

# CATEGORY 1

## REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR:9803170362 DOC.DATE: 98/03/11 NOTARIZED: NO DOCKET #  
FACIL:50-250 Turkey Point Plant, Unit 3, Florida Power and Light C 05000250  
50-251 Turkey Point Plant, Unit 4, Florida Power and Light C 05000251  
AUTH.NAME AUTHOR AFFILIATION  
HOVEY,R.J. Florida Power & Light Co.  
RECIP.NAME RECIPIENT AFFILIATION  
Document Control Branch (Document Control Desk)

SUBJECT: Forwards revised EPIPs, 0-EPIP-20106, "Natural Emergencies," 2nd  
0-EPIP-20132, "Technical Support Center Activation &  
Operation" & 0-EPIP-20133, "Operations Support Center  
Activation & Operation."

DISTRIBUTION CODE: A045D COPIES RECEIVED: LTR 1 ENCL 1 SIZE: 4 + 198  
TITLE: OR Submittal: Emergency Preparedness Plans, Implement'g Procedures, CI

### NOTES:

	RECIPIENT ID CODE/NAME	COPIES LTTR ENCL	RECIPIENT ID CODE/NAME	COPIES LTTR ENCL
	PD2-3 LA	1 1	PD2-3 PD	1 1
	CROTEAU, R	1 1		
INTERNAL:	AEOD/HAGAN, D	1 1	FILE CENTER	2 2
	NRR/DRPM/PERB	1 1	NUDOCS-ABSTRACT	1 1
EXTERNAL:	NOAC	1 1	NRC PDR	1 1

### NOTE TO ALL "RIDS" RECIPIENTS:

PLEASE HELP US TO REDUCE WASTE. TO HAVE YOUR NAME OR ORGANIZATION REMOVED FROM DISTRIBUTION LISTS  
OR REDUCE THE NUMBER OF COPIES RECEIVED BY YOU OR YOUR ORGANIZATION, CONTACT THE DOCUMENT CONTROL  
DESK (DCD) ON EXTENSION 415-2083

TOTAL NUMBER OF COPIES REQUIRED: LTTR 10 ENCL 10





MAR 11 1998

L-98-065

10 CFR 50.54(q)

10 CFR 50 Appendix E

U.S. Nuclear Regulatory Commission  
Attn: Document Control Desk  
Washington, D. C. 20555

Re: Turkey Point Units 3 and 4  
Docket Nos. 50-250 and 50-251  
Emergency Plan Implementing Procedure Changes

Emergency Plan Implementing Procedure EPIP-20133, "Operations Support Center (OSC) Activation and Operation." has been canceled. Information from the canceled procedure has been transitioned and reformatted into a new Emergency Plan Implementing Procedure, 0-EPIP-20133, "Operations Support Center (OSC) Activation and Operation."

The following Emergency Plan Implementing Procedures have been revised: 0-EPIP-20132, "Technical Support Center (TSC) Activation and Operation," and 0-EPIP-20106, "Natural Emergencies."

Pursuant to the requirements of 10 CFR 50.54(q) and 10 CFR 50 Appendix E, enclosed is one copy each of new procedure 0-EPIP-20133, and revised procedures 0-EPIP-20106 and 0-EPIP-20132. Attached please find a summary of changes to the above procedures. The implementation date for these procedure changes was February 26, 1998. FPL has determined that the changes described do not result in a decrease in the effectiveness of the Emergency Plan.

Should there be any questions, please contact us.

Very truly yours,

R. J. Hovey  
Vice President  
Turkey Point Plant

CLM

2.00-8

ADP /

Attachment, enclosures

cc: Regional Administrator, Region II, USNRC (2 copies)  
Senior Resident Inspector, USNRC, Turkey Point Plant (w/o enclosure)

9803170362 980311  
PDR ADOCK 05000250  
F PDR



**In addition to upgrading the format of the procedure, the following changes have been incorporated into 0-EPIP-20133:**

Two possible alternate OSC locations have been added to the procedure. These alternate locations are the second floor of the TSC Building and the Cable Spreading Room.

Guidance has been included for the use of non-ERO personnel for damage assessments, QC verifications, etc.

The OSC Supervisor should brief facility personnel on the status of the emergency.

Supervisors should communicate status updates to the field teams.

Field operators should follow directions from the Control Room until the TSC/OSC are activated; they would then be directed by the TSC through the OSC.

