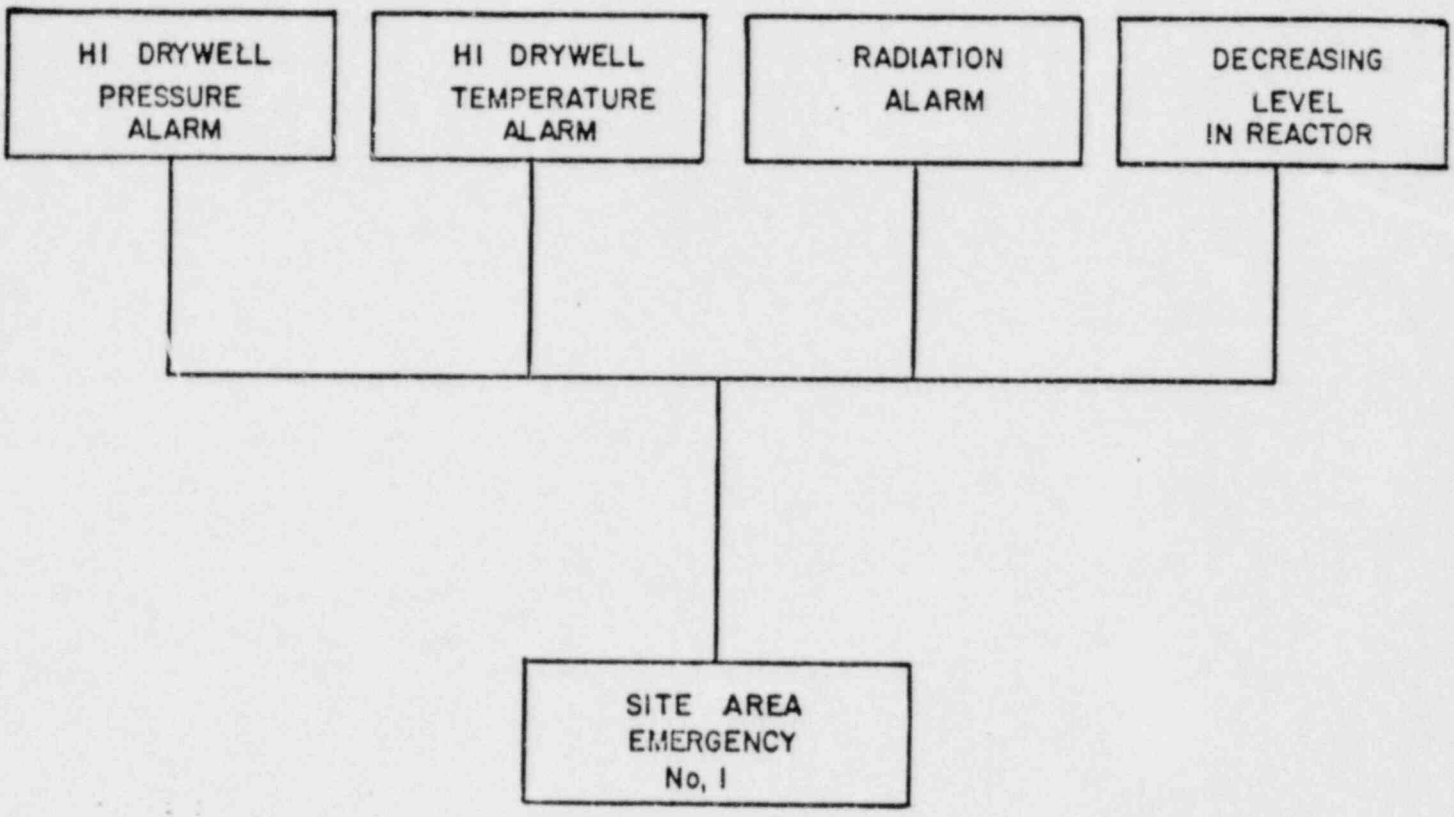
2) Reactor Vessel Level Trip A & B at + 12.5 inches decreasing level on 1H11 * PNL - 603 10.3

3) Reactor Vessel Water Level Lo-Lo Alarm at -38 inches decreasing on 1H11 * PNL - 603 10.4

4) Reactor Water Low Low indication at -146 inches. 10.6

SITE AREA EMERGENCY No. I

LOGIC DIAGRAM



GENERAL EMERGENCY NO. 6c 27.48

Initiating Conditions (NUREG 0654, Appendix 1) 27.51

Small or large LOCA occurs and containment performance is unsuccessful 27.54
affecting longer term success of the ECCS. Could lead to core degradation or 27.56
melt in several hours without containment boundary. 27.57

Emergency Action Levels 27.58

1. On-duty Watch Engineer has determined that a small or large LOCA has 28.1
occurred. 28.2

AND 28.4

2. Failure of containment cooling indicated by: 28.7

   a. Drywell temperature above 296°F on Instrument IT47*TR020 on panel 28.9
   1H11*PNL-VC2 and still rising 28.10

   OR 28.12

   b. Containment cooling has become inadequate and remains inadequate in 28.15
   for 1/2 hour as indicated by: 28.16

      1) Containment spray valves *MOV-038A&B and *MOV-039A&B remain 28.18
      closed as shown on panel 1H11*PNL-601 28.19

      OR 28.21

      2) On-duty Watch Engineer concludes from other indications that 28.25
      containment cooling has become and remains inadequate.

GENERAL EMERGENCY NO. 6C
LOGIC DIAGRAM

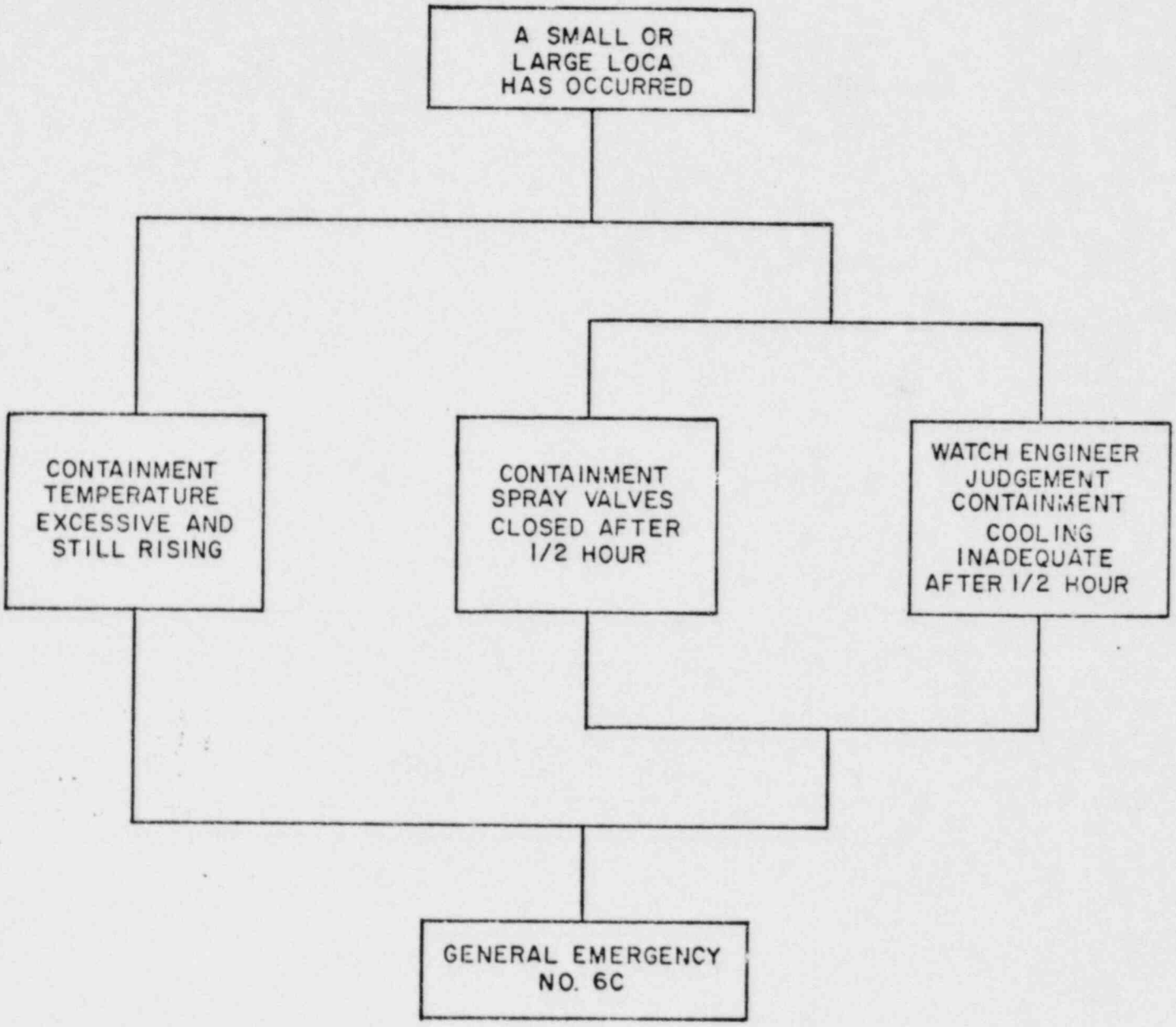


FIG. GE-6C-1

EVENT CATEGORY 2 1.6

ABNORMAL CORE CONDITIONS AND FUEL DAMAGE 1.8 1.9 1.10

INITIATING CONDITIONS 1.14

UNUSUAL EVENT NO. 3

Fuel damage indication. Examples: 1.17

a. High offgas at BWR air ejector monitor (greater than 500,000 uci/sec; corresponding to 16 isotopes decayed to 30 minutes; or an increase of 100,000 uci/sec within a 30 minute time period) 1.21 1.23 1.24 1.25

b. High coolant activity sample (e.g., exceeding coolant technical specifications for iodine spike) 1.26 1.27 1.28

c. Failed fuel monitor (PWR) indicated increase greater than 0.1% equivalent fuel failures within 30 minutes. 1.29 1.30 1.31

UNUSUAL EVENT NO. 4

Abnormal coolant temperature and/or pressure or abnormal fuel temperatures outside of technical specification limits. 1.33

ALERT NO. 1

Severe loss of fuel cladding: 1.34

a. High offgas at BWR air ejector monitor (greater than 5 ci/sec; corresponding to 16 isotopes decayed 30 minutes) 1.37 1.38

b. Very high coolant activity sample (e.g., 300 uci/cc equivalent of I-131) 1.40

c. Failed fuel monitor (PWR) indicates increase greater than 1% fuel failures within 30 minutes or 5% total fuel failures. 1.41 1.42 1.43

ALERT NO. 9

Coolant pump seizure leading to fuel failure. 1.45

SITE AREA EMERGENCY NO. 2

Degraded core with possible loss of coolable geometry (indicators should include instrumentation to detect inadequate core cooling, coolant activity and/or containment radioactivity levels). 1.46

GENERAL EMERGENCY NO. 2

Loss of 2 of 3 fission product barriers with a potential loss of 3rd barrier (e.g., loss of primary coolant boundary, clad failure, and high potential for loss of containment). 1.47

GENERAL EMERGENCY NO. 6b

Small or large LOCA's with failure of ECCS to perform leading to core melt degradation or melt in minutes to hours. Loss of containment integrity may be imminent. 1.48 1.49

UNUSUAL EVENT NO. 3

By LILCO

UNUSUAL EVENT NO. 4 2.9

Initiating Conditions (NUREG-0654, Appendix 1) 2.12

Abnormal coolant temperature and/or pressure or abnormal fuel temperatures 2.15
outside of technical specification limits. 2.16

Emergency Action Levels 2.19

When any of the following plant Safety Limits are exceeded: 2.22

1. Thermal power is greater than 25 percent of rated power on instrument R-603 2.24
as indicated on panel 1H11*PNL-603. 2.25

AND EITHER 2.28

a. Reactor vessel steam dome pressure is less than 785 psig on instrument 2.31
IC32-PI-003 as indicated on panel 1H11*PNL-603. 2.32

OR 2.35

b. Reactor core flow is less than 10 percent of rated flow on instrument 2.38
FI-014 as indicated on panel 1H11*PNL-602. 2.39

2. Minimum critical power ratio (MCPR) is less than 1.06. This will be 2.43
determined by the Periodic Core Performance Program, P1, indicating a
maximum fraction of the limiting critical power ratio (MFLCPR) equal to or
greater than one and a subsequent reactor trip due to a power or flow 2.44
transient.

AND BOTH 2.47

a. Reactor vessel steam dome pressure is greater than 785 psig on 2.50
instrument IC32-PI-003 as indicated on panel 1H11*PNL-603. 2.51

AND 2.54

b. Reactor core flow is greater than 10 percent of rated flow on 2.57
instrument FI-014 as indicated on panel 1H11*PNL-602. 2.58

OR 3.2

3. Reactor vessel steam dome pressure is greater than 1325 psig on instrument 3.4
IC32-PI-003 as indicated on panel 1H11*PNL-603. 3.5

OR 3.8

4. Reactor vessel water level is below the top of active irradiated fuel as 3.12
indicated as Zero inches on the fuel zone level instrument LI-007 on panel
1H11*PNL-601.

UNUSUAL EVENT No. 4
LOGIC DIAGRAM

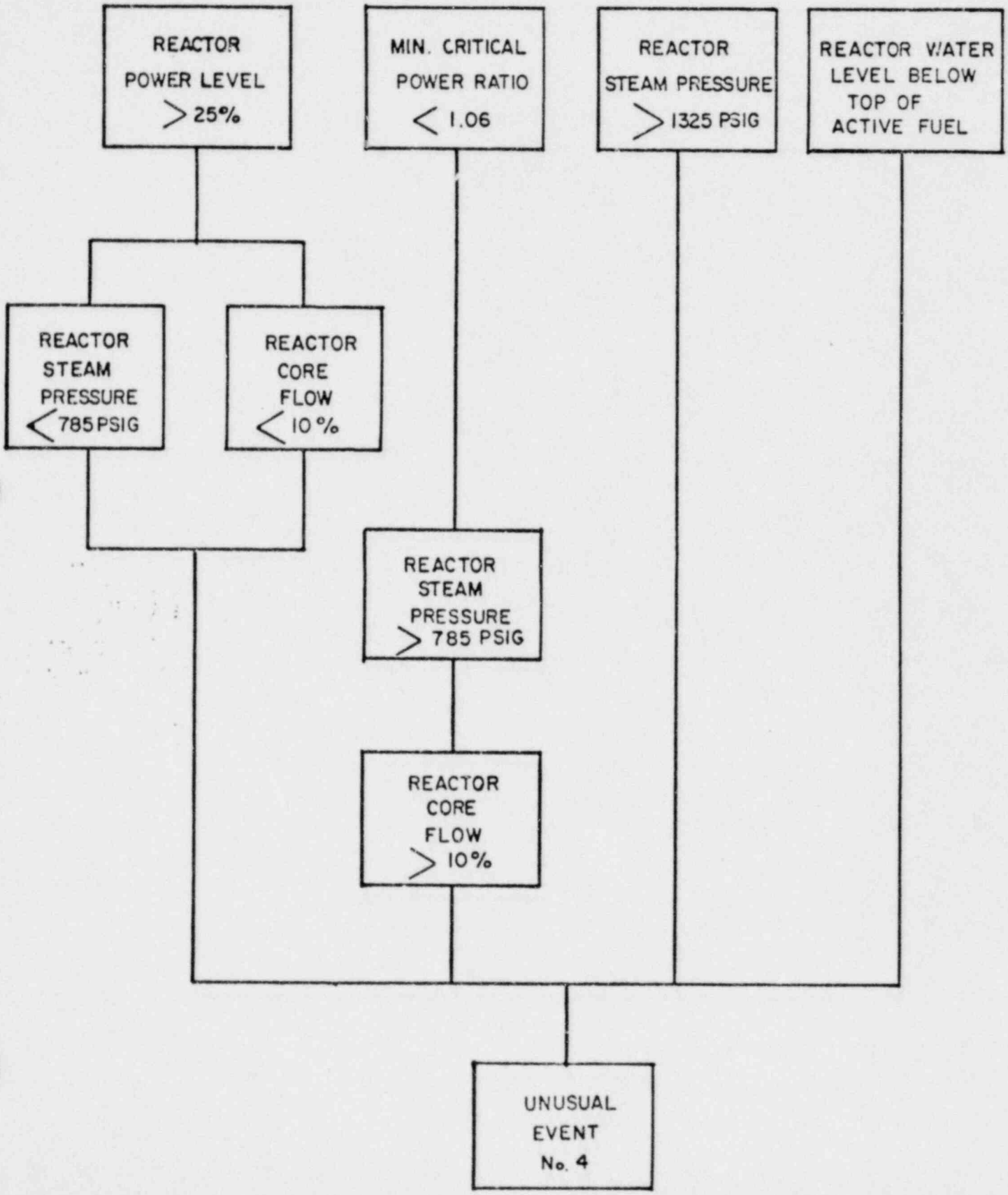


FIG. UE4-1

ALERT NO. 1

By LILCO

ALERT NO. 9 32.54

Initiating Conditions (NUREG-0654, Appendix 1) 32.57

Coolant pump seizure leading to fuel failure. 32.59

Emergency Action Levels 33.2

The combination of the following indications will define this condition: 33.6

1. Recirculation pump seizure indicated by: 33.8

   a. A high temperature alarm from the recirculation pump motor bearings, seal cavity, or cooling water temperature sensors and indicated by "Pump Motor High Temp" alarm on panel 1H11*PNL-602. 33.10 33.11 33.12

   OR 33.14

   b. Pump motor trip due to instantaneous overcurrent and indicated by "Generator (A) (B) Lockout" alarm on panel 1H11*PNL-602. 33.17

   AND 33.19

2. Reactor scram initiated by a turbine trip which was caused by a high reactor vessel water level trip (Level 8). 33.22

   AND 33.24

3. Fuel damage indication according to the Emergency Action Levels of Unusual Event No. 3. 33.27 33.29

ALERT No. 9

LOGIC DIAGRAM

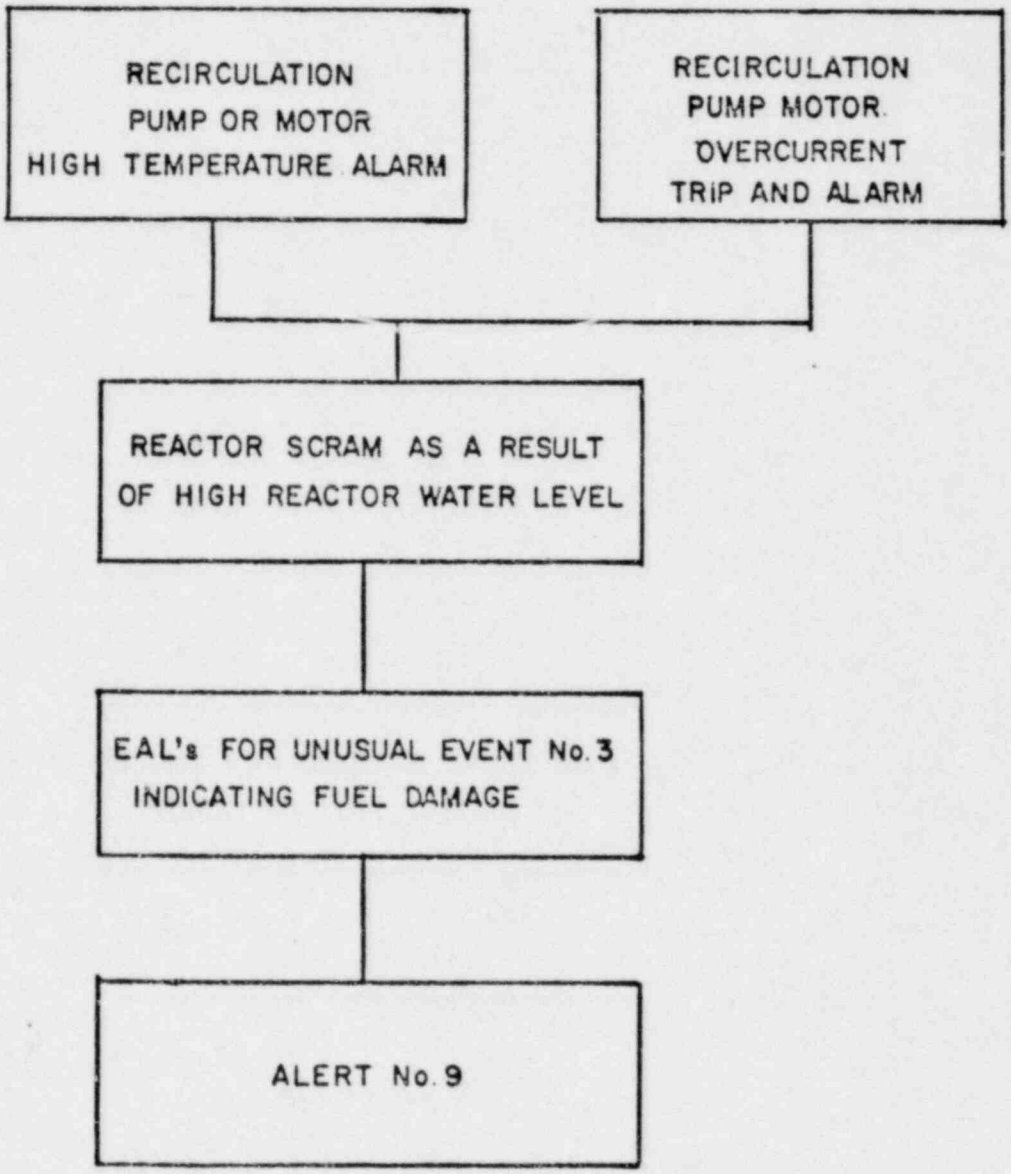


FIG. A9-1

SITE AREA EMERGENCY NO. 2 33.55

Initiating Conditions (NUREG-0654, Appendix 1) 33.58

Degraded core with possible loss of coolable geometry (indicators should include instrumentation to detect inadequate core cooling, coolant activity and/or containment radioactivity levels). 34.2 34.4 34.5

Emergency Action Levels 34.7

This condition will be defined by the following indications: 34.10

1. Severe loss of fuel cladding according to the Emergency Action Levels of Alert No. 1. 34.12 34.13

AND EITHER 34.15

a. Significant loss of coolable geometry as indicated by a 25 to 50 percent increase in core support plate differential pressure for the existing jet pump flow and power level compared to previous operating experience. Core support plate differential pressure and jet pump flow is indicated on recorder XR-014 on panel 1H11*PNL-603. 34.18 34.19 34.20 34.22 34.23

OR 34.25

b. Reactor vessel water level is below the top of active fuel. Zero inches on the fuel zone level instrument LI-007 on panel 1H11*PNL-601. 34.29

SITE AREA EMERGENCY No. 2
LOGIC DIAGRAM

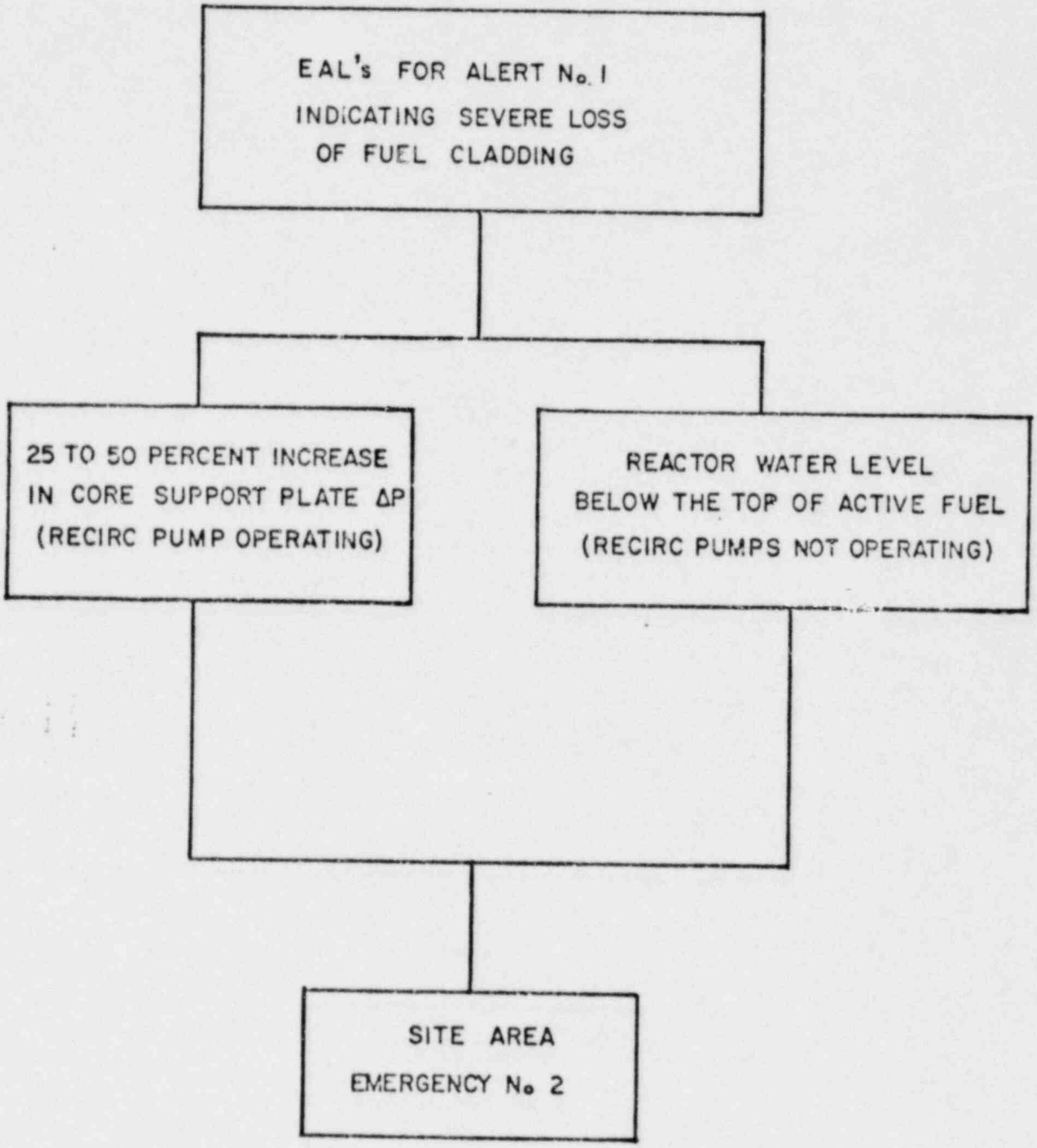


FIG. SAE 2-1

GENERAL EMERGENCY NO. 2 19.52

Initiating Conditions (NUREG-0654, Appendix 1) 19.55

Loss of 2 of 3 fission product barriers with a potential loss of 3rd barrier (e.g., loss of primary coolant boundary, clad failure, and high potential for loss of containment). 19.58

Emergency Action Levels 19.59

Loss of any 2 of the 3 fission product barriers with a potential loss of the 3rd, as follows: 20.1

1. Clad failure and failure of primary coolant boundary with high potential for loss of primary containment. 20.3 20.4

   a. Clad failure indicated by: 20.6

      1) Primary containment post accident radiation monitor _____, on panel _____, indicates levels corresponding to greater than _____, mR/Hr for _____ minutes at the site boundary for adverse meteorology and the secondary containment radiation monitor or the SBGT stack. Effluent radiation monitor provides confirmation of increased effluent release (increase of one decade) 20.8 20.9 20.10 20.11 20.12 20.13

      OR 20.15

      2) Coolant gap activity as indicated by sample analysis (greater than or equal to _____ uCi/gm equivalent of I-131). 20.18 20.19

      OR 20.21

      3) Offgas gap activity on BWR air ejection monitor _____, on panel _____ (greater than _____Ci/sec; corresponding to 16 isotopes decayed _____ minutes) 20.24 20.25 20.26

      OR 20.28

      4) High steam radiation monitor readings on panel _____ 20.31

      AND 20.34

   b. Primary coolant boundary failure indicated by: 20.37

      1) Primary containment post accident radiation monitor _____, on panel _____, indicates levels corresponding to greater than _____, mR/Hr for _____ minutes at the site boundary for adverse meteorology and the secondary containment radiation monitor or the SBGT stack. Effluent radiation monitor provides confirmation of increased effluent release (increase of one decade) 20.40 20.41 20.42 20.43 20.44 20.45

2) High Drywell Pressure Sys I (II) alarms at 1.69 psig on panel 1H11*PNL-601, subsection A2 20.46 20.4.

OR 20.49

3) Primary containment high temperature alarm on panel 1H11*PNL-VC2 20.52

AND 20.54

c. Potential loss of primary containment indicated by: 20.57

1) Primary containment pressure exceeds 43.2 psig as indicated on Instrument C32-PI-003 on panel 1H11*PNL-603 20.59 21.1

OR 21.3

2) Loss of containment cooling indicated by drywell temperature exceeding 296°F and rising on panel 1H11*PNL-VC2 21.6 21.7

OR 21.9

3) On-duty Watch Engineer's opinion based on visual observation of structural cracks or penetration failure, or other independently obtained information. 21.12 21.13 21.14

OR 21.16

2. Failure of primary coolant boundary and primary containment with high potential for clad failure. 21.19 21.20

a. Primary coolant boundary failure indicated by: 21.22

1) Failure of MSIV's 1B21*AOV-082A,B,C,D and 1B21*AOV-081A,B,C,D to isolate as indicated by red open lights on panels 1H11*PNL-601 and 1H11*PNL-602 21.24 21.26

OR 21.28

2) High Drywell Pressure Sys I (II) alarms at 1.69 psig on panel 1H11*PNL-601, subsection A2 21.31 21.32

OR 21.34

3) Primary containment high temperature alarm on panel 1H11*PNL-VC2 21.37

AND 21.39

b. Primary containment failure indicated by: 21.42

1) Failure of MSIV's 1B21*AOV-082 A,B,C,D and 1B21*AOV-081 A,B,C,D to isolate as indicated by red open lights on panels 1H11*PNL-601 and 1H11*PNL-602 21.44 21.45 21.46

OR 21.48

2) On-duty Watch Engineer observes from valve status indicators 21.51
that all containment penetrations required for isolation are 21.52
not valved off or closed, noting that during an accident 21.54
closure by a single valve rather than two valves in series 21.55
will suffice.

OR 21.58

3) On-duty Watch Engineer's opinion, based on visual 22.2
observation or other independently obtained information, 22.3
such as unexplained decrease in Suppression Pool level or 22.4
unexplained increase in secondary containment activity. 22.5

AND 22.8

c. Potential clad failure indicated by: 22.11

1) Core uncovered, indicated by water level below "0" on 22.14
instrument no. L1S-007 on panel 1H11*PNL-601 and still 22.15
falling

OR 22.17

2) On-duty Watch Engineer's opinion, based on other indications 22.20
in absence of falling water level, that ECCS has failed 22.21

3. Clad failure and primary containment failure with high potential for 22.24
primary coolant boundary failure. 22.25

a. Clad failure indicated by: 22.27

1) Coolant gap activity as indicated by sample analysis 22.29
(greater than or equal to _____ uCi/gm equivalent of I-131) 22.30

OR 22.32

2) Offgas gap activity at BWR air ejector monitor _____, on 22.35
panel _____; (greater than _____Ci/sec; corresponding to 16 22.36
isotopes decayed _____ minutes) 22.37

OR 22.39

3) High steam radiation monitor readings on panel _____ 22.42

AND 22.44

b. Primary containment failure indicated by: 22.47

1) On-duty Watch Engineer observes valve status indicators that 22.49
all containment penetrations required for isolation are not 22.51
valved off or closed, noting that during an accident closure 22.53

by a single valve rather than two valves in series will suffice. 22.54

OR 22.56

2) On-duty Watch Engineer's opinion, based on visual observation or other independently obtained information, such as unexplained decrease in Suppression Pool level or unexplained increase in secondary containment activity 22.59 23.1 23.2 23.3

AND 23.5

c. Potential failure of primary coolant boundary indicated by: 23.8

1) Reactor pressure exceeds 1075 psig and increasing, as shown by Instrument C32-PI-003 on panel 1H11*PNL-603 23.10 23.11

OR 23.13

2) On-duty Watch Engineer's opinion, based on other indications in absence of rising reactor pressure, that ECCS has failed 23.16 23.17