Team members should bring available radios to the OSC and prepare for re-entry activities upon arrival.

Additional team members may need to be sent to pair up with the operators who are required to remain in the field at the onset of the emergency.

Personnel in the field at the onset of the emergency may require dosimetry to be brought to them.

NRC responders will bring government issued dosimetry with them to the site.

Team members should maintain frequent communications with the OSC and communicate damage assessment information back to the OSC as soon as the evaluation is complete. Damage assessment communications should occur via the quickest available medium (radio, plant page, etc.) providing no additional radiological concerns result from use.

Instructions have been added for the OSC Supervisor to keep the noise levels down in the facility so the communication links can be easily heard.

A copy of the team briefing/debriefing form should accompany the team upon dispatch from the OSC.

Guidance on dressing out the teams has been included (team should dress out in advance if warranted by plant conditions, bathrooms may be used for dressout areas, etc.)

The OSC Control Point should be posted properly, and communication established from the Control Point to the OSC.



New electronic copy boards have been purchased for the OSC. They are kept in the Second Floor Fan Room of the NAB. Instructions for obtaining the copy boards from the Fan Room have been incorporated into the procedure.

New maps showing plant locations are available on one of the new copy boards.

Instructions have been added for the Plant Status Board Keepers.

Instructions have been added for maintaining the Team Tracking Board (verifying priorities, ensuring the board is updated when teams change assignments, teams are tracked and updated, dose tracking information is recorded, etc.).

Additional instructions have been added for Security personnel on maintaining OSC accountability.

Medical personnel should return to the OSC after completing an assignment.

Plant page audibility in the OSC should be checked during activation.

**The following changes have been incorporated into 0-EPIP-20132:**

Guidance on the use of non-ERO personnel for damage assessments, QC verifications, etc.

Instructions for TSC leads to communicate results of damage assessments to the Emergency Coordinator (EC) in a timely manner.

Instructions for the TSC State/County Communicator to maintain the EC logbook.

Instructions for the TSC Chemistry Supervisor to fax completed dose calculation information to the EOF for use during activation.

The security checklist has been revised.



**The following changes have been incorporated into 0-EPIP-20106:**

**Hurricane Warning Section:**

Instructions have been added for placing sandbags at the bottom of the stoplogs.

Instructions for moving/storage of the hydrazine tank have been added to the procedure per recommendation from an Environmental Department Audit.

Land Utilization responsibilities have been moved to the Projects Supervisor to reflect a recent organization change.

Instructions have been added for providing updates to employees on the status of a storm via plant newsletter, CCTV system, and Hurricane Information Line.

Instructions have been included for generating an overtime letter stating that 72 hour rule deviation is probable.

Instructions have been included for reviewing the Loss of Instrument Air Procedure in preparation for a station blackout.

TSC Security Supervisor instructions now include preparing for the suspension of safeguards, ensuring the plant access roadway is clear, and moving employee vehicles to the highest available parking area.

**Earthquake Section:**

Responsibilities for Seismograph Recorder film development and evaluation have been clarified.





SC, ASSIGNED PAGES PER REF O-ERIP-84106 & O-ERIP-20132 & O-ERIP-20133  
LTA DATED 3/11/98 MODIFIED BY ACB 7/11/98  
ALCF# 9803170362 98/03/11

# Florida Power & Light Company

## Turkey Point Nuclear Plant



O-ERIP-20106

Title:

### Natural Emergencies

#### Safety Related Procedure

Responsible Department:	Emergency Preparedness
Revision Approval Date:	8/29/96
Periodic Review Due:	5/30/01
Implementation Date	8/30/96