GENERAL EMERGENCY No. 2

LOGIC DIAGRAM

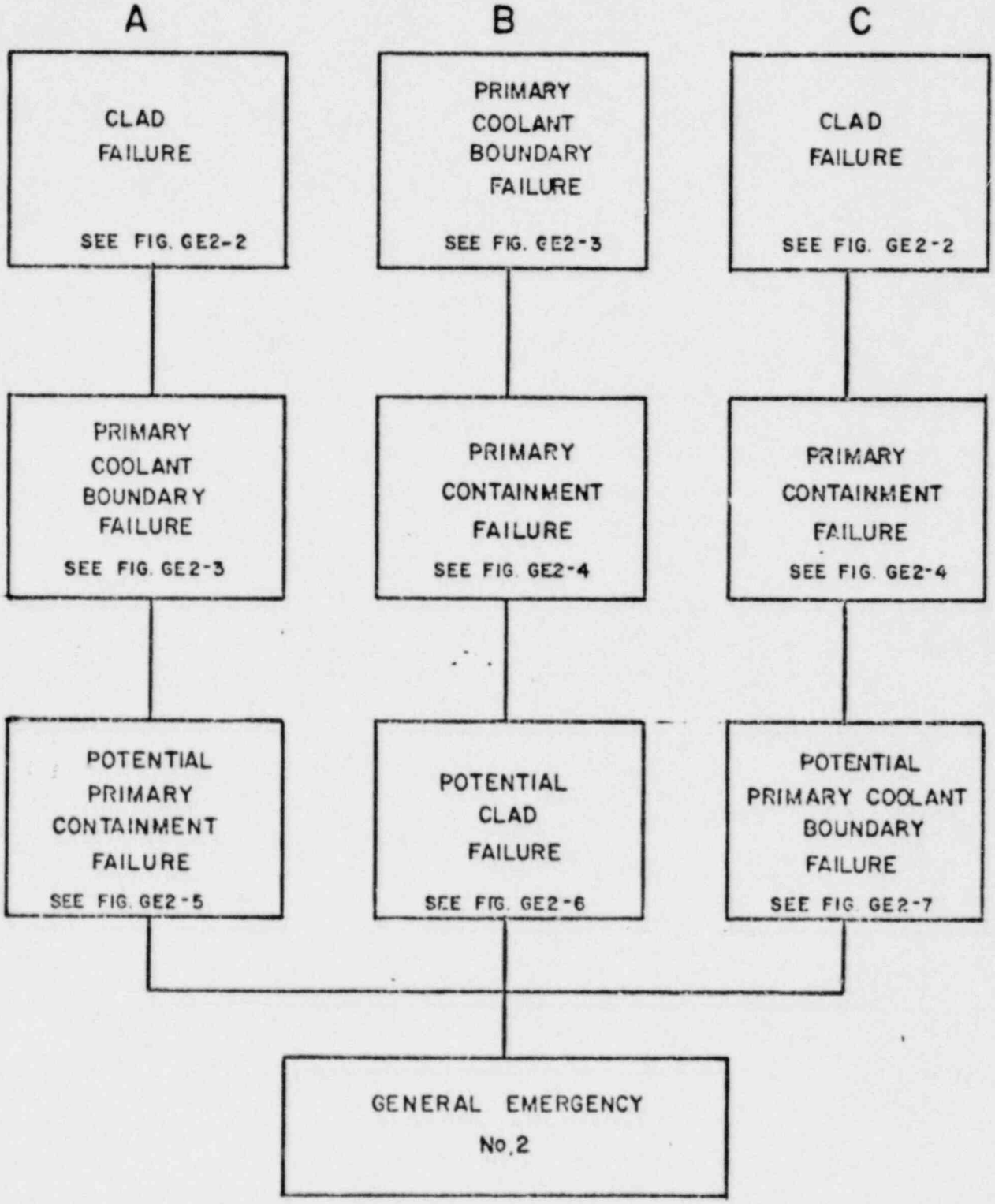


FIG. GE2-1

GENERAL EMERGENCY No. 2

LOGIC DIAGRAM

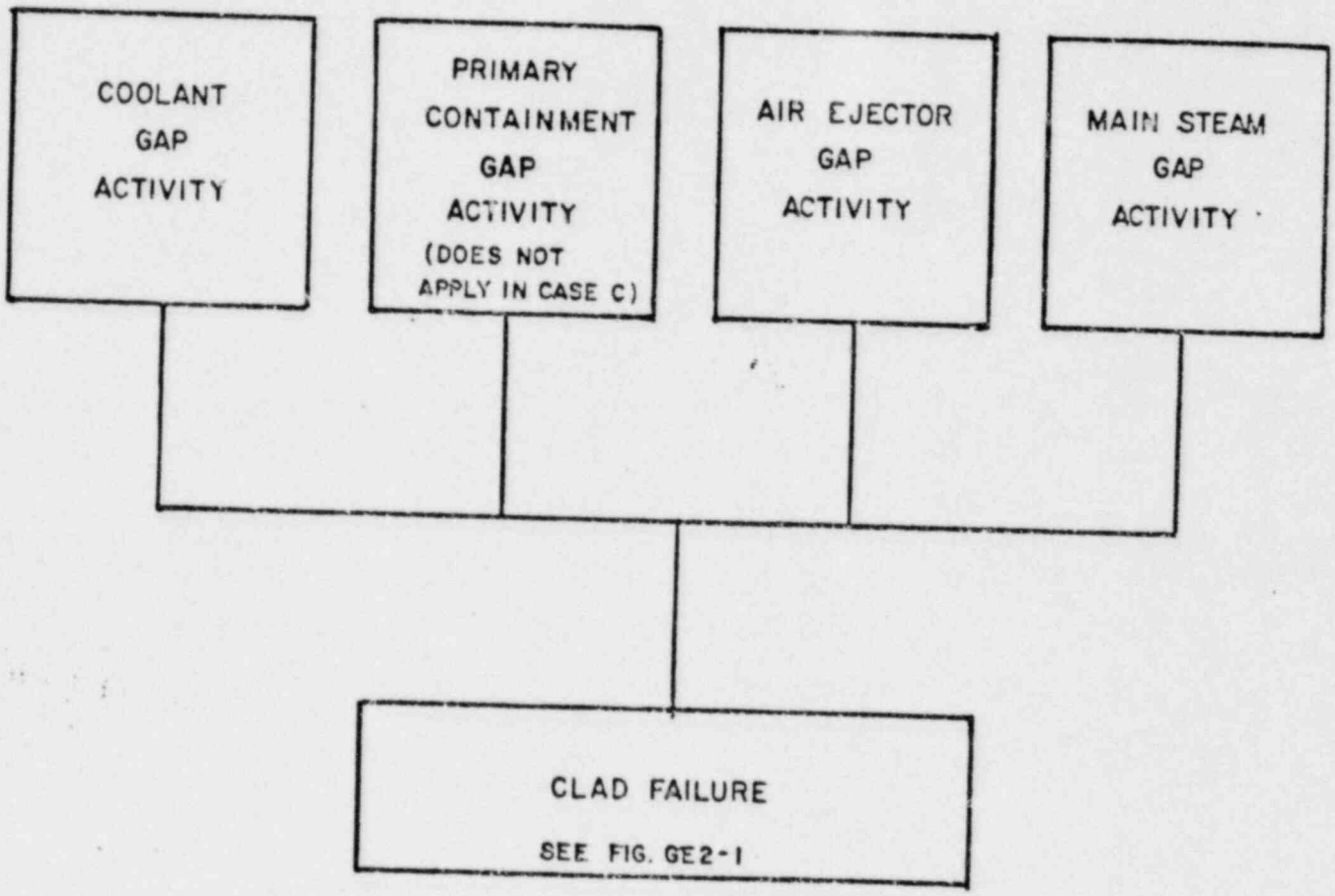


FIG. GE2-2

GENERAL EMERGENCY No. 2

LOGIC DIAGRAM

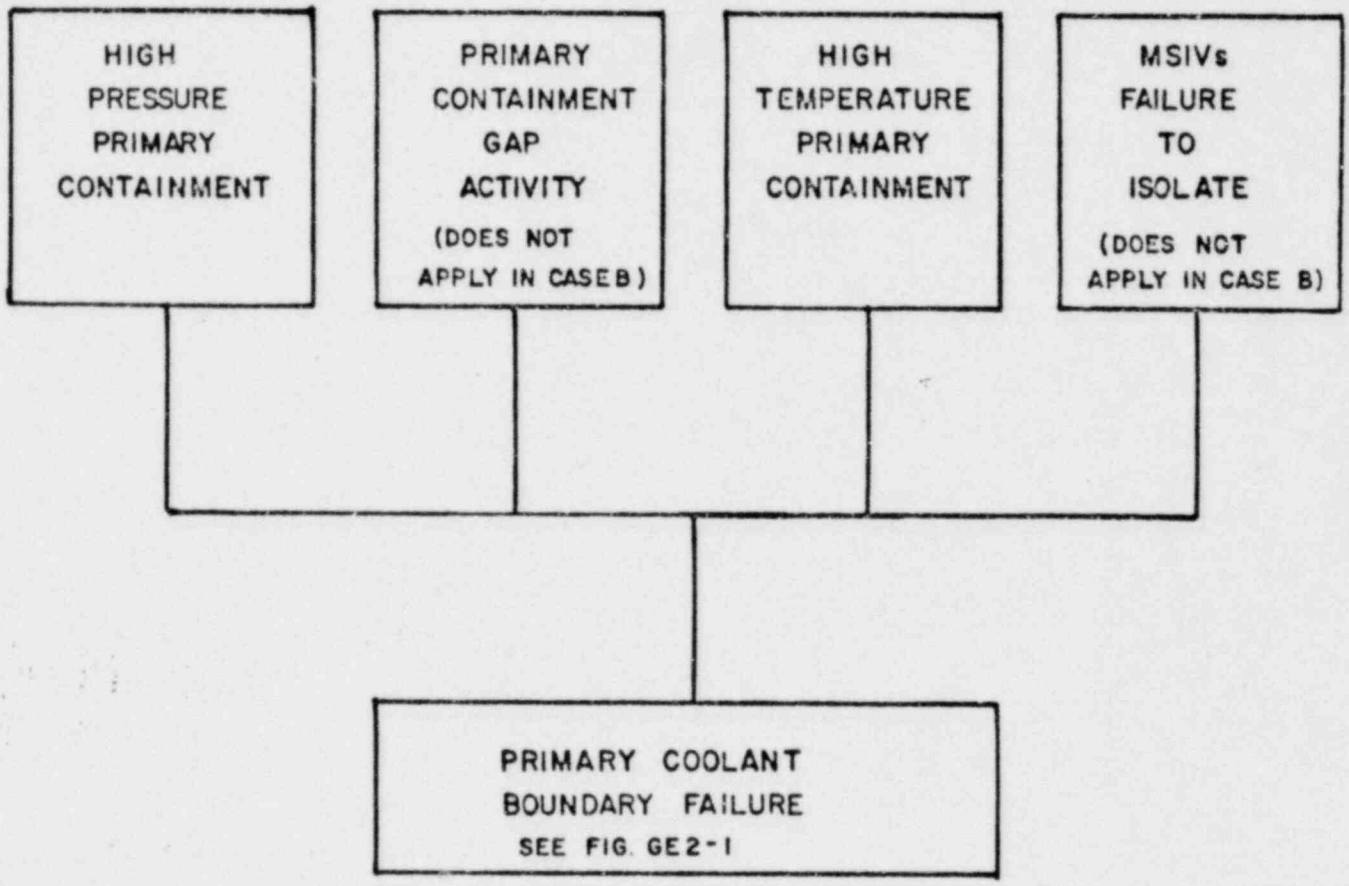


FIG. GE2-3

GENERAL EMERGENCY No. 2

LOGIC DIAGRAM

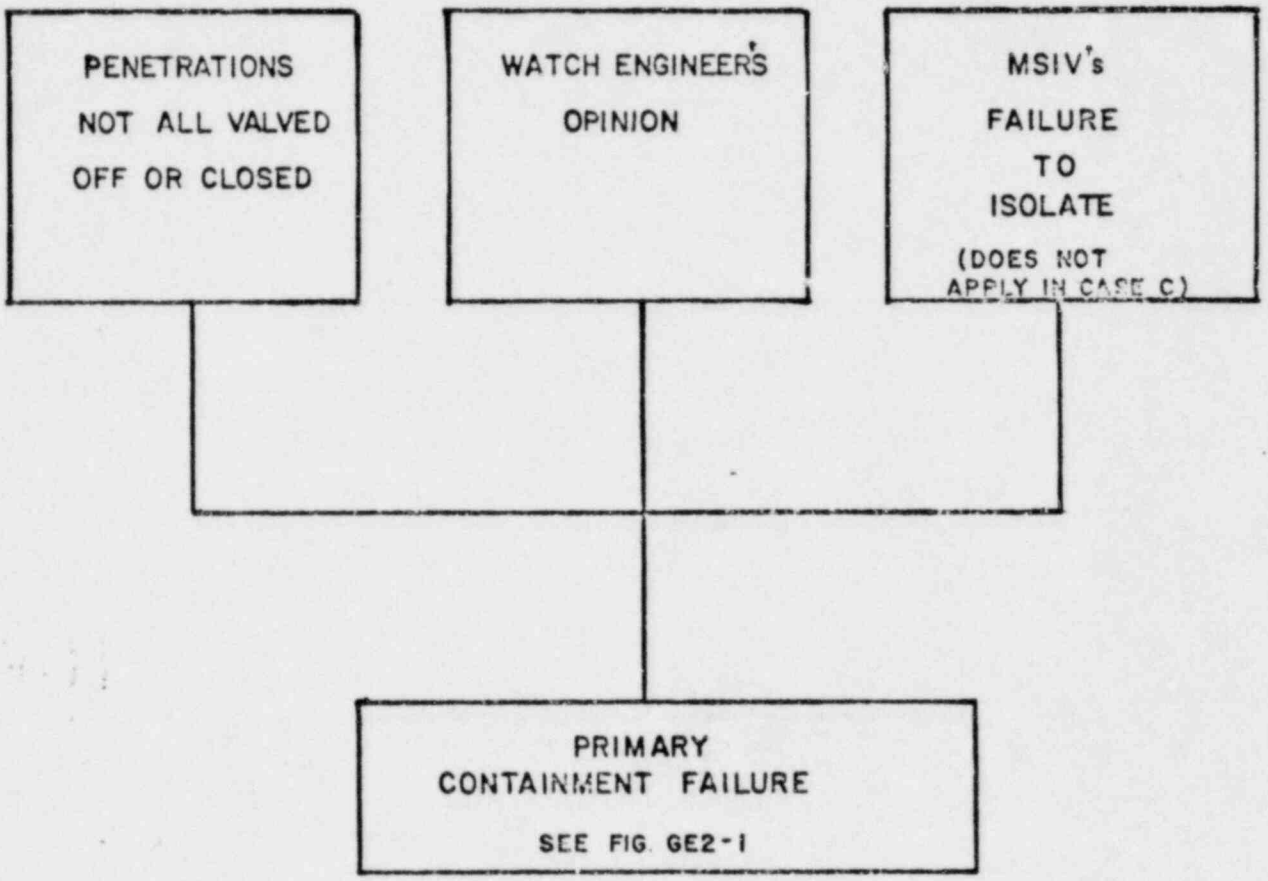


FIG. GE2-4

GENERAL EMERGENCY No. 2

LOGIC DIAGRAM

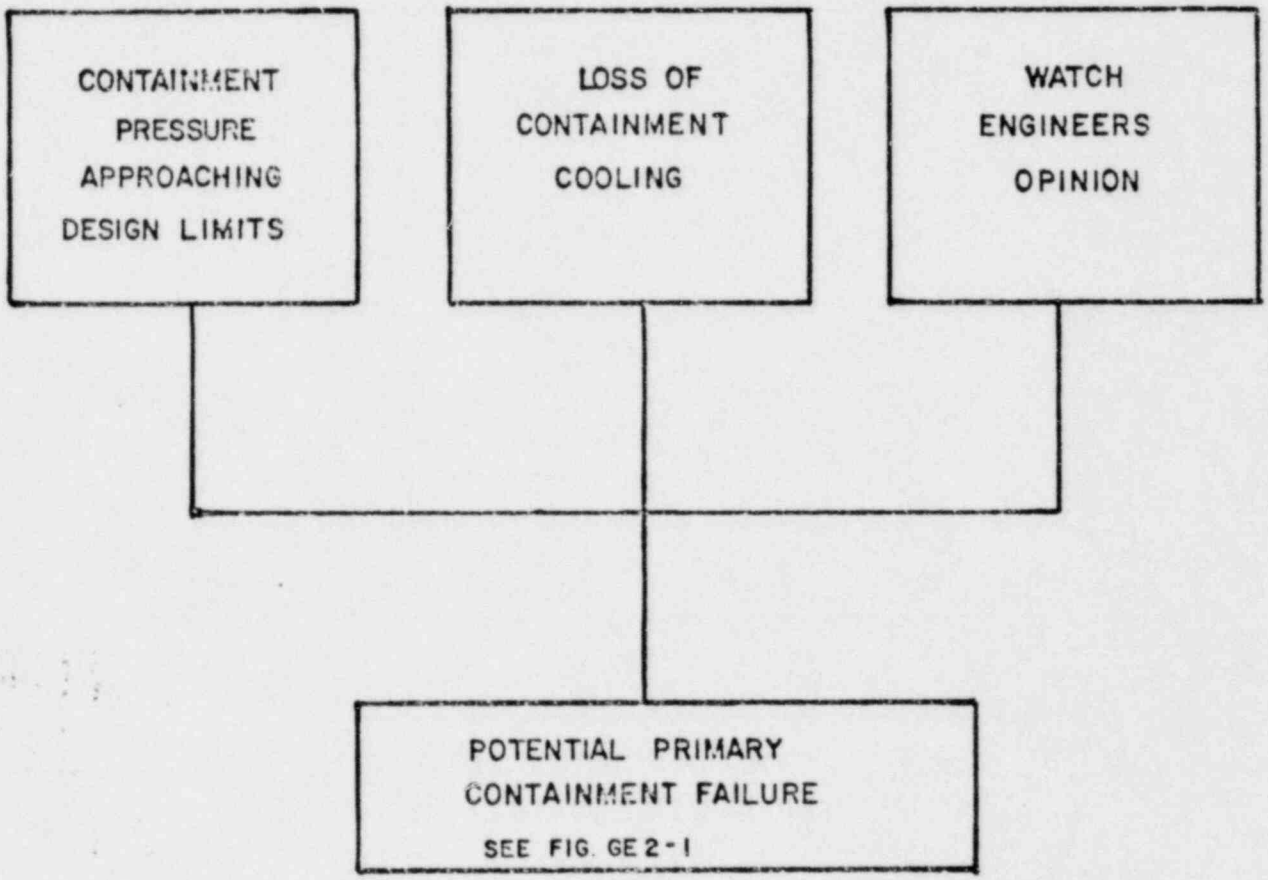


FIG. GE2-5

GENERAL EMERGENCY No. 2
LOGIC DIAGRAM

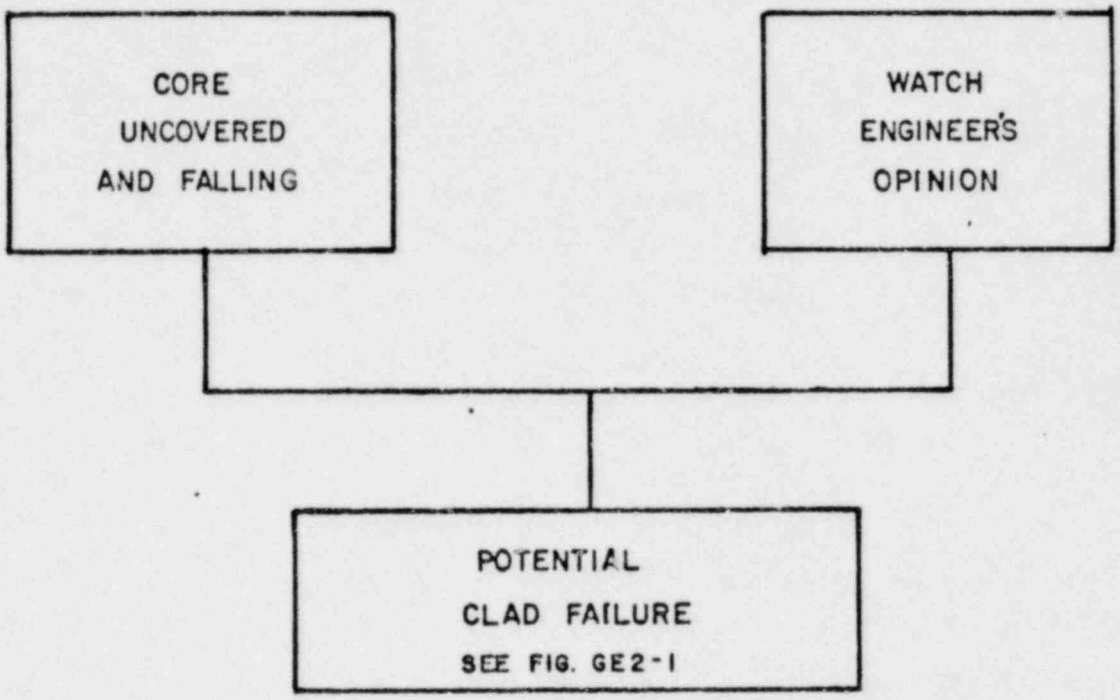


FIG. GE2-6

GENERAL EMERGENCY No. 2

LOGIC DIAGRAM

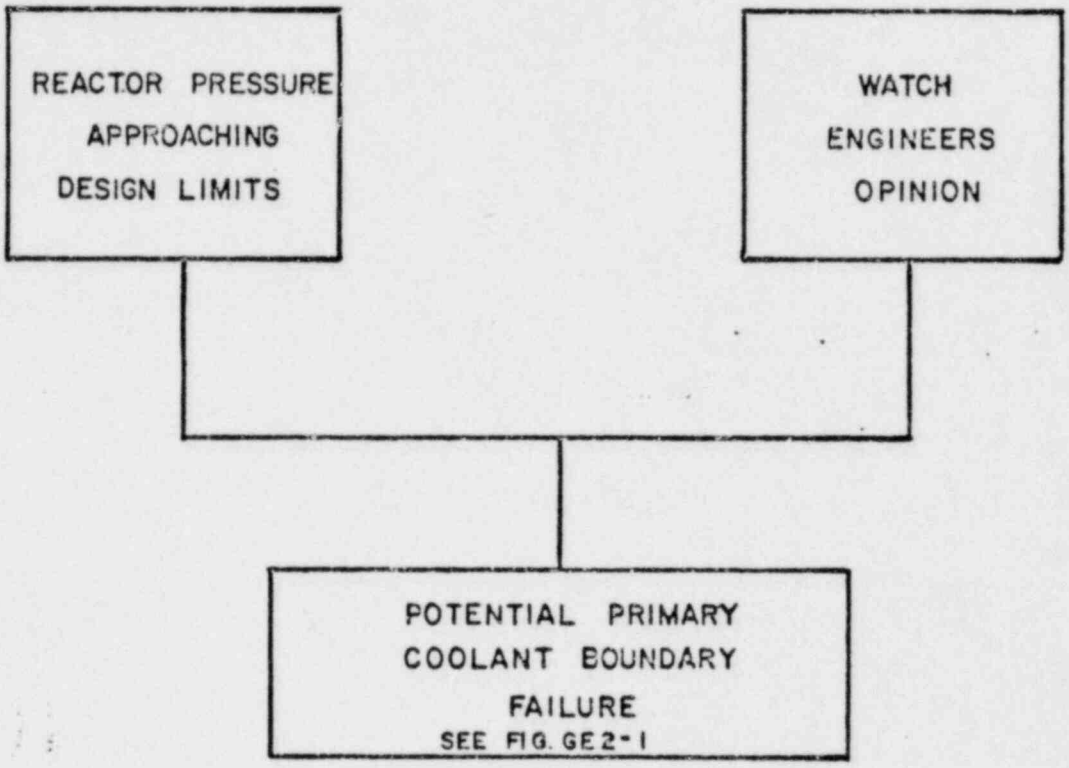


FIG. GE 2-7

GENERAL EMERGENCY NO. 6b

25.27

Initiating Conditions (NUREG - 0654, Appendix 1) 25.30

Small or large LOCA'S with failure of ECCS to perform leading to core melt degradation or melt in minutes to hours. Loss of containment integrity may be imminent. 25.33 25.35

Emergency Action Levels 25.37

1. Loss of primary coolant boundary indicated by: 25.40

   a. High Drywell Pressure Sys I (II) alarm at 1.69 psig on panel 1H11*PNL-601, subsection A2. 25.43

   OR 25.45

   b. Primary Containment High Temperature alarm on panel 1H11*PNL-VC2. 25.49

   OR 25.51

   c. Radiation Monitoring System Common Alarm on 1H11*MCB-01 and/or *PNL-080 with indication on Recorders *RR105 or *RR106 or *PNL-080 of high gaseous or high particulate radiation in the Drywell. 25.55 25.56 25.58

   OR 26.1

   d. Indication of rapidly decreasing reactor level on 1H11*PNL-603 with a rapid succession of the following alarms: 26.4 26.6

      1) Reactor Level Hi or Lo alarm at +33.5 inches on 1H11*PNL-603 26.8

      2) Reactor Level Trip Initiation at + 12.5 inches and decreasing level on 1H11*PNL-603, subsection A9-13 26.9 26.10

      3) Reactor Lo-Lo Level alarm at -38 inches on 1H11*PNL-603, subsection A10 26.11 26.12

      4) Reactor Low Level Initiation alarm on 1H11*PNL-603 26.13

AND 26.15

2. Clad failure indicated by: 26.18

   a. Radiation Monitoring System Common alarm on 1H11*MCB-01 and/or *PNL-080 with indication on Recorders *RR105 or *RR106 or *PNL-080 of high gaseous or high particulate radiation in the Drywell. 26.20 26.21 26.22

   OR 26.24

   b. Coolant gap activity as indicated by sample analysis (greater than or equal to _____ uCi/gm equivalent of I - 131) 26.27 26.28

   OR 26.30

c. Offgas gap acitivity at BWR air ejection monitor on panel _____ 26.33
(greater than _____ Ci/sec; corresponding to 16 isotopes decayed _____ 26.35
minutes)

AND 26.37

3. ECCS malfunction, indicated by: 26.40

a. Core uncovered, indicated by water level below "0" on instrument No. 26.43
1B21*LIS-007 on panel 1H11*PNL-601 and still falling.

OR 26.45

b. Primary Containment High Temperature alarm on panel 1H11*PNL-VC2 26.48

26.49

GENERAL EMERGENCY No. 6B

LOGIC DIAGRAM

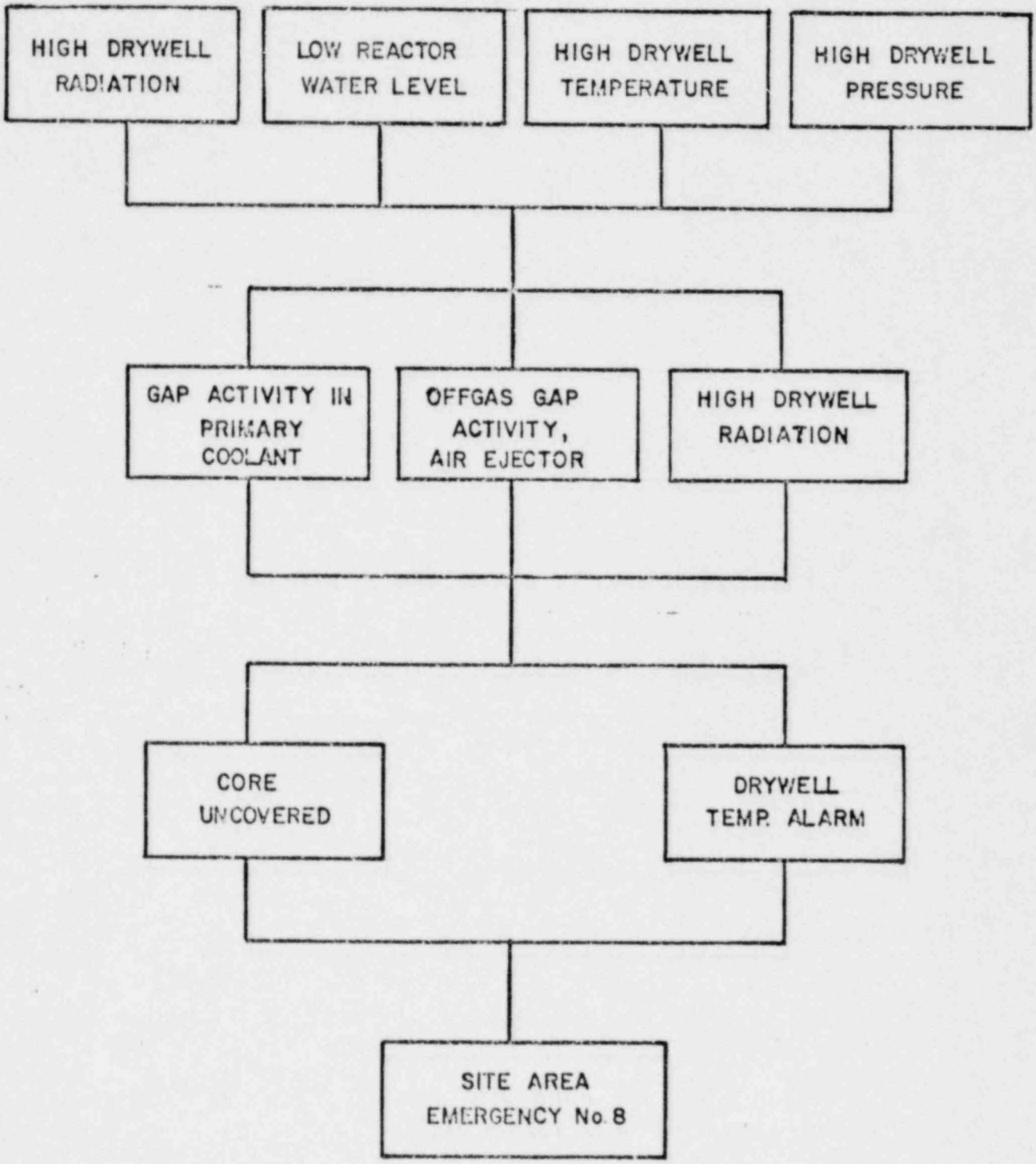


FIG. GE6B-1

EVENT CATEGORY 3 — 1.9

STEAM LINE BREAK OR MS RV/SV FAILURE — 1.11, 1.12

INITIATING CONDITIONS — 1.16

UNUSUAL EVENT NO. 6	Failure of a safety or relief valve in a safety related system to close following reduction of applicable pressure.	1.19 1.21
ALERT NO. 4	Steam line break with significant (e.g., greater than 10 gpm) primary to secondary leak rate (PWR) or MSIV malfunction causing leakage (BWR).	1.22 1.23 1.24
SITE AREA EMERGENCY NO. 4	BWR steam line break outside containment without isolation.	1.25 1.26

UNUSUAL EVENT NO. 6 13.23

Initiating Conditions (NUREG - 0654, Appendix 1) 13.26

Failure of a safety or relief valve in a safety related system to close following reduction of applicable pressure. 13.29 13.30

Emergency Action Levels 13.31

Safety or relief valves in Reactor Coolant System lifts on high pressure and pressure returns to normal: 13.33

1. Failure of relief valve discharge temperature to decrease recorded on panel 1H11*PNL-614 13.35

OR 13.37

2. Safety relief valve leaking alarm on panel 1H11*PNL-602 13.40

OR 13.42

3. Relief valve red light OPEN indication on panel 1H11*PNL-602 remains illuminated 13.45

UNUSUAL EVENT No. 6
LOGIC DIAGRAM

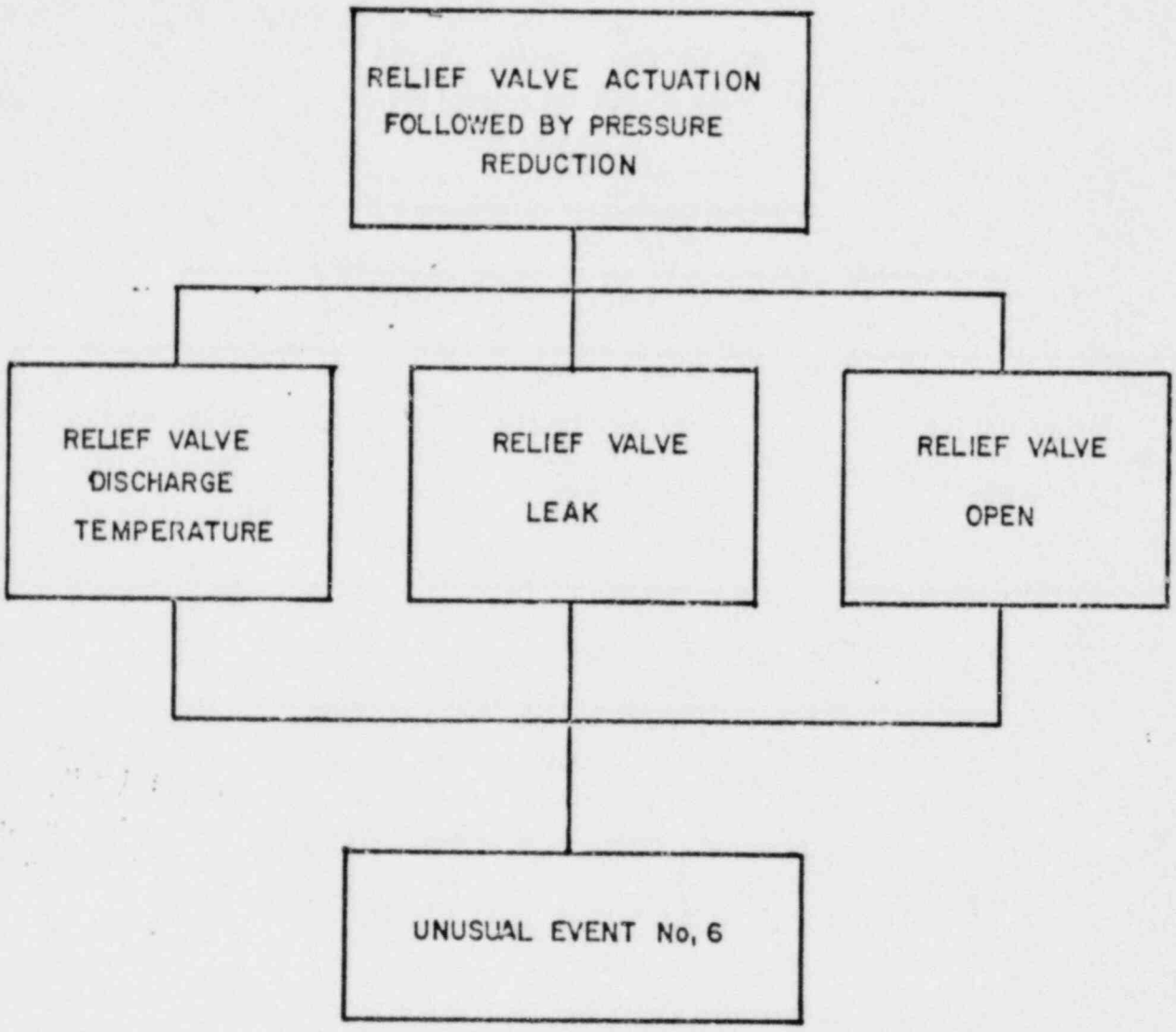


FIG. UE6 - 1

ALERT NO. 4 32.16

Initiating Conditions (NUREG-0654, Appendix 1) 32.19

Steam line break with MSIV malfunction causing leakage (BWR). 32.22

Emergency Action Levels 32.24

A steam line break with Main Steam Isolation Valve (MSIV) malfunction causing leakage will be defined by the following indications: 32.27

1. Automatic MSIV closure caused by any of the following trips: 32.29

   a. Main Steam Line (MSL) high flow alarm of 106 psi differential as indicated on panel 1H11*PNL-603. 32.31

   OR 32.33

   b. MSL tunnel space high temperature alarm of 185°F as indicated on panel 1H11*PNL-603. 32.36

   OR 32.38

   c. MSL tunnel ventilation high differential temperature alarm of 50°F as indicated on panel 1H11*PNL-601. 32.41

   AND 32.43

2. Watch Engineer judgement that the MSIV's have malfunctioned based on evidence of continuing main steam leakage, e.g.: 32.46

   a. Main steam line flow 32.48
   b. Elevated space temperatures 32.49
   c. Increased area radiation levels 32.50
   d. Direct observation 32.51

ALERT No. 4
LOGIC DIAGRAM

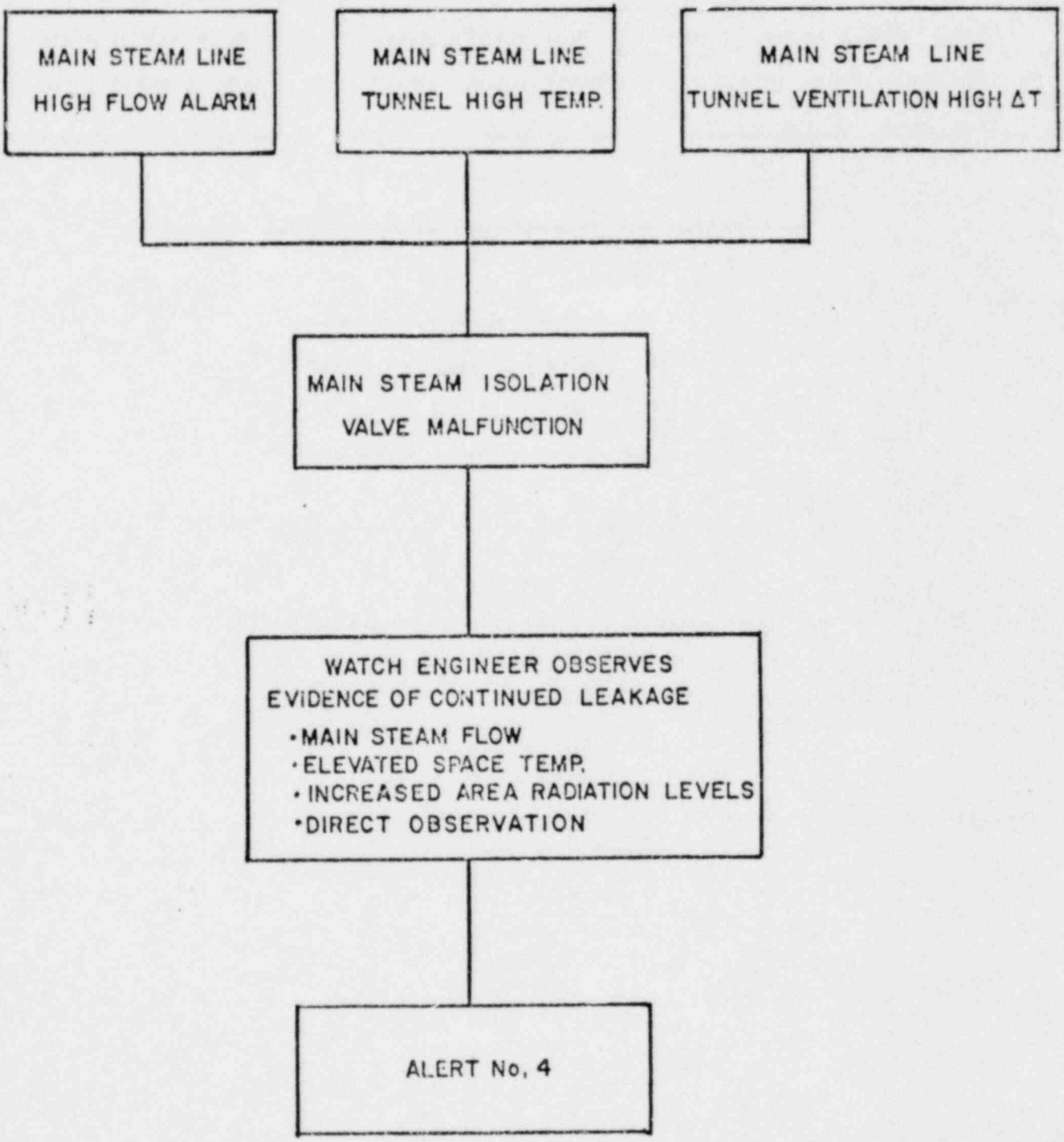


FIG. A4-1

SITE AREA EMERGENCY NO. 4 34.32

Initiating Conditions (NUREG-0654, Appendix 1) 34.35

BWR steam line break outside containment without isolation. 34.38

Emergency Action Levels 34.40

1.a. Main Steam Line (MSL) break outside containment indicated by any of the following: 34.44

1) MSL high steam flow alarm of 106 psi differential as indicated on panel 1H11*PNL-603. 34.46

OR 34.48

2) MSL tunnel space high temperature alarm of 185°F as indicated on panel 1H11*PNL-603. 34.52

OR 34.54

3) MSL tunnel ventilation high differential temperature of 50°F as indicated on panel 1H11*PNL-603. 34.57

AND 34.59

No isolation of the break as indicated by: 35.3

b. Failure of two MSL isolation valves (AOV-081A-D and AOV-082A-D) in series to close as indicated by the position indication lights on panels 1H11*PNL601 and 602. 35.6 35.8

OR 35.10

2.a. High Pressure Coolant Injection (HPCI) steam supply break outside containment indicated by any of the following: 35.13

1) HPCI high steam flow alarm of 233 inches of water pressure differential as indicated on panel 1H11*PNL-601. 35.15 35.16

OR 35.18

2) HPCI equipment area high temperature alarm of 134°F as indicated on panel 1H11*PNL-601. 35.22

OR 35.24

3) HPCI steam supply pressure low alarm of 110 psig as indicated on panel 1H11*PNL-601. 35.27

AND 35.29

No isolation of the break as indicated by: 35.32

SITE AREA EMERGENCY No. 4

LOGIC DIAGRAM

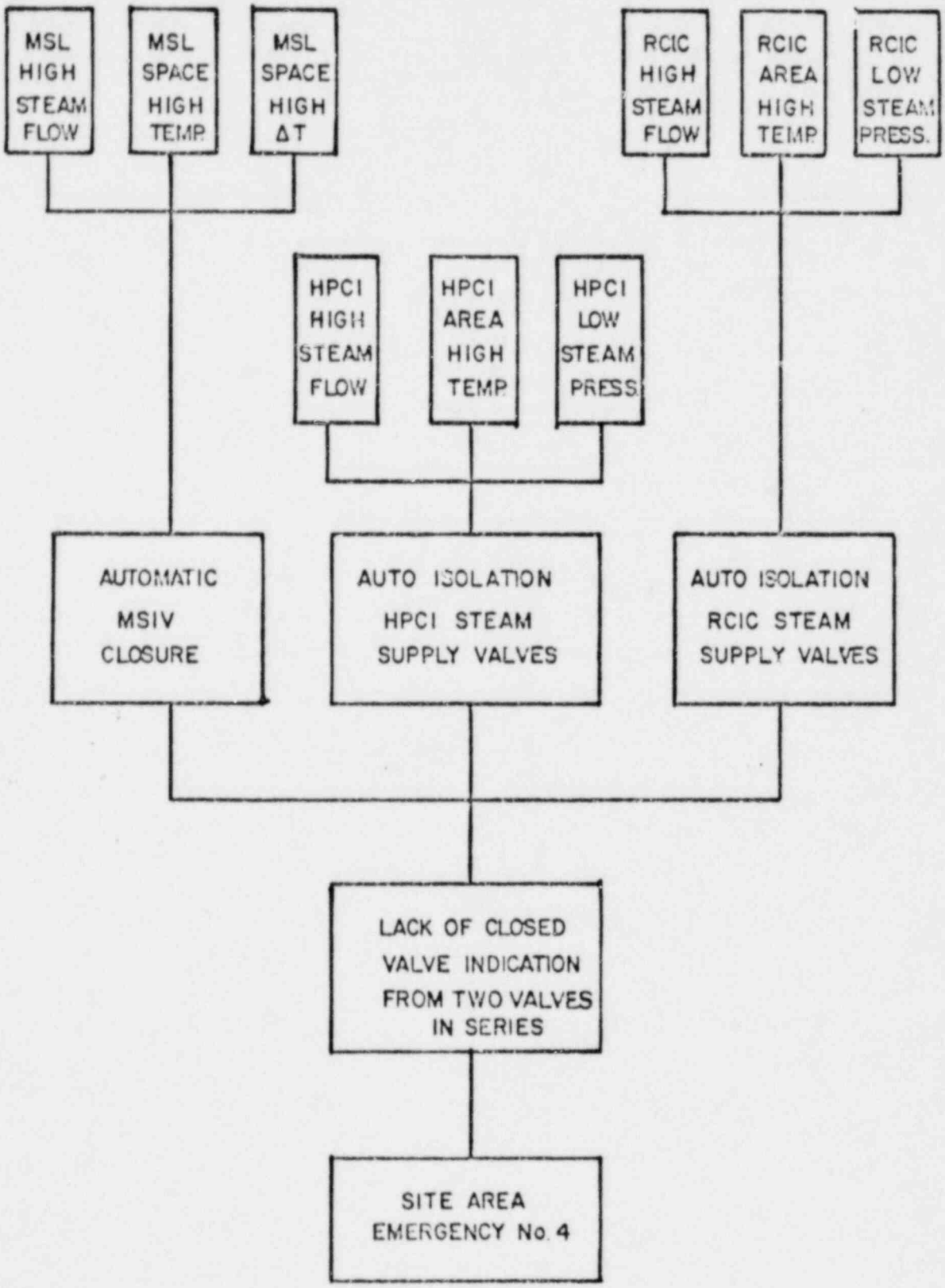


FIG. SAE 4 - 1

	EVENT CATEGORY 4	1.9
	OTHER LCO'S	1.11
	INITIATING CONDITIONS	1.15
UNUSUAL EVENT NO. 1	Emergency Core Cooling System (ECCS) initiated and discharge to vessel.	1.18 1.19
UNUSUAL EVENT NO. 8	Loss of containment integrity requiring shutdown by technical specifications.	1.20 1.21
UNUSUAL EVENT NO. 9	Loss of engineered safety feature or fire protection function requiring shutdown by technical specifications (e.g., because of malfunction, personnel error or procedural inadequacy).	1.22 1.23 1.24

UNUSUAL EVENT NO. 1 1..48

Initiating Conditions (NUREG - 0654, Appendix 1) 13.51

Emergency Core Cooli System (ECCS) initiated and discharge to vessel 13.54

Emergency Action Levels 13.56

1. High Pressure Coolant Injection flow to Reactor Vessel 13.59

   a. HPCI system initiation indicated by white indicating light for HPCI initiation signal sealed in on panel 1H11*PNL-601 14.2 14.3

   AND 14.5

   b. HPCI flow indication on FIC-003 exceeds 800 gpm on panel 1H11*PNL-601 14.8

   AND 14.10

   c. HPCI pump discharge valves MOV-034 and MOV-035 to Reactor Vessel are open, indicated by red light on panel 1H11*PNL-601 14.13 14.14

   OR 14.16

2. Core Spray flow to Reactor Vessel 14.19

   a. Automatic Depressurization System activation indicated by ADS Logic A,B,C&D energized alarms on panel 1H11*PNL-602 14.21

   AND 14.23

   b. CSS flow indication exceeds 420 gpm on FIS-002 A(B) on panel 1H11*PNL-601 14.27

   AND 14.29

   c. CSS Injection valves MOV-033A(B) to Reactor Vessel are open, indicated by red light on panel 1H11*PNL-601 14.32 14.33

   OR 14.35

3. Low Pressure Coolant Injection flow to Reactor Vessel 14.38

   a. Automatic Depressurization System activation indicated by ADS Logic A,B,C&D energized alarms on panel 1H11*PNL-602 14.40

   AND 14.42

   b. LPCI flow indication exceeds 400 gpm on FI-001A(B) on panel 1H11*PNL-601 14.46

   AND 14.48

c. LPCI isolation valves MOV-036 A(B) and MOV-037A(B) are open, indicated by red light on panel 1H11*PNL-601 14.51 14.52

UNUSUAL EVENT No. 1

LOGIC DIAGRAM

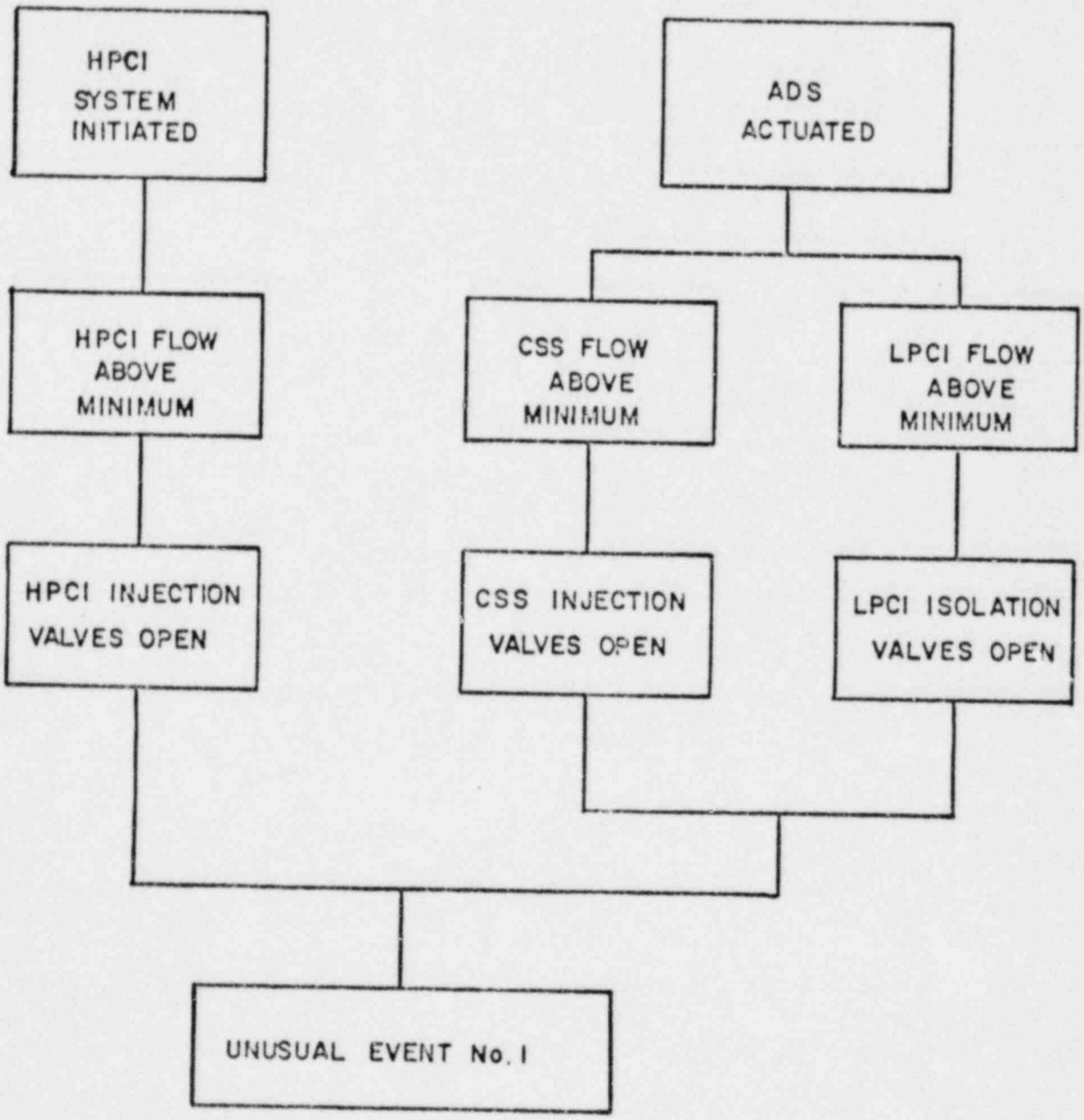


FIG. UEI-1

UNUSUAL EVENT 8 10.30

Initiating Conditions (NUREG 0654, Appendix 1) 10.33

Loss of containment integrity requiring shutdown by technical specifications 10.36

Emergency Action Levels 10.38

1. Failing to meet any one of the following Limiting Conditions for Operation (LCO for primary containment and requiring shutdown): 10.40 10.43

   a. TS 3.6.1.3, Primary Containment Air Locks 10.45

      OR 10.47

   b. TS 3.6.1.4, Main Steam Isolation Valves (MSIV) Leakage Control System 10.49 10.50

      OR 10.52

   c. TS 3.6.1.6, Primary Containment Internal pressure 10.54

      OR 10.56

   d. TS 3.6.1.7, Primary Containment Average Air temperature 10.58

      OR 11.1

   e. TS. 3.6.1.8, Primary Containment Ventilation System 11.3

      OR 11.5

   f. TS 3.6.2.1, Suppression Pool 11.7

      OR 11.9

   g. TS 3.6.2.2, Suppression Pool Spray 11.11

      OR 11.13

   h. TS 3.6.2.3, Suppression Pool Cooling 11.15

      OR 11.17

   i. TS 3.6.3, Primary Containment Isolation Valves 11.19

      OR 11.21

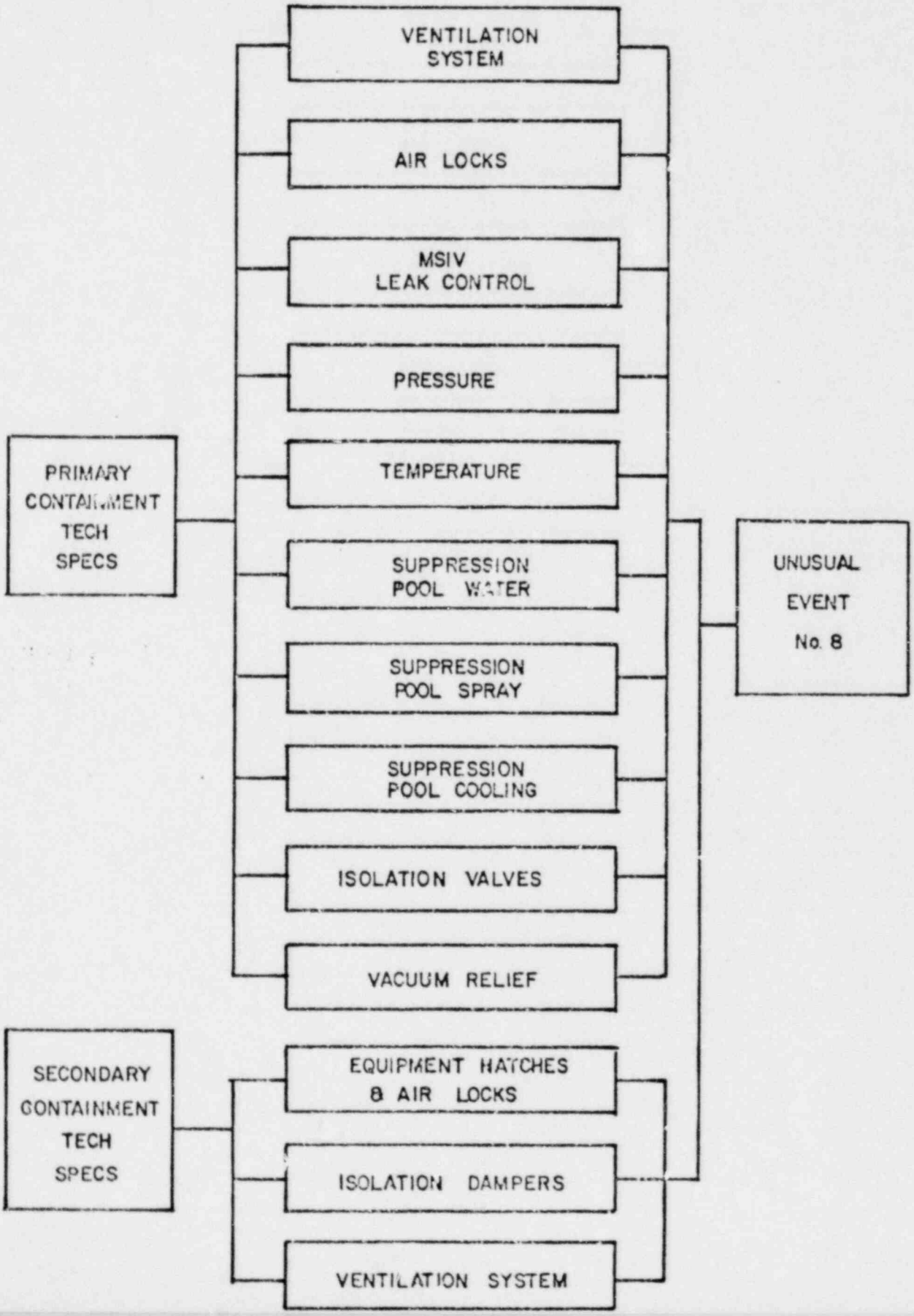
   j. TS 3.6.4, Duppression Chamber - Drywell Vacuum Breakers 11.23

      OR 11.25

2. Failing to meet any one of the following LCO's for secondary containment: 11.28 11.29

UNUSUAL EVENT No. 8

LOGIC DIAGRAM



UNUSUAL EVENT NO. 9 11.44

Initiating Conditions (NUREG-0654, Appendix 1) 11.47

Loss of engineered safety feature or fire protection system function requiring shutdown by technical specifications (e.g., because of malfunction, personnel error or procedural inadequacy) 11.50

Emergency Action Levels 11.51

1. Failing to meet any one of the following Limiting Conditions for Operation (LCO) for engineered safety features and requiring shutdown: 11.53

   a. TS 3.5.1, HPCI system 11.55

   OR 11.58

   b. TS 3.5.2, ADS system 12.2

   OR 12.5

   c. TS 3.5.3.1, Core Spray system 12.8

   OR 12.11

   d. TS 3.5.3.2, LPCI system 12.14

   OR 12.17

   e. TS 3.5.4, Suppression Pool 12.20

   OR 12.23

   f. TS 3.1.3.7 Control Rod Position Indication 12.26

   OR 12.29

   g. TS 3.1.3.8. Control rod drive housing support 12.32

   OR 12.35

   h. TS 3.1.5, Standby liquid control system 12.38

   OR 12.40

   i. TS 3.4.2, Safety relief valves 12.43

   OR 12.46

   j. TS 3.4.7, MSIV system 12.49

   OR 12.52

   k. TS 3.6.6.1, Hydrogen Recombiner system 12.56

	OR	12.59
1.	TS 3.7.2, Control Room Emergency Filter system	13.3
	OR	13.7
m.	TS 3.7.4, RCIC system	13.10
	OR	13.14
2.	Failing to meet any one of the following LCO's for fire protection system functions and requiring shutdown:	13.17
a.	TS 3.7.7 Fire Suppression Water System	13.19

UNUSUAL EVENT No. 9
LOGIC DIAGRAM

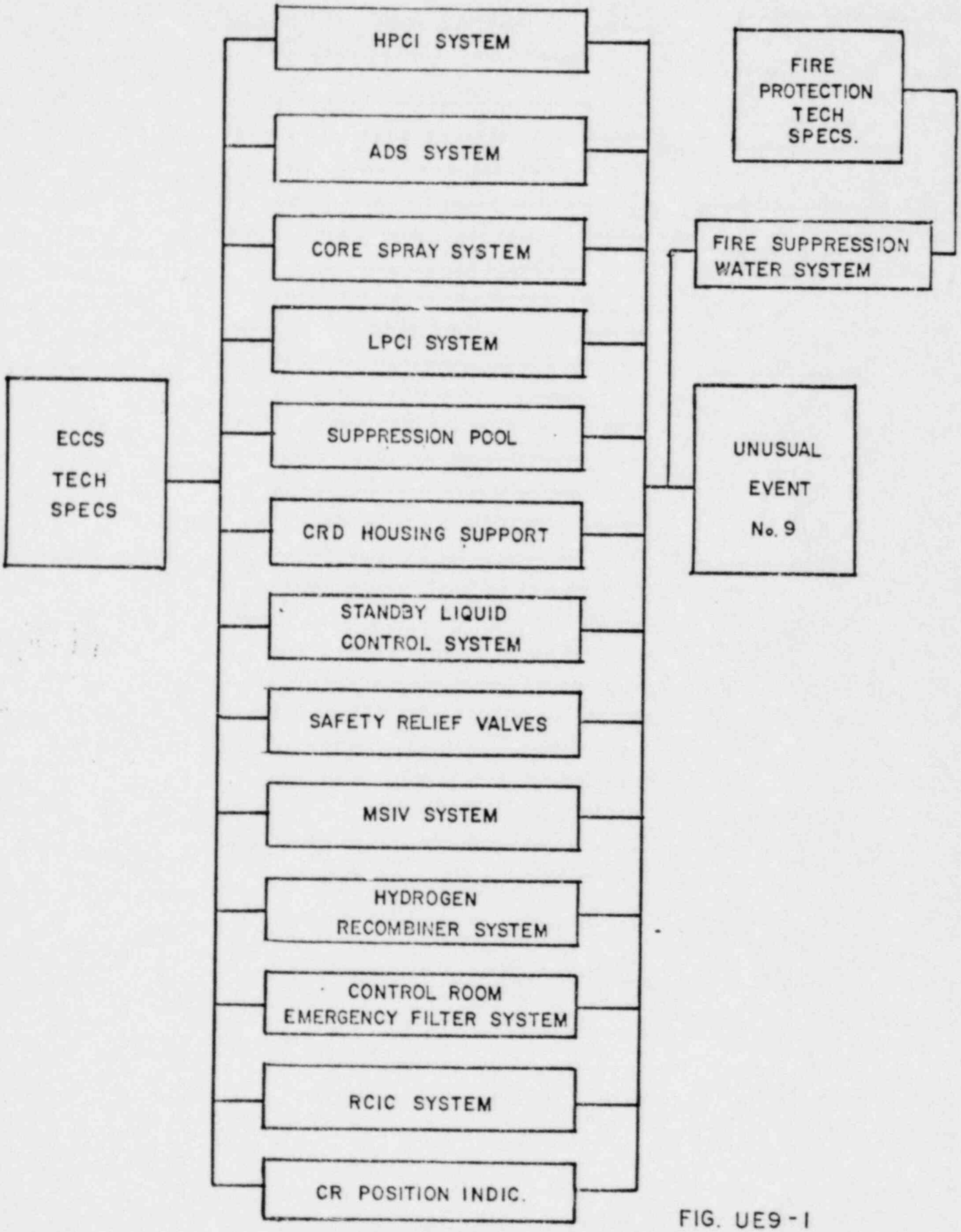


FIG. UE9-1

effluent monitors) or are measured in the environs.

EVENT CATEGORY 5 1.9

ABNORMAL RADIOLOGICAL EFFLUENT 1.11

OR RADIATION LEVELS 1.13

INITIATING CONDITIONS 1.17

UNUSUAL EVENT NO. 2	Radiological effluent technical specification limits exceeded.	1.21
ALERT NO. 6	Radiation levels or airborne contamination which indicate a severe degradation in the control of radioactive materials (e.g., increase of factor of 1000 in direct radiation readings within facility).	1.22 1.23
ALERT NO. 15	Radiological effluents greater than 10 times technical specification instantaneous limits (an instantaneous rate which, if continued over 2 hours, would result in about 1 mr at the site boundary under average meterological conditions).	1.24 1.25
SITE AREA EMERGENCY NO. 13	a. Effluent monitors detect levels corresponding to greater than 50 mr/hr for 1/2 hour or greater than 500 mr/hr W.B. for two minutes (or five times these levels to the thyroid) at the site boundary for adverse meteorology.	1.27 1.30 1.31 1.32
	b. These dose rates are projected based on other plant parameters (e.g., radiation level in containment with leak rate appropriate for existing containment pressure) or are measured in the environs.	1.34 1.35 1.36
	c. EPA Protective Action Guidelines are projected to be exceeded outside the site boundary.	1.37 1.38
GENERAL EMERGENCY NO. 1	a. Effluent monitors detect levels corresponding to 1 rem/hr W.B. or 5 rem/hr thyroid at the site boundary under actual meteorological conditions.	1.40 1.42 1.43
	b. These dose rates are projected based on other plant parameters (e.g., radiation levels in containment with leak rate appropriate for existing containment pressure with some confirmation from	1.45 1.46 1.47 1.48

UNUSUAL EVENT NO. 2

By LILCO

ALERT NO. 6

By LILCO

ALERT NO. 15

By LILCO

SITE AREA EMERGENCY NO. 13

By LILCO

GENERAL EMERGENCY NO. 1

By LILCO

EVENT CATEGORY 6 1.9

LOSS OF SHUTDOWN FUNCTIONS: DECAY HEAT OR REACTIVITY 1.11 1.12

INITIATING CONDITIONS 1.16

ALERT NO. 10	Complete loss of any function needed for plant cold shutdown	1.19 1.20
ALERT NO. 11	Failure of the reactor protection system to initiate and complete a scram which brings the reactor subcritical.	1.21 1.22
SITE AREA EMERGENCY NO. 8	Loss of any function needed for plant hot shutdown.	1.24
SITE AREA EMERGENCY NO. 9	Transient requiring operation of shutdown systems with failure to scram (continued power generation but no core damage immediately evident).	1.26 1.27
GENERAL EMERGENCY NO. 6a	Transient (e.g., loss of offsite power) plus failure of requisite core shut down systems (e.g., scram). Could lead to core melt in several hours with containment failure likely. More severe consequences if pump trips does not function.	1.29 1.30 1.31
GENERAL EMERGENCY NO. 6d	Shutdown occurs but requisite decay heat removal system (e.g., RHR) or nonsafety systems heat removal means are rendered unavailable. Core degradation or melt could occur in about ten hours with subsequent containment failure.	1.32 1.33 1.34 1.35 1.36

ALERT NO. 10 37.41

Initiating Conditions (NUREG-0654, Appendix 1) 37.44

Complete loss of any function needed for plant cold shutdown. 37.46

Emergency Actions Levels 37.48

Loss of shutdown heat removal capability will be indicated by either of the following: 37.51

1.a. Reactor building "Service Water System A" inoperative alarm panel 1H11*MCB-01. 37.53 37.54

AND 37.56

b. Reactor building "Service Water System B" inoperative alarm on panel 1H11*MCB-01. 37.58 37.59

OR 38.2

2.a. "Residual Heat Removal A System" inoperative alarm on panel 1H11*PNL-601. 38.4

AND 38.6

b. "Residual Heat Removal B System" inoperative alarm on panel 1H11*PNL-601. 38.8

ALERT NO. 10
LOGIC DIAGRAM

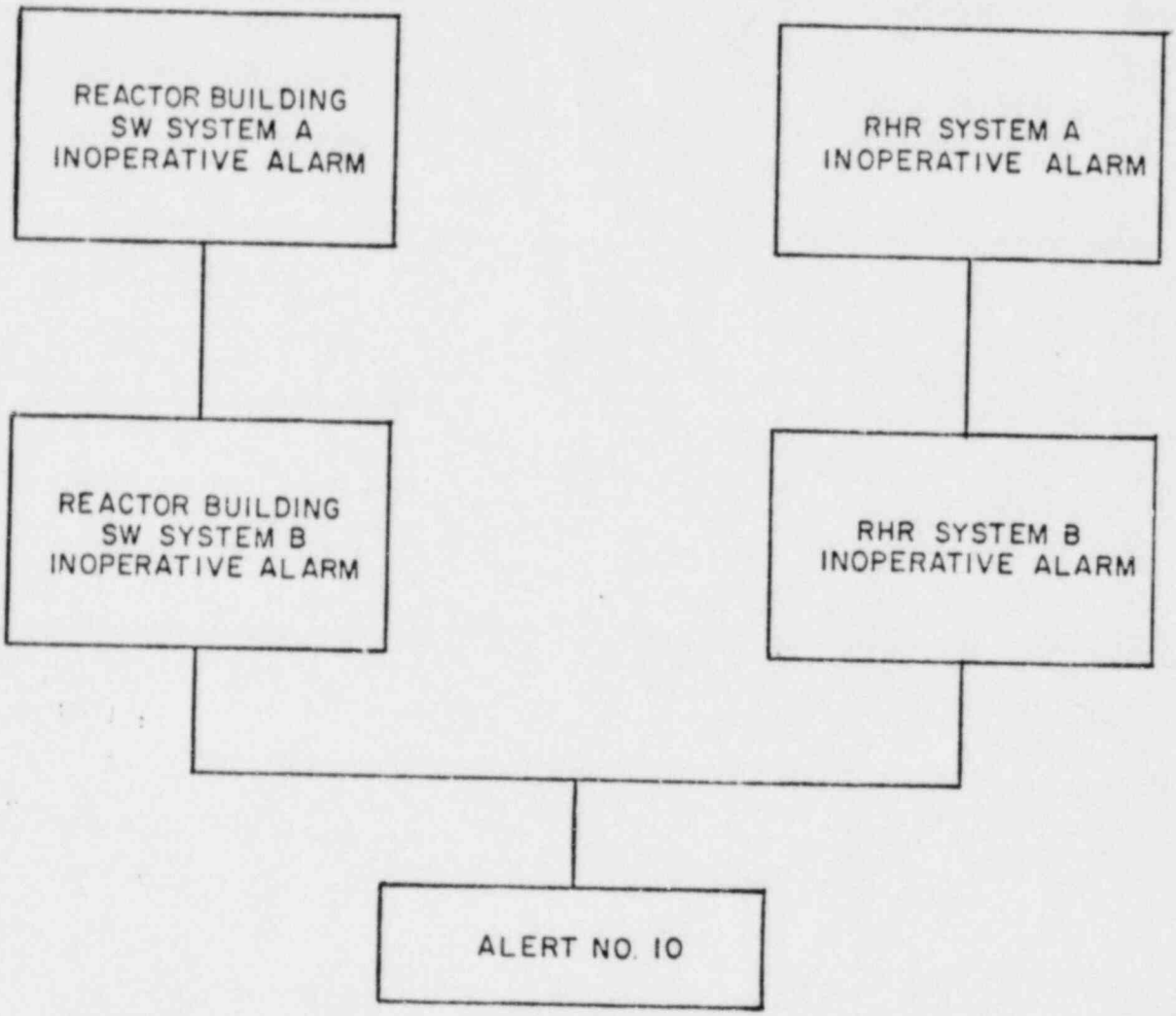


FIG. A10-1

ALERT NO. 11 38.45

Initiating Conditions (NUREG-0654, Appendix 1) 38.48

Failure of the reactor protection system to initiate and complete a scram. 38.51

Emergency Action Levels 38.53

1. Initiation of a reactor scram by at least one reactor protection system (RPS) channel trip in Reactor Auto Scram Channel A and in Reactor Auto Scram Channel B as indicated on panel 1H11*PNL-603. 38.56

AND 38.58

2. Failure to bring the reactor subcritical as determined by the Watch Engineer from the Neutron Monitoring System and other plant instrumentation as indicated on panel 1H11*PNL-603. 39.2

ALERT NO. II
LOGIC DIAGRAM

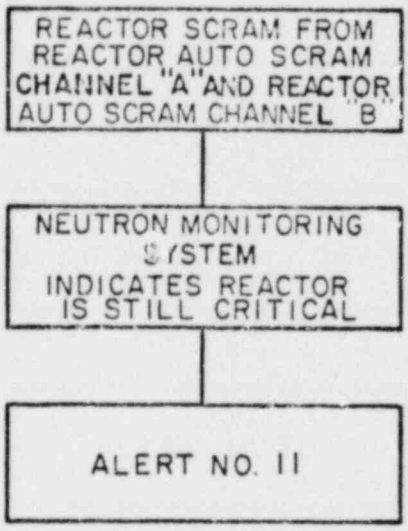


FIG. AII-1

SITE AREA EMERGENCY NO. 8 36.34

Initiating Conditions (NUREG-0654, Appendix 1) 36.37

Complete loss of any function needed for plant hot shutdown. 36.39

Emergency Action Levels 36.41

Loss of reactor shutdown function is covered by Site Area Emergency No. 9 36.44

Loss of reactor heat removal function is determined by the following indications: 36.45

1. Loss of heat removal capability with the reactor pressurized: 36.47

   a. Loss of steam dump capability as indicated by closure of the main steam isolation valves on panels 1H11*PNL-601 and 602 or steam bypass valves on panel 1H11*MCB-01. 36.49

   OR 36.51

   b. Inoperable main circulating water system with all four pumps not running as indicated on panel 1H11*MCB-01 36.54

   OR 36.56

   c. No makeup capability to the reactor vessel as determined by the following inoperable systems: 36.59

      1) High pressure coolant injection (HPCI) system inoperative alarm as indicated on panel 1H11*PNL-601. 37.2

      AND 37.4

      2) Reactor core isolation cooling (RCIC) system inoperative alarm as indicated on panel 1H11*PNL-602. 37.7

      AND 37.9

      3) Lack of feedwater flow as indicated by flow indicators IC32-FI-001 A and B on panel 1H11*MCB-01. 37.12

2. Loss of heat removal capability with reduced reactor pressure: 37.14

   a. All safety/relief valves inoperable as determined by the on-duty Watch Engineer from valve position indications on panel 1H11*PNL-602. 37.16

   OR 37.18

   b. 1) "Residual Heat Removal A System" inoperative alarm on panel 1H11*PNL-601. 37.21

   AND 37.23

2) "Residual Heat Removal B System" inoperative alarm on panel 1H11*PNL-601. 37.26

OR 37.29

c. 1) Reactor Building "Service Water System A" inoperative alarm on panel 1H11*MCB-01. 37.32

AND 37.35

2) Reactor building "Service Water System B" inoperative alarm on panel 1H11*MBC-01. 37.38

SITE AREA EMERGENCY No. 8

LOGIC DIAGRAM

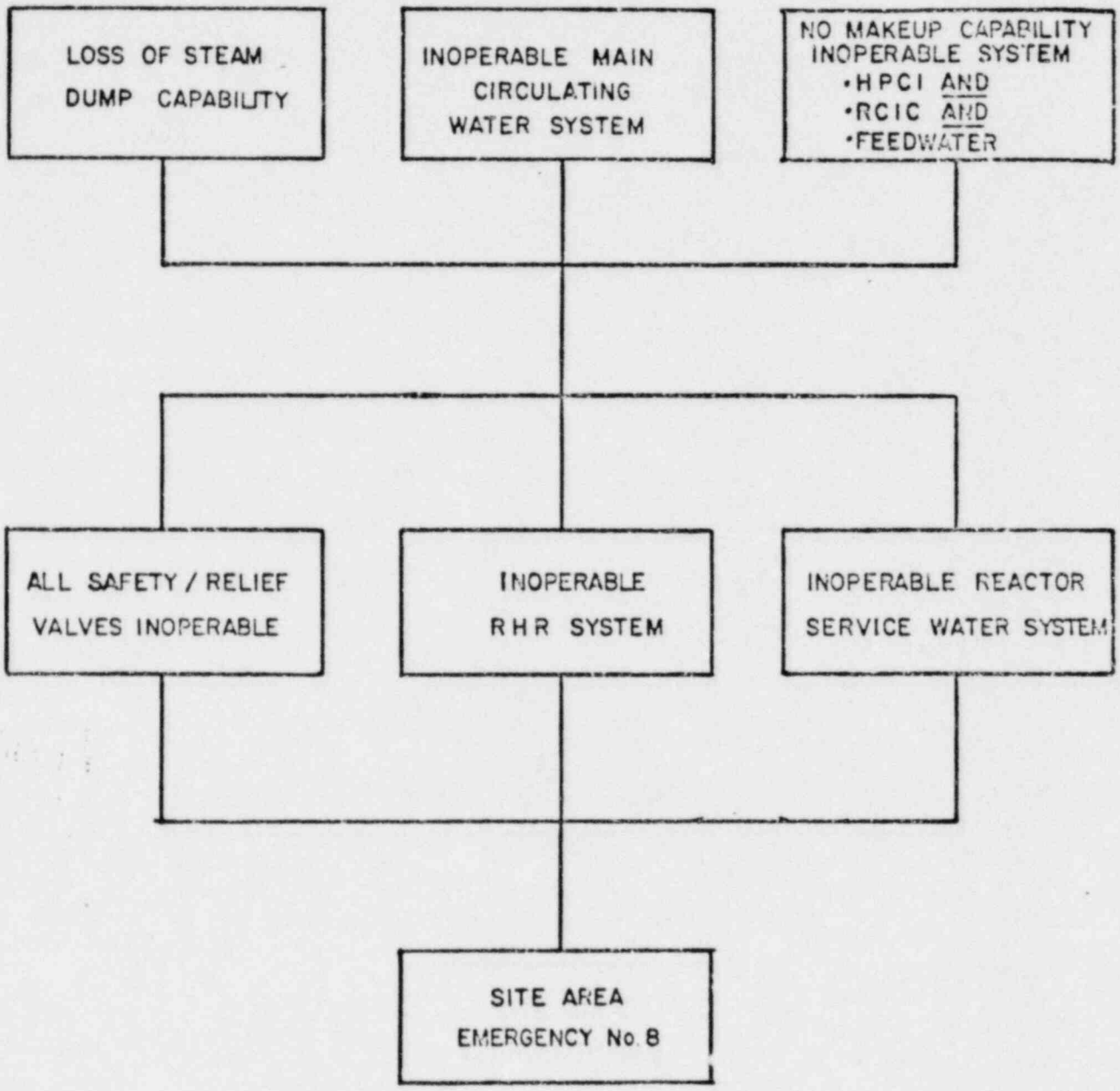


FIG. SAE 8-1

SITE AREA EMERGENCY NO. 9 14.55

Initiating Conditions (NUREG-0654, Appendix 1) 14.58

Transient requiring operation of shutdown systems with failure to scram (continued power generation but no core damage immediately evident). 15.2

Emergency Action Levels 15.4

1. Failure of scram indicated by: 15.7

   a. Automatic scram indicated by Reactor Automatic Trip Channels A-1, A-2, B-1 and B-2 alarms or manual scram indicated on panel 1H11*PNL-603. 15.9 15.10

   AND 15.12

   b. Failure to scram indicated by one or more channels of average Power Range Monitor (APRM) do not fall to downscale trip level of 5 percent on panel 1H11*PNL-603. 15.15 15.16 15.17

   AND 15.19

   c. On-duty watch engineer concludes scram has not occurred and authorizes initiation of Standby Liquid Control System (SLCS). 15.22

   AND 15.24

2. Failure of SLCS to shutdown reactor is indicated by: 15.27

   a. Key to initiate SLCS inserted on panel 1H11*PNL-603 15.29

   AND 15.31

   b. Initiation of SLCS confirmed by: 15.34

      1) Squib valve loss of continuity alarm on panel 1H11*PNL-603 15.37

      OR 15.39

      2) Selected pump run light illuminated on panel 1H11*PNL-603 15.42

      AND 15.44

   c. Failure to shut down reactor indicated by failure of one or more channels of APRM to fall to downscale trip level of 5 percent on panel 1H11*PNL-603 15.47 15.48 15.49

   AND 15.51

3. On-duty watch engineer judges that a transient has been or is being observed. 15.54

   AND 15.56

4. No indication of core damage is observed 15.59

   a. See Initiating Condition for General Emergency No. 2 action level criteria for core damage. If core damage is observed, a general emergency should be declared. 16.2 16.4

SITE AREA EMERGENCY No. 9

LOGIC DIAGRAM

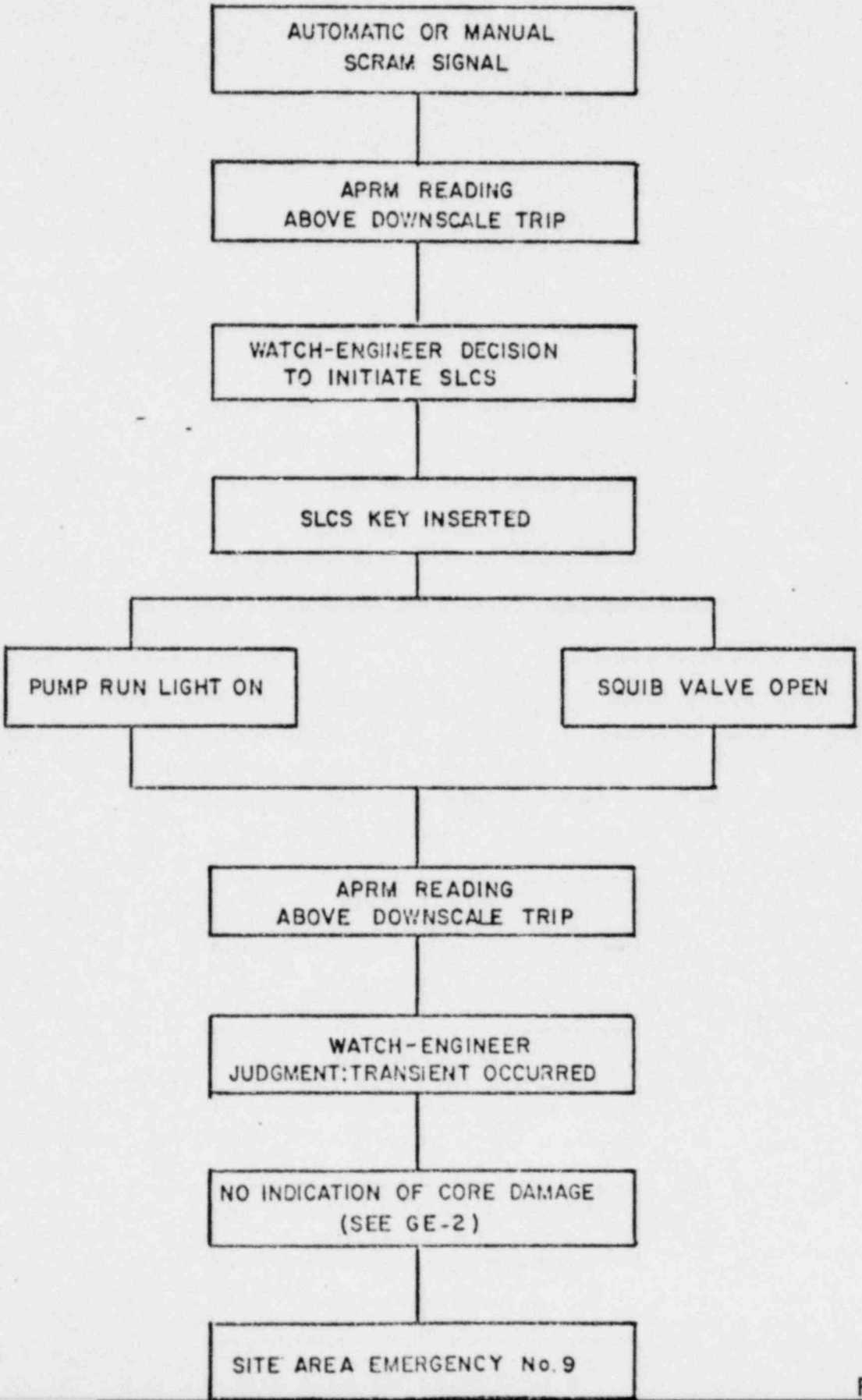


FIG. SAE 9-1

GENERAL EMERGENCY NO. 6a 24.2

Initiating Conditions (NUREG -0654. Appendix 1) 24.5

Transient (e.g. loss of offsite power) plus failure of requisite core shut down 24.9
systems (e.g. scram). Could lead to core melt in several hours with 24.10
containment failure likely. More severe consequences if pumps trip does not 24.11
function.

Emergency Action Levels 24.12

1. Failure of automatic scram indicated by: 24.14

   a. Automatic scram signal alarm on panel 1H11*PNL-603,subsection A, or 24.16
   manual scram signal alarm on panel 1H11*PNL-603

   AND 24.18

   b. Failure to scram indicated by absence of APRM Downscale alarm on panel 24.21
   1H11*PNL-603, sub-section A10/30 (3-10). 24.22

   AND 24.24

   c. On-duty Watch Engineer concludes scram has not occurred and authorizes 24.27
   initiation of Standby Liquid Control System (SLCS). 24.28

   AND 24.30

2. Failure of SLCS to shut down reactor is indicated by: 24.33

   a. Key to initiate SLCS inserted on panel 1H11*PNL-603 24.35

   AND 24.37

   b. Initiation of SLCS confirmed by: 24.40

      1) SLCS Squib VV Loss of Continuity alarm on panel 1H11*PNL-603/ 24.42
      subsection A10/B-7

      OR 24.44

      2) Selected pump run light illuminated on panel 1H11*PNL-603 24.47

      AND 24.49

   c. Failure to shut down reactor, indicated by absence of APRM Downscale 24.52
   alarm on panel 1H11*PNL-603, sub-section A10/30 (3-10) 24.54

   AND 24.56

3. Potential for core melt indicated by: 25.1

   a. Very high reactor pressure (open safety/relief valves, indicated by 25.3
   safety/relief valve open indications on panel 1H11*PNL-602) 25.4

OR 25.7

b. Rapidly increasing containment pressure indicated by High Drywell Pressure Sys I(II) alarm on panel 1H11*PNL-601, subsection A2 25.10 25.12

OR 25.14

c. Rapidly increasing containment temperature indicated by Primary Containment High Temperature alarm on panel 1H11*PNL-VC2 25.17 25.18

OR 25.20

d. Rapidly increasing suppression pool temperature indicated by Suppression Pool High Temperature alarm on panel 1H11*MCB-01. 25.23 25.24

GENERAL EMERGENCY NO. 6A
LOGIC DIAGRAM

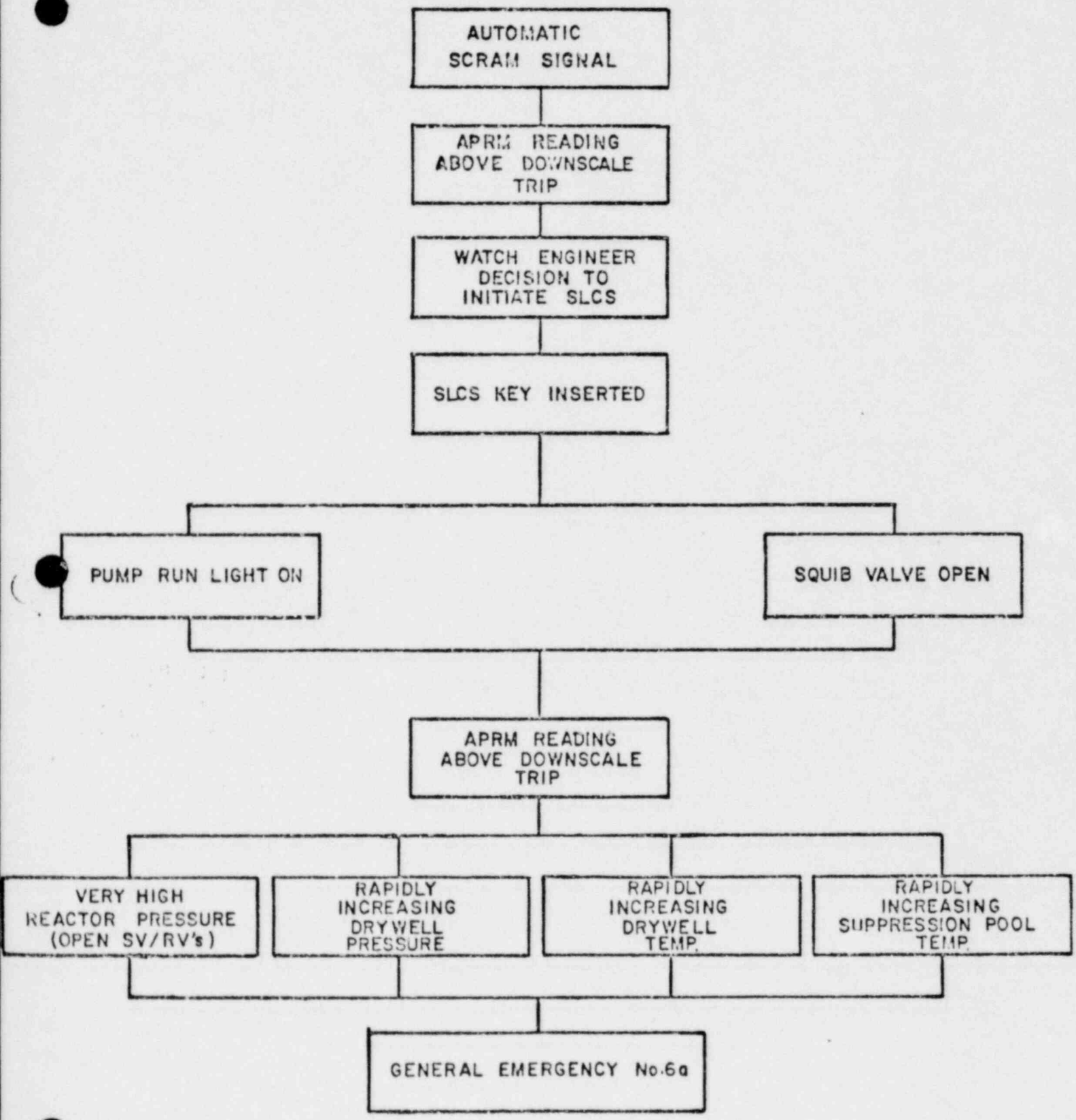


FIG. GE 6a-1

General Emergency No. 6d 28.28

Initiating Conditions (NUREG-0654, Appendix 1) 28.31

Shutdown occurs but requisite decay heat removal system (e.g. RHR) or non- 28.35
safety systems heat removal means are rendered unavailable. Core degradation 28.36
or melt could occur in about ten hours with subsequent containment failure. 28.37

Emergency Action Levels 28.38

Loss of reactor heat removal functions required for a hot shutdown is covered 28.40
by Site Area Emergency No. 8.

The following indications would denote additional loss of decay heat removal 28.41
functions that could lead to core degradation or melt in about 10 hours. 28.42

1. Continued loss of decay heat removal funtion indicated by: 28.44

   a. Increasing reactor pressure as observed on C32-PI-003 on panel 28.46
      1H11*PNL-607

   OR 28.48

   b. Suppression Pool High Temperature alarm on panel 1H11*MCB-01. 28.51

   AND 28.53

2. Unavailabiity of other possible heat sinks indicated by: 28.56

   a. Condensate storage tank nearly empty indicated by Hi/Lo level alarm on 28.58
      panel 1H11*MCB-01 confirmed by low level reading of LT002 on computer 28.59
      input point ID F593

   AND 29.2

   b. Demineralized water storage tank nearly empty indicated by Hi/Lo level 29.5
      alarm on panel 1H11*MCH-01 confirmed by Demineralized Water Storage 29.6
      Tank Low alarm on panel 1G11-PNL-047

3. On-duty watch engineer concludes t at situation will not improve and will 29.8
   lead to core melt only a small fraction of the decay heat rate in the first 29.10
   10 hours.

GENERAL EMERGENCY NO. 6D
LOGIC DIAGRAM

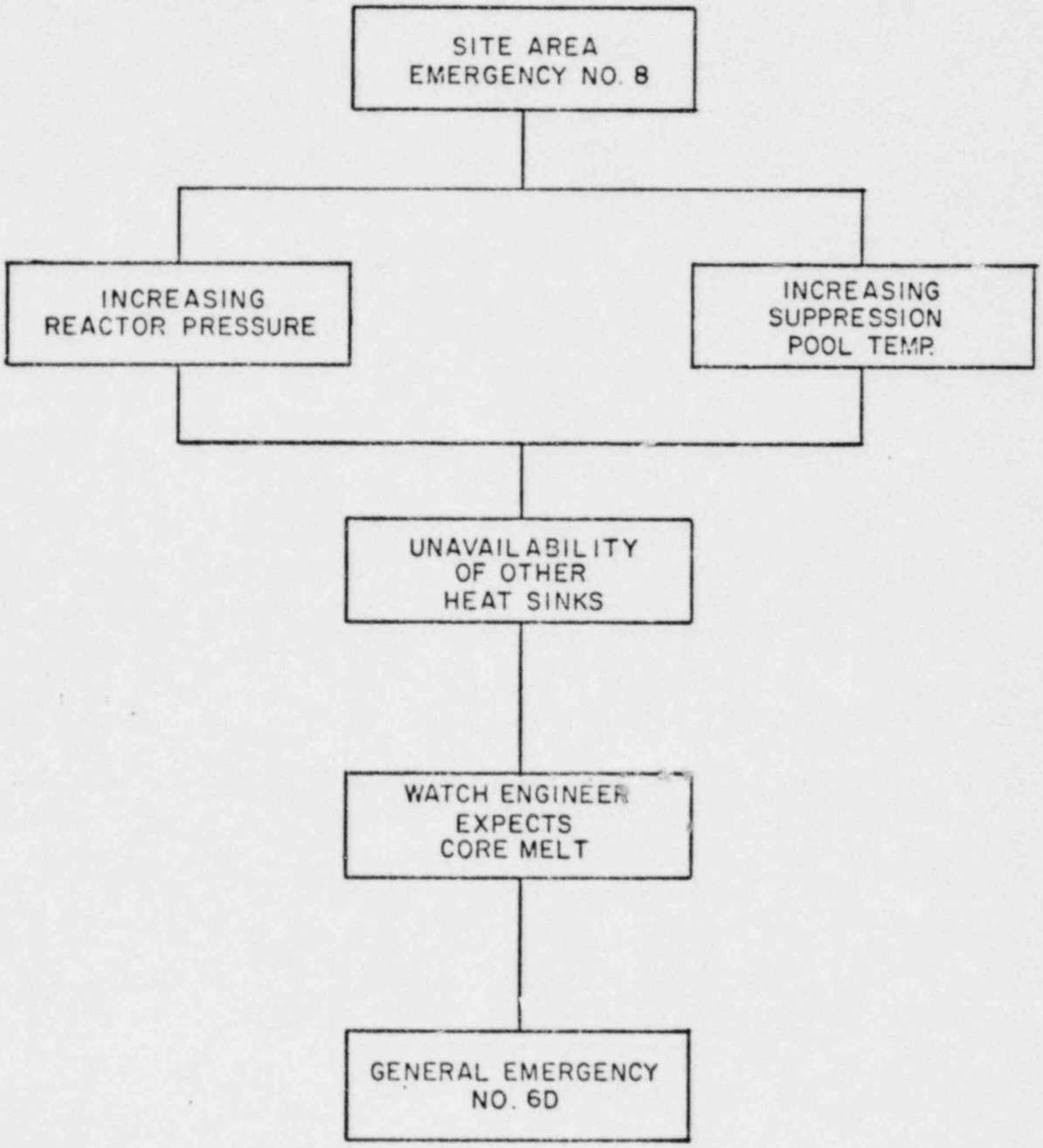


FIG. 6D-1

EVENT CATEGORY 7 1.9

ELECTRICAL OR POWER FAILURES 1.11

INITIATING CONDITIONS 1.15

UNUSUAL EVENT NO. 7	Loss of offsite power or loss of onsite AC power capability.	1.18 1.19
ALERT NO. 7	Loss of offsite power and loss of all onsite AC power (see Site Area Emergency for extended loss).	1.20 1.21
ALERT NO. 8	Loss of all onsite DC power (Site Area Emergency for extended loss).	1.22 1.23
SITE AREA EMERGENCY NO. 6	Loss of offsite power and loss of onsite AC power for more than 15 minutes.	1.25
SITE AREA EMERGENCY NO. 7	Loss of all vital onsite DC power for more than 15 minutes.	1.27

UNUSUAL EVENT NO. 7 30.43

Initiating Conditions (NUREG - 0654, Appendix 1) 30.46

Loss of off-site power or loss of on-site AC power capability. 30.49

Emergency Action Levels 30.51

1. A Main Turbine Generator trip with all offsite 138 kv buses (Bus 1 and Bus 2) and the 69 kv bus unavailable for service as indicated on panel 1H11* MCB-01. 30.54

AND 30.56

2. Loss of voltage on any essential 4160 volt bus (Div. I, Div. II, or Div III) with failure of associated diesel generator to start as indicated on panel 1H11* MCB-01. 30.59

AND 31.2

3. Loss of voltage on any essential 480 volt essential substation bus or 480 volt essential MCC bus as indicated on panel 1H11 * MCB-01. 31.5

UNUSUAL EVENT NO. 7
LOGIC DIAGRAM

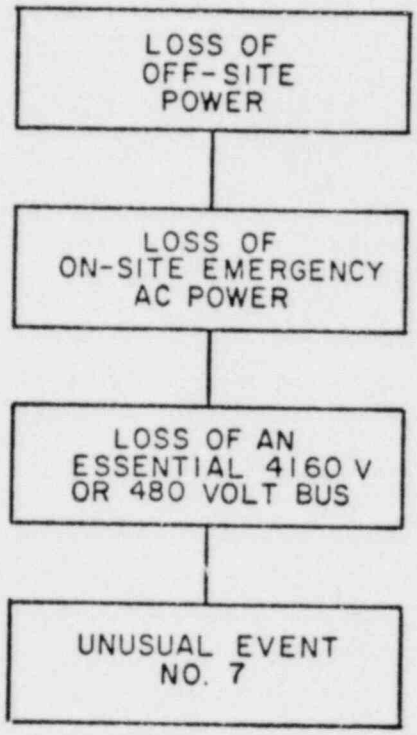


FIG. UE7-1

ALERT NO. 7 29.37

Initiating Conditions (NUREG 0654, Appendix 1) 29.40

Loss of offsite power and loss of all onsite AC power (see Site Area Emergency for extended loss) 29.42

Emergency Action Levels 29.44

1. Main Turbine Generator trip with all off-site 138 kv buses (Bus 1 and Bus 2)and the 69 kv bus unavailable for service as indicated on panel 1H11*MCB-01. 29.47

AND 29.49

2. Failure of all emergency diesel generators to start and synchronize as indicated on panel 1H11*MCB-01. 29.52

ALERT NO. 7

LOGIC DIAGRAM

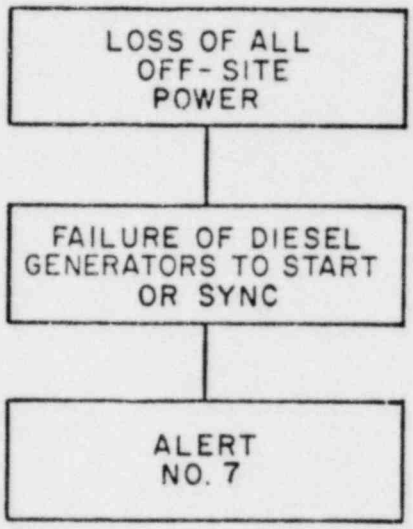


FIG. A7-1

ALERT NO. 8 29.55

Initiating Conditions (NUREG 0654, Appendix 1) 29.58

Loss of all onsite DC power (See Site Area Emergency for extended loss) 30.1

Emergency Action Levels 30.4

1. Complete loss or less than 105 VDC on Division I, II and III vital DC distribution buses as indicated on panel 1H11*MCB-01. 30.7

AND 30.9

2. Complete loss or less than 21 VDC on all vital 24 volt DC distribution buses as indicated on panel 1H11*MCB-01. 30.12

ALERT NO. 8
LOGIC DIAGRAM

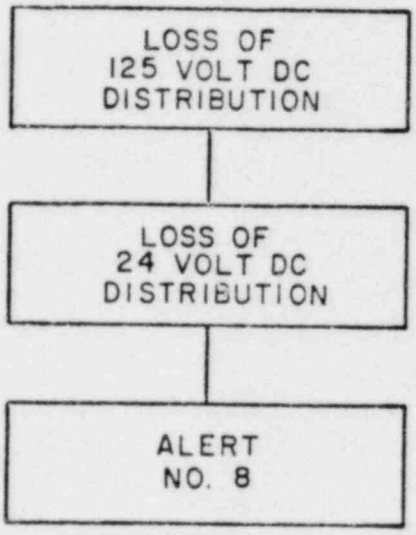


FIG. A8-1

SITE AREA EMERGENCY NO. 6 30.15

Initiating Conditions (NUREG 0654, Appendix 1) 30.18

Loss of offsite power and loss of onsite AC power for more than 15 minutes. 30.20

Emergency Actions Levels 30.22

1. A Main Turbine Generator trip as indicated on panel 1H11*MCB-01. 30.25

AND 30.27

2. Loss of all offsite 138 kv buses (Bus 1 and Bus 2) and the 69 kv bus as indicated on panel 1H11*MCB-01. 30.30

AND 30.32

3. Failure of all emergency diesel generators to start or synchronize as indicated on panel 1H11*MCB-01. 30.35

AND 30.37

4. Fifteen (15) minutes elapsed time from indication of loss of all power. 30.40

SITE AREA EMERGENCY NO. 6

LOGIC DIAGRAM

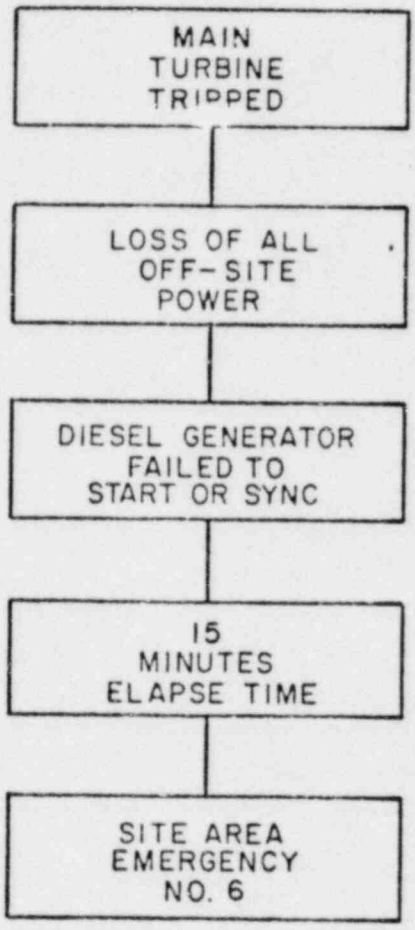


FIG. SAE 6-1

SITE AREA EMERGENCY NO. 7 29.13

Initiating Condition (NUREG 0654, Appendix 1) 29.16

Loss of all vital onsite DC power for more than 15 minutes. 29.19

Emergency Action Levels 29.21

1. Complete loss of 125 VDC on Division I, II and III vital DC distribution buses as indicated on panel 1H11*MCB-01. 29.24

AND 29.26

2. Complete loss of all 24 VDC vital distribution buses as indicated on panel 1H11*MCB-01. 29.29

AND 29.31

3. 15 minutes elapsed time. 29.34

SITE AREA EMERGENCY NO. 7

LOGIC DIAGRAM

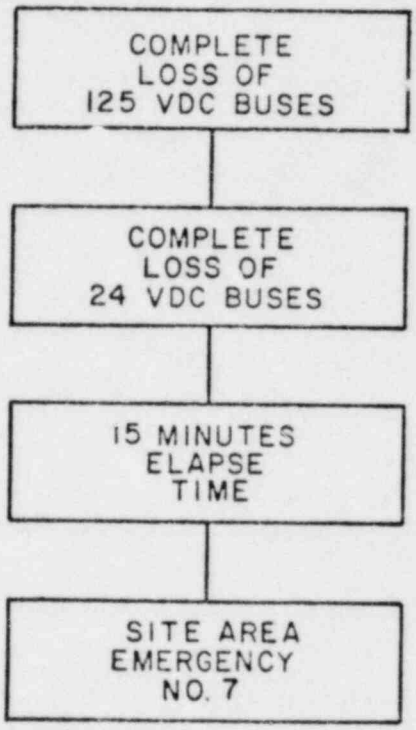


FIG. SAE 7-1

	EVENT CATEGORY 8	1.9
	FIRE	1.11
	INITIATING CONDITIONS	1.14
UNUSUAL EVENT NO. 10	Fire within the plant lasing more than 10 minutes.	1.17 1.18
ALERT NO. 13	Fire potentially affecting safety systems.	1.19
SITE AREA EMERGENCY NO. 11	Fire compromising the functions of safety systems.	1.21 1.22
GENERAL EMERGENCY NO. 7	Any major internal or external events (e.g., fires, earthquakes, substantially beyond design basis) which could cause massive common damage to plant systems resulting in any of the above.	1.24 1.26

UNUSUAL EVENT NO. 10 10.9

Initiating Conditions (NUREG 0654, Appendix 1) 10.12

Fire within the plant lasting more than 10 minutes. 10.13

Emergency Action Levels 10.14

1. A fire observed to burn for 10 minutes 10.17

OR 10.19

2. a. Fire detection alarm on panel 1M43-PNL-FP sounds, 10.21

AND 10.23

b. Absence of visual confirmation that the fire has been put out ten minutes after the sounding of the alarm. 10.26 10.27

Initiating Conditions (NUREG 0654, Appendix 1) 27.40

Fire potentially affecting safety systems. 27.41

Emergency Action Levels 27.42

1. Observation of fire through fire detection equipment, operation of automatic fire fighting systems, and fire fighting teams, which the Watch Engineer determines has the potential to affect safety systems. 27.44 27.45

SITE AREA EMERGENCY NO. 11 27.24

Initiating Conditions (NUREG 0654, Appendix 1) 27.27

Fire compromising the functions of safety systems. 27.29

Emergency Action Levels 27.31

1. Observation of major fire that affects redundant safety systems trains or functions. 27.34

GENERAL EMERGENCY NO. 7 23.44

Initiating Conditions (NUREG 0654, Appendix 1) 23.47

Any major internal or external event (e.g., fires, earthquakes, substantially 23.51
beyond design basis) which could cause massive common damage to plant system 23.52
resulting in any of the general emergency initiating conditions. 23.53

Emergency Action Levels 23.55

1. As deemed necessary by Watch Engineer. 23.58

EVENT CATEGORY 9 1.9

CONTROL ROOM EVACUATION 1.11

INITIATING CONDITIONS 1.15

ALERT NO. 20	Evacuation of control room anticipated or required with control of shutdown system established from local stations.	1.18 1.19
SITE AREA EMERGENCY NO. 18	Evacuation of control room and control of shutdown systems not established from local stations in 15 minutes.	1.21

ALERT NO. 20 33.32

Initiating Conditions (NUREG-0654, Appendix 1) 33.35

Evacuation of control room anticipated or required with control of shutdown systems established from local stations. 33.39

Emergency Action Levels 33.41

1. When determined by the on-duty Watch Engineer that the following conditions exist: 33.45

   a. Evacuation of the control room has occurred or has been initiated. 33.47

   AND 33.49

   b. Control of shutdown systems has been established from local stations. 33.52

SITE AREA EMERGENCY NO. 18 36.10

Initiating Conditions (NUREG-0654, Appendix 1) 36.13

Evacuation of control room and control of shutdown systems not established from local stations in 15 minutes. 36.17

Emergency Action Levels 36.19

1. When determined by the on-duty Watch Engineer that the following conditions exist: 36.22 36.23

   a. Evacuation of the control room has occurred. 36.25

   AND 36.27

   b. Control of shutdown systems has not been established from local stations within 15 minutes of the control room evacuation. 36.30 36.31

EVENT CATEGORY 10 1.24

LOSS OF MONITORS, ALARMS, ETC. 1.26

INITIATING CONDITIONS 1.29

UNUSUAL EVENT NO. 11	Indications or alarms on process or effluent parameters not functional in control room to an extent requiring plant shutdown or other significant loss of assessment or communication capability (e.g., plant computer, Safety Paramenter Display System, all meteorological instrumentation).	1.32 1.33 1.34 1.35 1.36
ALERT NO. 14	Most or all alarms (annunicators) lost.	1.37
SITE AREA EMERGENCY NO. 12	Most or all alarms (annunciators) lost and plant transient initiated or in progress.	1.39

UNUSUAL EVENT No. 11 31.10

Initiating Conditions (NUREG 0654, Appendix 1) 31.13

Indication or alarms on process or effluent parameters not functional in 31.16
control room to an extent requiring plant shutdown or other significant loss of 31.18
assessment or communication capability (e.g. plant computer, Safety Parameter 31.19
Display System, all meteorological instrumentation). 31.20

Emergency Action Levels 31.22

1. Loss of all control room communications 31.24

OR 31.26

2. Loss of all meteorological instrumentation 31.28

OR 31.30

3. Loss of all Process and Effluent Radiation Monitoring System indications or 31.35
alarms

ALERT NO. 14 26.52

Initiating Conditions (NUREG 0654, Appendix 1) 26.55

Most or all alarms (annuciators) lost. 26.57

Emergency Action Levels 26.59

1. As determined by the Watch Engineer from direct observation of main control room panels. 27.3 27.4

SITE AREA EMERGENCY NO. 12 27.7

Initiating Conditions (NUREG 0654, Appendix 1) 27.10

Most or all alarms (annunciators) lost and plant transient initiated or in progress. 27.12

Emergency Action Levels 27.13

1. Most or all alarms lost. 27.15

AND 27.17

2. The on-duty Watch Engineer determines that a plant transient has occurred or is in progress. 27.21

EVENT CATEGORY 11 1.42

FUEL HANDLING ACCIDENT 1.44

INITIATING CONDITIONS 1.47

ALERT NO. 12	Fuel damage accident with release of radiactivity to containment or fuel handling building.	1.50 1.51
SITE AREA EMERGENCY NO. 10	Major damage to spent fuel in containment or fuel handling building (e.g., large object damages fuel or water loss below fuel level).	1.53 1.54

ALERT NO 12

By LILCO

SITE AREA EMERGENCY NO. 10 38.11

Initiating Conditions (NUREG-0654, Appendix 1) 38.14

Major damage to spent fuel in containment or fuel handling building (e.g., large object damages fuel or water loss below fuel level). 38.17

Emergency Action Levels 38.19

1. Watch Engineer judgement that either of the following have occurred resulting in major fuel damage: 38.22

   a. Uncovering of active fuel portion of irradiated fuel. Spent fuel pool level indication is below the lower end of scale (33 feet above the bottom of the fuel pool) on level indicator 1G41-LI008 on panel 1H11*MCB-01. 38.25

   OR 38.27

   b. Dropping of a heavy object onto spent fuel confirmed by direct observation. 38.30

   AND 38.32

2. Common high radiation alarms on panel 1H11*PNL-601 caused by high radiation levels at: 38.35

   a. The refueling level ventilation exhaust radiation detector (1D11*RE-017) as indicated on panels 1H11*PNL-635 and 636. 38.37

   AND 38.39

   b. The refueling floor area radiation detector (1D11-RE-014) as indicated on panel 1H11*PNL-600. 38.42

SITE AREA EMERGENCY NO. 10

LOGIC DIAGRAM

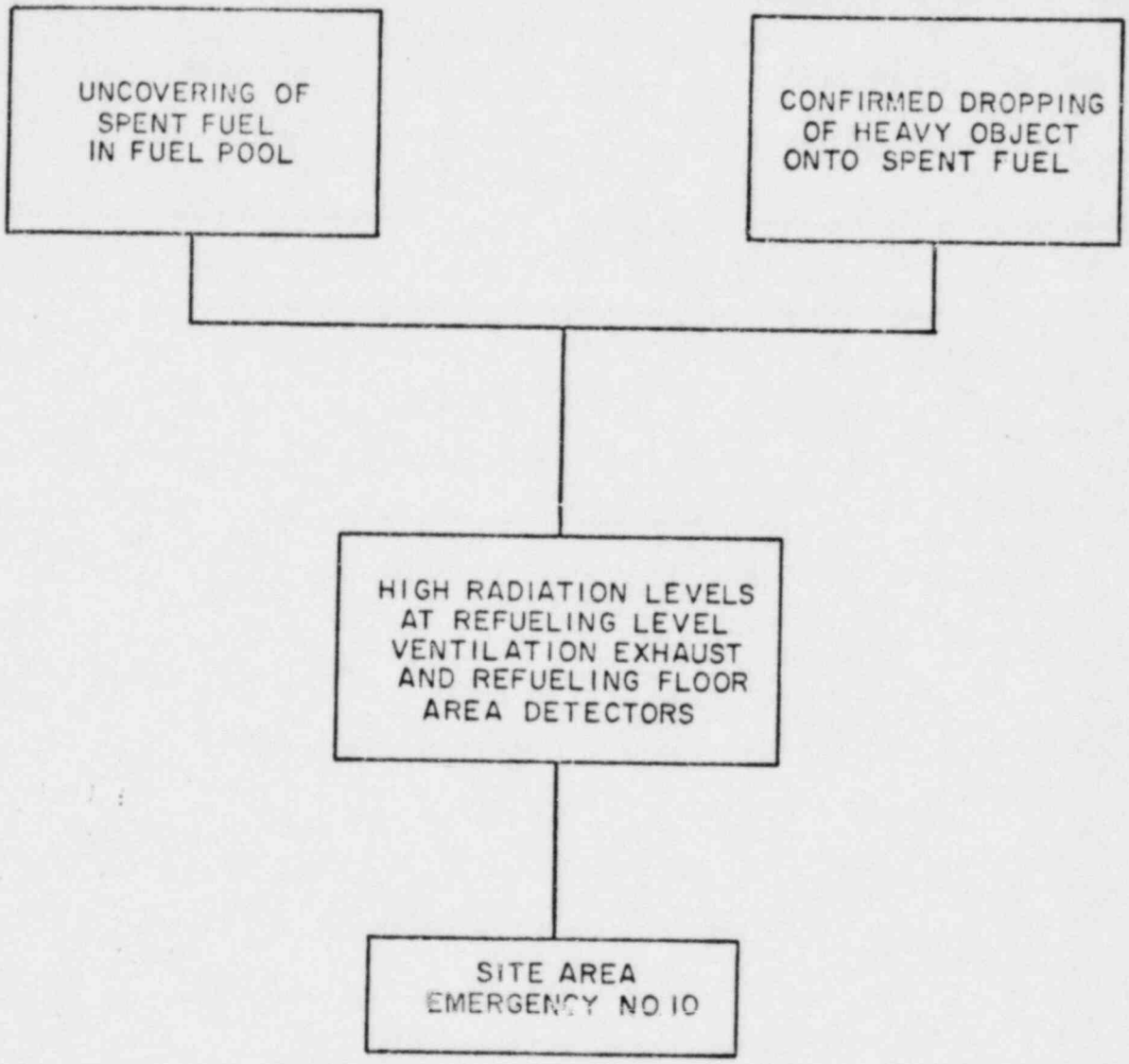


FIG. SAE 10-1

	EVENT CATEGORY 12	1.57
	HAZARDS TO PLANT OPERATION	1.59
	INITIATING CONDITIONS	2.3
UNUSUAL EVENT NO. 14	Other hazards being experienced or projected:	2.6
	a. Aircraft crash on-site or unusual aircraft activity over facility	2.8
	b. Train derailment on-site	2.9
	c. Near or on-site explosion	2.10
	d. Near or on-site toxic or flammable gas release.	2.11
	e. Turbine rotating component failure causing rapid plant shutdown.	2.12
ALERT NO. 18	Other hazards being experienced or projected:	2.14
	a. Aircraft crash on facility	2.16
	b. Missile impacts from whatever source on facility	2.17
	c. Known explosion damage to facility affecting plant operation	2.18
	d. Entry into facility environs of uncontrolled toxic or flammable gases	2.19
	e. Turbine failure causing casing penetration	2.20
SITE AREA EMERGENCY NO. 16	Other hazards being experienced or projected with plant not in cold shutdown:	2.23
	a. Aircraft crash affecting vital structures by impact or fire	2.25
	b. Severe damage to safe shutdown equipment from missiles or explosion	2.26
	c. Entry of uncontrolled flammable gases into vital areas. Entry of uncontrolled toxic gases into vital areas where lack of access to the area constitutes a safety problem.	2.27 2.28 2.29

GENERAL EMERGENCY NO. 7

Any major internal or external events (e.g., fires, earthquakes, substantially beyond design basis) which could cause massive common damage to plant systems resulting in any of the above. 2.32 2.33 2.34

UNUSUAL EVENT NO. 14 18.41

Initiating Conditions (NUREG 0654, Appendix 1) 18.44

Other hazards being experienced or projected: 18.47

a. Aircraft crash on-site or unusual aircraft activity over facility 18.49

b. Train derailment on-site 18.50

c. Near or onsite explosion 18.51

d. Near or onsite toxic or flammable gas release 18.52

e. Turbine rotating component failure causing rapid plant shutdown. 18.53

Emergency Action Levels 18.55

1. The Watch Engineer observes or receives notification of: 18.58

a. An airplane crash on-site 19.1

OR 19.3

b. Unusual aircraft activity over the site. 19.6

OR 19.8

2. The Watch Engineer receives notification of derailment of an off-site train carrying large quantities of toxic, explosive or flammable material which would affect the plant. 19.12

OR 19.14

3. The Watch Engineer observes or receives notification of a near-site or on-site explosion. 19.17

OR 19.19

4. The Watch Engineer observes or receives notification of: 19.22

a. An on-site or near-site toxic gas release 19.24

OR 19.26

b. An on-site or near-site flammable gas release 19.29

OR 19.31

5. a. A turbine trip as indicated by main turbine trip alarm on panel 1H11*MCB-01 19.34

AND 19.36

b. Panel 1H11*MCB-01 annuciates high turbine vibrations 19.39

AND 19.41

c. Watch Engineer's opinion that the trip is due to a rotating component failure. 19.44

OR 19.46

6. The Watch Engineer observes or receives notification of unusual boating activity near-site. 19.49

UNUSUAL EVENT No. 14

LOGIC DIAGRAM

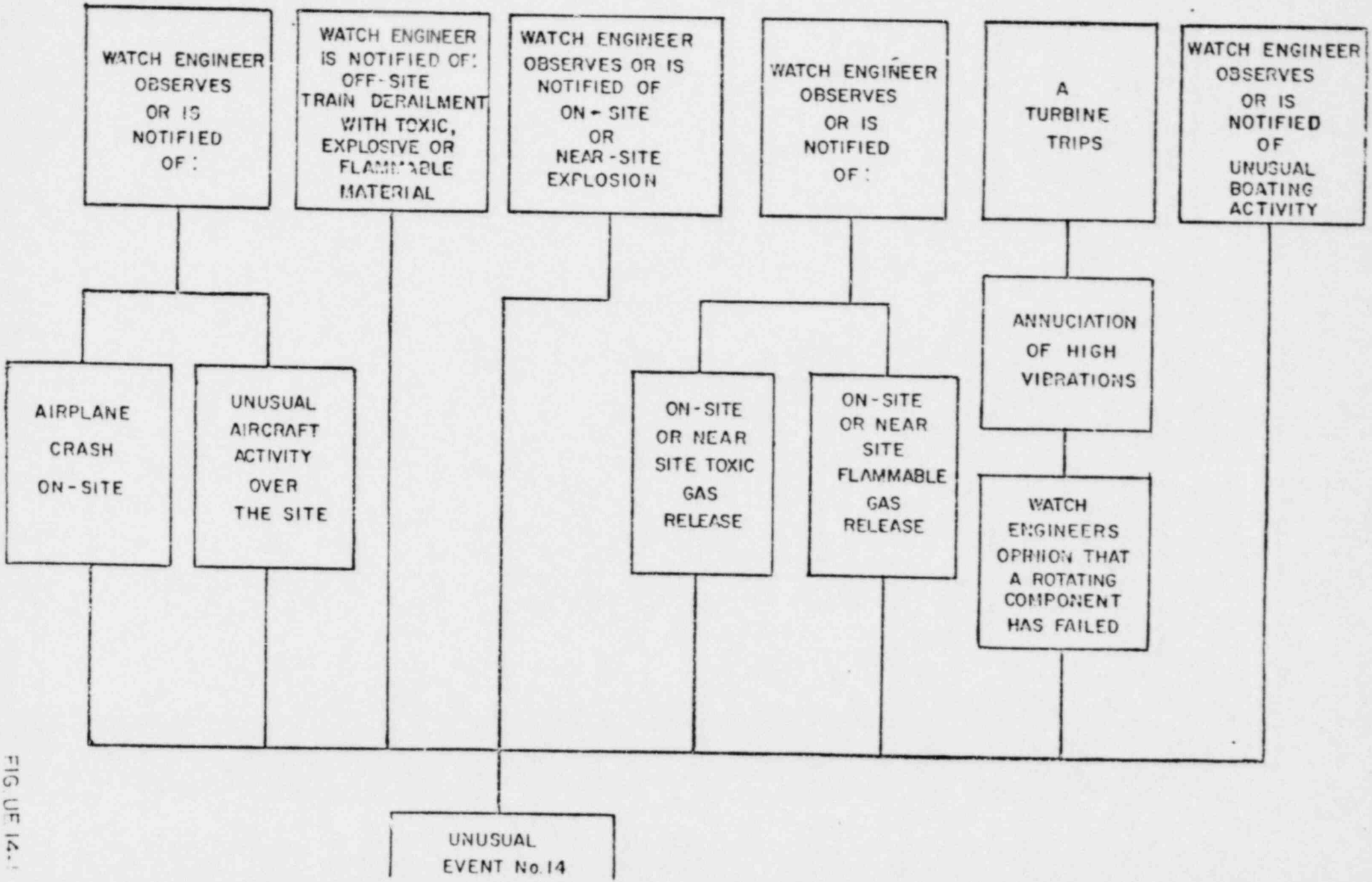


FIG. UE 14-1

ALERT NO. 18 17.13

Initiating Conditions (NUREG 0654, Appendix 1) 17.16

Other hazards being experienced or projected: 17.19

a. Aircraft crash on facility 17.21

b. Missile impacts from whatever source on facility 17.22

c. Known explosion damage to facility affecting plant operation 17.23

d. Entry into facility environs of uncontrolled toxic or flammable gases 17.24

e. Turbine failure causing casing penetration 17.25

Emergency Action Levels 17.27

1. The Watch Engineer observes or receives notification of an aircraft crash into the plant structures. 17.30

OR 17.32

2. The Watch Engineer observes or receives notification of a missile impact on 17.35

a. a plant structure 17.37

OR 17.39

b. a plant component 17.42

OR 17.44

3. The Watch Engineer observes or receives notification of plant damage by explosion. 17.47

OR 17.49

4. a. The Watch Engineer receives notification of gases in concentrations which exceed the limits of toxicity within the plant environs. 17.52 17.54

OR 17.56

b.1) Instruments measure toxic gases in the ventilation and air conditioning system. 17.59 18.1

AND EITHER 18.3

2)a) Isolation of the primary air intake as indicated on panel number 1H11*PNL-VC1. 18.6 18.7

OR 18.9

b) Isolation of the alternate outside air intake as indicated on panel number 1H11*PNL-VC1. 18.12 18.14

OR 18.16

c. The Watch Engineer receives notification of gases in concentrations which exceed the limits of flammability within the plant environs. 18.19 18.20

OR 18.22

d. Flammable gases are detected by instruments (portable or permanent) in any plant structure containing safety related equipment. 18.25 18.27

OR 18.29

5. a. Turbine trips as indicated on panel number 1H11*MCB-01 18.32

AND 18.34

b. The Watch Engineer observes or receives notification of a turbine failure causing casing penetration. 18.37 18.38

ALERT NO. 18

LOGIC DIAGRAM

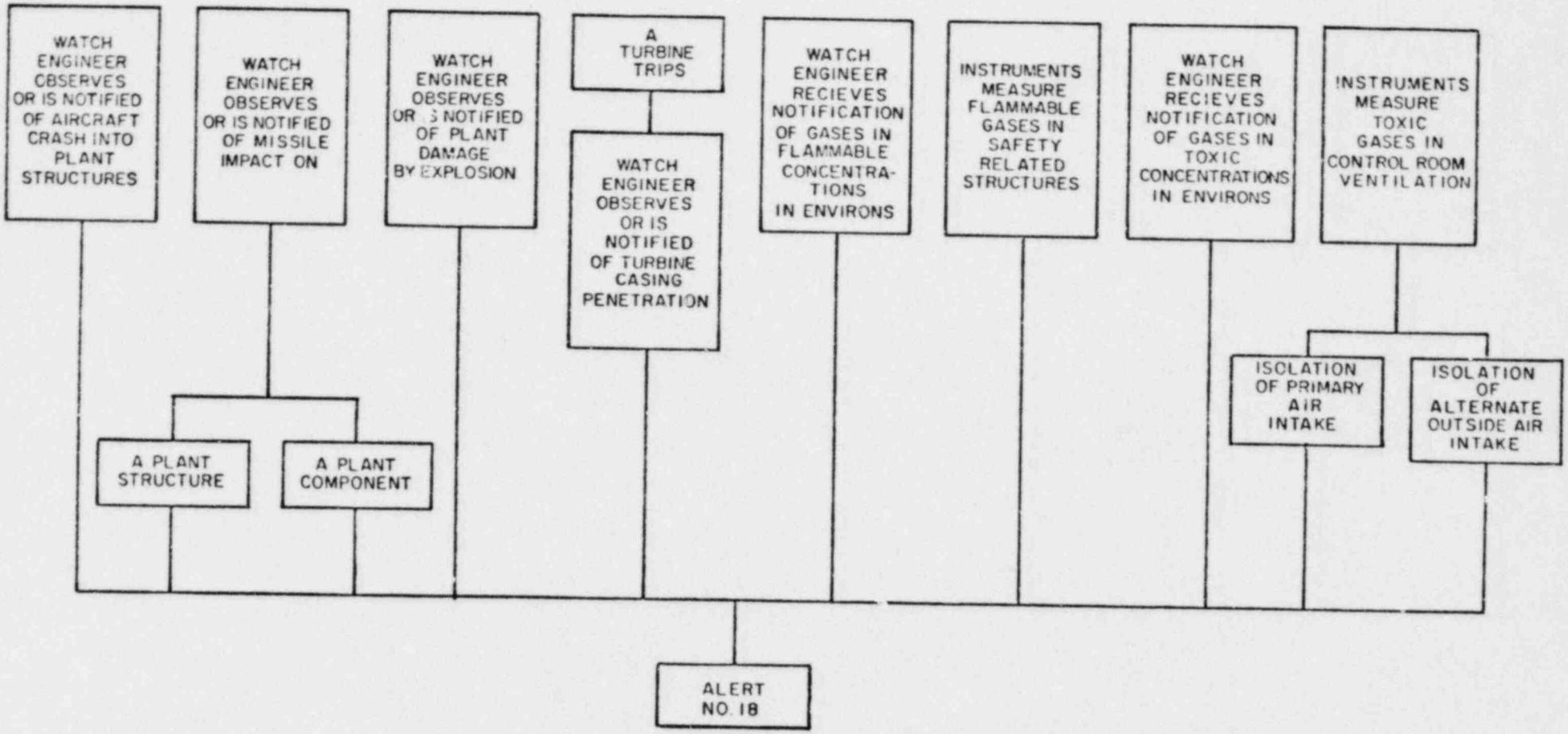


FIG. A18-1

SITE AREA EMERGENCY NO. 16

16.7

Initiating Conditions (NUREG 0654, Appendix 1) 16.10

Other hazards being experienced with plant not in cold shutdown: 16.13

a. Aircraft crash affecting vital structures by impact or fire 16.15

b. Severe damage to safe shutdown equipment from missiles or explosion 16.16

c. Entry of uncontrolled flammable gases into vital areas. Entry of uncontrolled toxic gases into vital areas where lack of access to the area constitutes a safety problem. 16.18 16.19

Emergency Action Levels 16.21

1. Plant not in cold shutdown 16.24

AND 16.26

2. An aircraft crash causing either damage or fire in: 16.29

a. The reactor building 16.31

OR 16.33

b. The control room 16.35

OR 16.37

c. The auxilary building 16.39

OR 16.41

d. The radwaste building 16.43

OR 16.45

e. The turbine building 16.47

OR 16.49

f. The screenwell 16.51

OR 16.53

3. Missiles or explosion in the plant causing loss of functions needed for hot shutdown (see Site Area Emergency No. 8 and Site Area Emergency No. 9). 16.57 16.58

OR 17.1

4. Presence of uncontrolled flammable gases in vital areas as detected by instrumentation (portable or installed). 17.4

OR 17.7

5. Presence of uncontrolled toxic gases in plant areas as detected by instrumentation (portable on installed) which renders a safety related system both manually and remote manually inoperable. 17.10

SITE AREA EMERGENCY NO. 16
LOGIC DIAGRAM

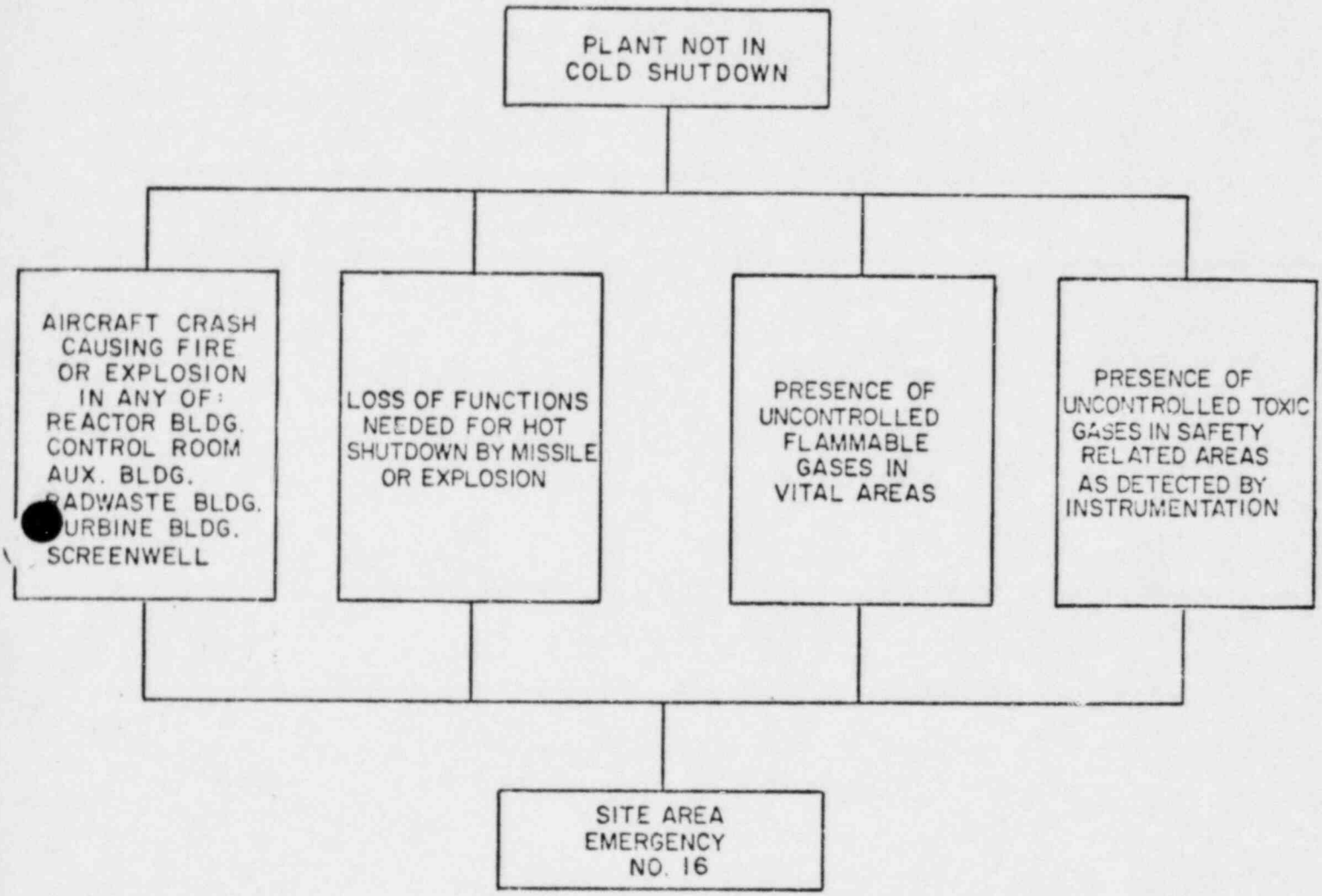


FIG. SAE 16-1

GENERAL EMERGENCY NO. 7 23.44

Initiating Conditions (NUREG 0654, Appendix 1) 23.47

Any major internal or external event (e.g., fires, earthquakes, substantially 23.51
beyond design basis) which could cause massive common damage to plant system 23.52
resulting in any of the general emergency initiating conditions. 23.53

Emergency Action Levels 23.55

1. As deemed necessary by Watch Engineer. 23.58

	EVENT CATEGORY 13	1.7
	SECURITY THREATS	1.9
	INITIATING CONDITIONS	1.13
UNUSUAL EVENT NO. 12	Security threat or attempted entry or attempted sabotage.	1.18
ALERT NO. 16	Ongoing security compromise.	1.20
SITE AREA EMERGENCY NO. 14	Imminent loss of physical control of the plant.	1.21
GENERAL EMERGENCY NO. 3	Loss of physical control of the facility.	1.22

UNUSUAL EVENT NO. 12 3.37

Initiating Conditions (NUREG 0654, Appendix 1) 3.40

Security threat or attempted entry or attempted sabotage. 3.43

Emergency Action Levels 3.45

1. When determined by the on-duty Watch Engineer that there exists: 3.48

   a. A security threat 3.50

      OR 3.52

   b. An attempted entry 3.55

      OR 3.57

   c. An attempted sabotage 4.1

ALERT NO. 16 3.15

Initiating Conditions (NUREG 0654, Appendix 1) 3.18

Ongoing Security Compromise. 3.20

Emergency Action Levels 3.22

1. On duty Watch Engineer determines or is notified by Security that an area 3.26
   of the plant has been commandeered by unauthorized personnel. This area: 3.27

   a. Is not necessary for shutdown capability 3.29

      AND 3.31

   b. Is not a vital area (as defined in security plan). 3.34

SITE AREA EMERGENCY NO. 14 4.4

Initiating Conditions (NUREG 0654, Appendix 1) 4.7

Imminent loss of physical control of the plant. 4.10

Emergency Action Levels 4.12

1. On duty Watch Engineer determines or is notified by Security that a physical attack on the plant is in progress involving imminent occupation of: 4.15 4.16

   a. The control room 4.19

   OR 4.21

   b. The auxiliary shutdown panels 4.24

   OR 4.26

   c. Other vital areas (as defined in security plan). 4.29

GENERAL EMERGENCY NO. 3 4.32

Initiating Conditions (NUREG 0654, Appendix 1) 4.35

Loss of physical control of the facility. 4.38

Emergency Action Levels 4.40

1. On duty Watch Engineer determines or is notified by Security that a physical attack on the plant has resulted in unauthorized personnel occupying: 4.43 4.44

   a. the control room 4.46

   OR 4.48

   b. any other vital area (as defined in security plan). 4.51

EVENT CATEGORY 14 1.26

NATURAL EVENTS 1.28

INITIATING CONDITIONS 1.31

UNUSUAL EVENT NO. 13

Natural phenomenon being experienced or projected beyond usual levels: 1.35

a. Any earthquake felt in-plant or detected on station seismic instrumentation 1.38

b. 50 year flood or low water, tsunami, hurricane surge, seiche 1.39

c. Any tornado on site 1.40

d. Any hurricane. 1.41

ALERT NO. 17

Severe natural phenomena being experienced or projected: 1.43

a. Earthquake greater than OBE levels 1.45

b. Flood, low water, tsunami, hurricane surge, seiche near design levels 1.46

c. Any tornado striking facility. 1.47

d. Hurricane winds near design basis level. 1.48

SITE AREA EMERGENCY NO. 15

Severe natural phenomena being experienced or projected with plant not in cold shutdown: 1.50

a. Earthquake greater than SSE levels 1.52

b. Flood, low water, tsunami, hurricane surge, seiche greater than design levels or failure of protection of vital equipment at lower levels 1.53

c. Sustained winds or tornadoes in excess of design levels. 1.54

GENERAL EMERGENCY NO. 7

Any major internal or external events (e.g., fires, earthquakes, substantially beyond design basis) which could cause massive common damage to plant systems resulting in any of the above. 1.56

UNUSUAL EVENT NO. 13 7.34

Initiating Conditions (NUREG 0654, Appendix 1) 7.37

Natural phenomenon being experienced or projected beyond usual levels: 7.40

a. Any earthquake felt in-plant or detected on station seismic instrumentation. 7.42

b. 50 year flood or low water, tsunami, hurricane surge, seiche 7.43

c. Any tornado on site 7.44

d. Any hurricane. 7.45

Emergency Action Levels 7.47

1. Any earthquake which: 7.50

a. Is felt in-plant 7.52

OR 7.54

b. Causes Seismic Recording System Start indication as indicated on panel 1H11*PNL-SMP 7.57

OR 7.59

c. Is detected by seismic event detected alarm on panel 1H11*MCB-01. 8.3

OR 8.5

2. Any 50 year flood, 50 year low water, or hurricane surge, or seiche which is: 8.8

a. near +12 ft MLW as indicated by recorder LR-048 on panel 1H11*PNL-TR 8.10

OR 8.12

b. near -4 ft MLW as indicated by recorder LR-048 on panel 1H11*PNL-TR. 8.14

OR 8.17

3. Any tornado observed to cross the site boundary 8.20

OR 8.22

4. Any hurricane observed in the area 8.25

OR 8.27

5. Any measured wind velocity exceeding 80 mph as indicated on panel 1H11*PNL-118A/B 8.30

UNUSUAL EVENT No. 13

LOGIC DIAGRAM

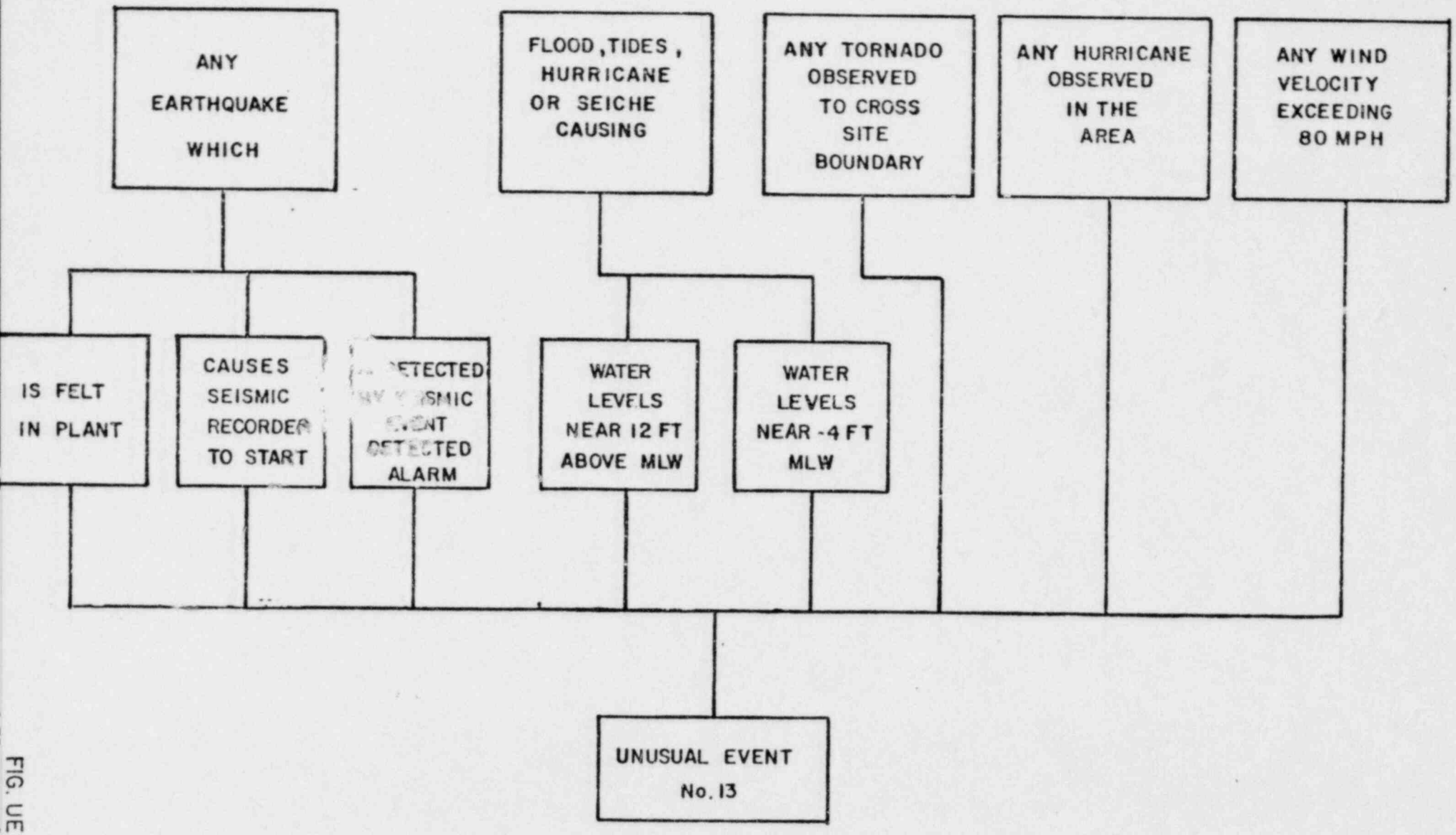


FIG. UE13-1

ALERT NO. 17 8.33

Initiating Conditions (NUREG-0654, Appendix 1) 8.36

Severe natural phenomena being experienced or projected: 8.39

a. Earthquake greater than OBE levels 8.41

b. Flood, low water, hurricane surge, or seiche near design levels 8.42

c. Any tornado striking facility 8.43

d. Hurricane winds near design basis level. 8.44

Emergency Action Levels 8.46

1. An earthquake beyond 0.1g levels as detected on plant seismic instrumentation on panel 1H11*PNL-SMP. 8.49 8.50

OR 8.52

2. 8.55

a. Water level above off +12 ft MLW on recorder LR-048 on panel 1H11*PNL-TR 8.58

(NOTE: This is an off scale high, the recorder's range is restricted to +12 ft MLW.) 9.1

OR 9.3

b. Water level below -4 ft MLW on recorder LR-048 on panel 1H11*PNL-TR. 9.7

(NOTE: This is an off scale low, the recorder's range is restricted to -4 ft MLW.) 9.9

OR 9.11

3. A tornado striking and damaging any safety related structure. 9.14

OR 9.16

4. Projected hurricane winds near 100 mph. 9.19

OR 9.21

5. Measured wind velocity near 100 mph as indicated on panel 1H11*PNL-118A/B 9.24

ALERT No. 17

LOGIC DIAGRAM

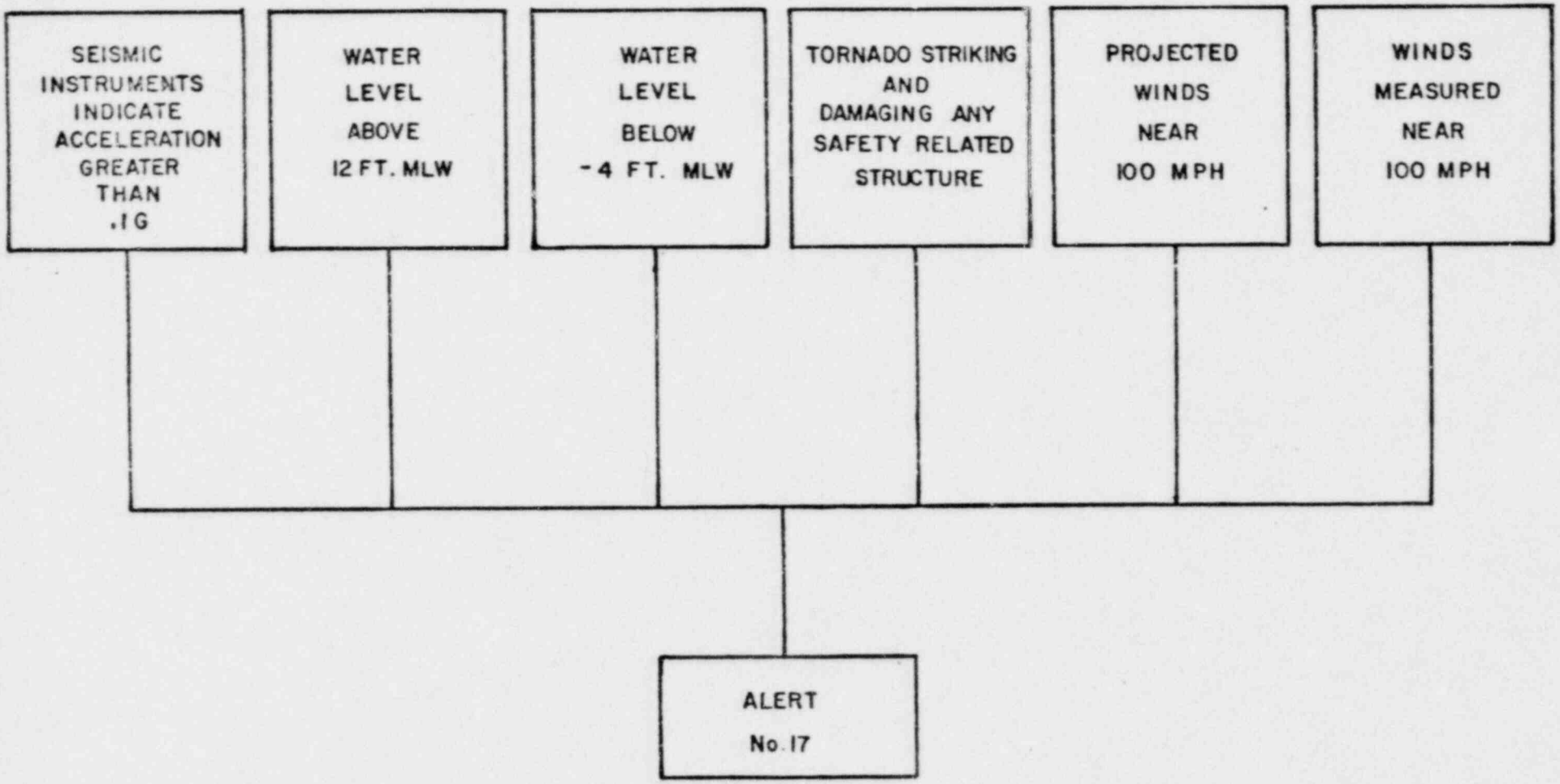


FIG. A17-1

SITE AREA EMERGENCY NO. 15 6.42

Initiating Conditions (NUREG 0654, Appendix 1) 6.45

Severe natural phenomena being experienced or projected with plant not in cold shutdown: 6.48

a. Earthquake greater than SSE levels 6.50

b. Flood, low water, hurricane surge, seiche greater than design levels or failure of protection of vital equipment at lower levels 6.51

c. Sustained winds or tornadoes in excess of design levels. 6.52

Emergency Action Levels 6.54

1. Plant not in cold shutdown 6.56

AND 6.59

2. An earthquake causing an acceleration greater than .2 g detected on plant seismic instrumentation as indicated on panel 1H11*-PNL-SMP. 7.3 7.4

OR 7.7

3. Water levels measured or estimated to be: 7.10
   a. Near +26 ft MLW (NOTE: The range of the Tide Level Recorder on panel 1H11*PNL-T is limited to +12 ft MLW.) 7.12

OR 7.14

   b. Near -7.3 ft MLW (Note: The reange of the Tide Level Recorder on panel 1H11*PNL-TR is limited to -4 ft MLW.) 7.17

OR 7.19

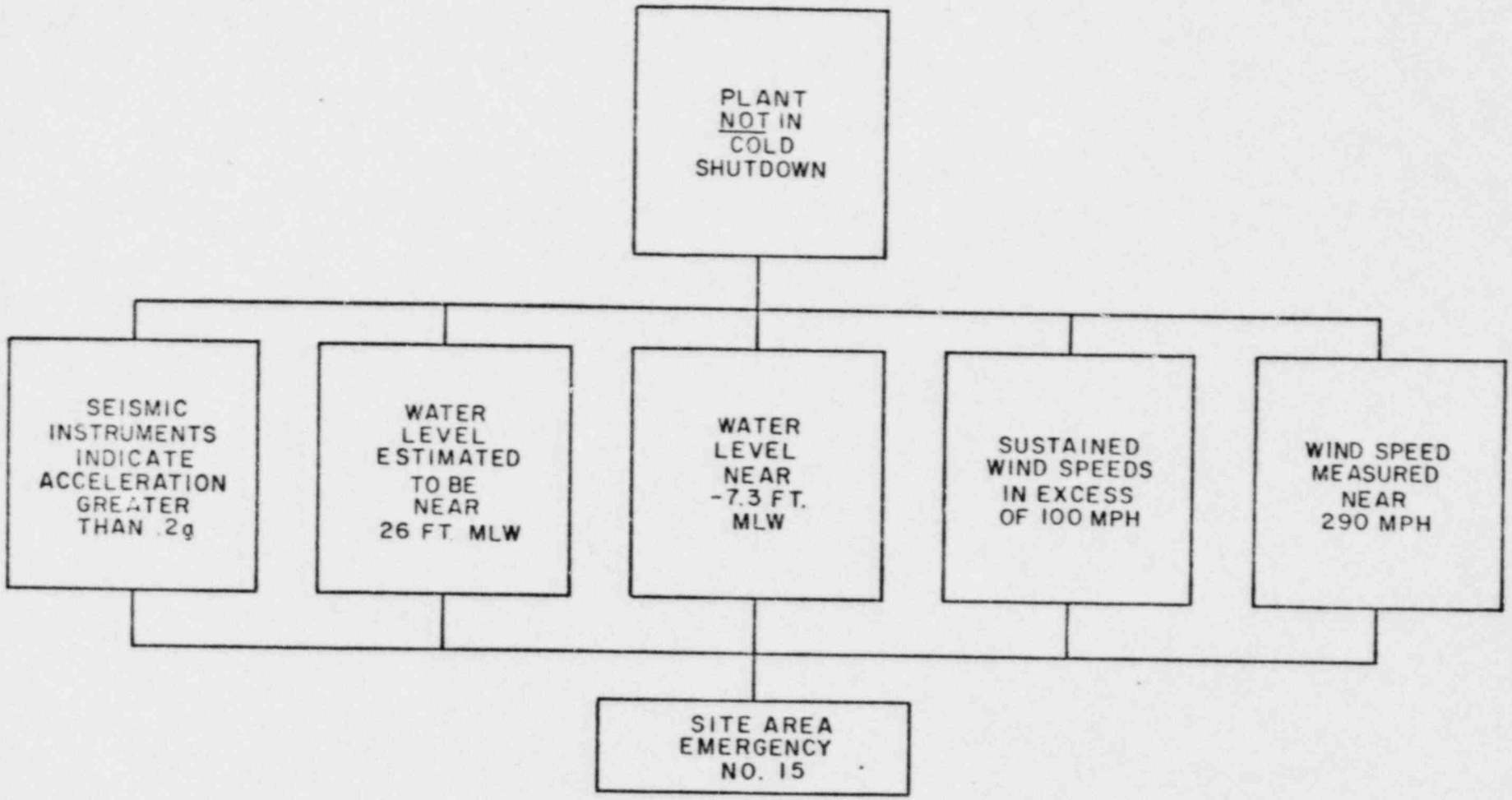
4. Sustained wind speeds in excess of 100 mph measured on site. (NOTE: This is an off scale high, the range of the anenometer is restricted to 100 MPH.) 7.23 7.24

OR 7.26

5. Winds of short duration with an estimated speed in excess of 290 mph. (NOTE: This is well beyond the range of the anenometer. Other means of measurement will have to be employed.) 7.29 7.31

SITE AREA EMERGENCY NO. 15

LOGIC DIAGRAM



GENERAL EMERGENCY NO. 7 23.44

Initiating Conditions (NUREG 0654, Appendix 1) 23.47

Any major internal or external event (e.g., fires, earthquakes, substantially 23.51
beyond design basis) which could cause massive common damage to plant system 23.52
resulting in any of the general emergency initiating conditions. 23.53

Emergency Action Levels 23.55

1. As deemed necessary by Watch Engineer. 23.58

EVENT CATEGORY 15 2.1

OTHERS 2.3

INITIATING CONDITIONS 2.6

UNUSUAL EVENT NO. 15	Other plant conditions exist that warrant increased awareness on the part of a plant operating staff or State and/or local offsite authorities or require plant shutdown under technical specification requirements or involve other than normal controlled shutdown (e.g., cooldown rate exceeding technical specification limits, pipe cracking found during operation).	2.11 2.12
UNUSUAL EVENT NO. 16	Transportation of contaminated injured individual from site to offsite hospital.	2.13
ALERT NO. 19	Other plant conditions exist that warrant precautionary activation of technical support center and placing near-site Emergency Operations Facility and other key emergency personnel on standby.	2.14
SITE AREA EMERGENCY NO. 17	Other plant conditions exist that warrant activation of emergency centers and monitoring teams or a precautionary notification to the public near the site.	2.15
GENERAL EMERGENCY NO. 4	Other plant conditions exist, from whatever source, that make release of large amounts of radioactivity in a short time period possible, e.g. any core melt situation.	2.16

UNUSUAL EVENT NO. 15 31.38

Initiating Conditions (NUREG-0654, Appendix 1) 31.41

Other plant conditions exist that warrant increased awareness on the part of a 31.45
plant operating staff or State and/or local offsite authorities or require 31.46
plant shutdown under technical specification requirements or involve other than 31.47
normal controlled shutdown (e.g., cooldown rate exceeding technical 31.48
specification limits, pipe cracking found during operation). 31.49

Emergency Action Levels 31.51

When the on-duty Watch Engineer determines that plant conditions exist such 31.54
that any of the following actions are necessary:

1. Increased awareness of plant conditions by the plant operating staff. 31.56

OR 31.59

2. Increased awareness of plant conditions by the State and/or local offsite 32.3
authorities.

OR 32.5

3. Plant shutdown required by technical specification requirements. 32.8

OR 32.10

4. Plant startup or shutdown occurring outside normal controlled conditions 32.13
defined by the technical specifications.

UNUSUAL EVENT NO. 16 1.55

Initiating Conditions (NUREG 0654, Appendix 1) 1.58

Transportation of contaminated injured individual from site to offsite hospital. 2.2

Emergency Action Levels 2.4

As deemed necessary by on-duty Watch Engineer when transporting externally contaminated injured individual from site to offsite medical facility. 2.5 2.6

ALERT NO. 19 1.34

Initiating Conditions (NUREG 0654, Appendix 1) 1.37

Other plant conditions exist that warrant precautionary activation of the 1.38
Technical Support Center and placing the near-site Emergency Operations 1.39
Facility and other key emergency personnel on standby. 1.40

Emergency Action Level 1.42

1. When determined by the on-duty Watch Engineer that plant conditions exist 1.44
which warrant:

   a. Precautionary activation of the Technical Support Center 1.46

   AND 1.48

   b. Precautionary activation of the Operations Support Center 1.51

1.52

SITE AREA EMERGENCY NO. 17 1.7

Initiating Conditions (NUREG 0654, Appendix 1) 1.10

Other plant conditions exist that warrant activation of emergency centers and monitoring teams or a precautionary notification to the public near the site. 1.14 1.15

Emergency Action Levels 1.17

1. As determined by the on-duty Watch Engineer that plant conditions exist which warrant: 1.20 1.21

   a. The notifications required by the Site Area Emergency Classification 1.23

      OR 1.25

   b. 1) Activation of monitoring teams 1.27

      AND 1.29

      2) Activation of emergency centers 1.31

GENERAL EMERGENCY NO. 4 23.20

Initiating Conditions (NUREG-0654, Appendix 1) 23.23

Other plant conditions exist, from whatever source, that make release of large 23.27
amounts of radioactivity in a short time period possible, e.g., any core melt 23.28
situation. See the specific PWR and BWR sequences below. 23.29

Emergency Action Levels 23.31

1. On-duty Watch Engineer's judgement that other plant conditions exist, 23.34
from whatever source, that make release of large amounts of 23.35
radioactivity in a short time possible. 23.36

OR 23.38

2. See the four sequences listed under General Emergency No. 6a, b, c, d. 23.41