RTS 95-0996P, 96-0997

LIST OF EFFECTIVE PAGES

<u>Page</u>	<u>Revision Date</u>	<u>Page</u>	<u>Revision Date</u>	<u>Page</u>	<u>Revision Date</u>	<u>Page</u>	<u>Revision Date</u>
1	08/29/96	25	05/31/96	49	08/29/96	73	08/29/96
2	08/29/96	26	08/29/96	50	08/29/96	74	08/29/96
3	05/31/96	27	08/29/96	51	08/29/96	75	08/29/96
4	08/29/96	28	08/29/96	52	08/29/96	76	08/29/96
5	05/31/96	29	08/29/96	53	08/29/96	77	08/29/96
6	08/29/96	30	08/29/96	54	08/29/96	78	08/29/96
7	08/29/96	31	08/29/96	55	08/29/96	79	08/29/96
8	05/31/96	32	05/31/96	56	08/29/96	80	08/29/96
9	05/31/96	33	08/29/96	57	08/29/96	81	08/29/96
10	05/31/96	34	05/31/96	58	08/29/96	82	08/29/96
11	05/31/96	35	08/29/96	59	08/29/96	83	08/29/96
12	05/31/96	36	08/29/96	60	08/29/96	84	08/29/96
13	08/29/96	37	08/29/96	61	08/29/96	85	08/29/96
14	05/31/96	38	08/29/96	62	08/29/96	86	08/29/96
15	05/31/96	39	08/29/96	63	08/29/96	87	08/29/96
16	05/31/96	40	08/29/96	64	08/29/96	88	08/29/96
17	05/31/96	41	08/29/96	65	08/29/96	89	08/29/96
18	08/29/96	42	08/29/96	66	08/29/96	90	08/29/96
19	08/29/96	43	08/29/96	67	08/29/96	91	08/29/96
20	08/29/96	44	08/29/96	68	08/29/96	92	08/29/96
21	08/29/96	45	08/29/96	69	08/29/96	93	08/29/96
22	08/29/96	46	08/29/96	70	08/29/96		
23	08/29/96	47	08/29/96	71	08/29/96		
24	05/31/96	48	08/29/96	72	08/29/96		



## TABLE OF CONTENTS

<u>Section</u>	<u>Page</u>
1.0 <u>PURPOSE</u> .....	5
2.0 <u>REFERENCES/RECORDS REQUIRED/</u> <u>COMMITMENT DOCUMENTS</u> .....	5
3.0 <u>RESPONSIBILITIES</u> .....	10
4.0 <u>DEFINITIONS</u> .....	11
5.0 <u>PROCEDURE</u> .....	13
5.1 Weather Reports for Emergency Classification Determination .....	14
5.2 Tornado .....	14
5.3 Hurricane Warning .....	15
5.3.1 Emergency Coordinator Responsibilities .....	15
5.3.2 Emergency Preparedness Coordinator Responsibilities .....	19
5.3.3 TSC Projects Supervisor Responsibilities .....	25
5.3.4 TSC Maintenance Manager Responsibilities .....	25
5.3.5 TSC Mechanical Supervisor Responsibilities .....	31
5.3.6 TSC I&C Supervisor Responsibilities .....	41
5.3.7 TSC Electrical Supervisor Responsibilities .....	43
5.3.8 TSC Operations Manager Responsibilities .....	44
5.3.9 TSC Chemistry Supervisor Responsibilities .....	50
5.3.10 TSC Health Physics Supervisor Responsibilities .....	50
5.3.11 TSC Security Supervisor Responsibilities .....	52
5.3.12 TSC Fire Protection Supervisor Responsibilities .....	52
5.3.13 Site Facilities Responsibilities .....	53
5.4 Earthquake .....	56

Procedure No.:	Procedure Title:	Page: 4
0-EPIP-20106	Natural Emergencies	Approval Date: 8/29/96

## TABLE OF CONTENTS (Cont'd)

<u>Section</u>	<u>Page</u>
<u>FIGURE/ENCLOSURES</u>	
<u>Figure 1</u>	
Details for Flood Protection Dike .....	58
<u>Enclosure 1</u>	
480 Volt Receptacle List .....	59
<u>Enclosure 2</u>	
Drain Plugs Locations and Installation .....	61
<u>Enclosure 3</u>	
Operations Guidelines for Category 5 Hurricane with Significant Flooding .....	69
<u>Enclosure 4</u>	
Loss of Communications - Remote Station Guidelines .....	84
<u>ATTACHMENTS</u>	
<u>Attachment 1</u>	
Recommended Minimum Hurricane Staffing Levels .....	92

Procedure No.:	Procedure Title:	Page: 5
0-EPIP-20106	Natural Emergencies	Approval Date: 5/31/96

## 1.0 PURPOSE

- 1.1 This procedure provides instructions and guidelines for preparing, controlling, and recovering the plant following activation of the Emergency Plan for a natural emergency.
- 1.2 This procedure addresses tornadoes, hurricanes and earthquakes, but is to be used for any severe natural disturbance which results in Emergency Plan activation. Specific guidance is provided for coping with possible flood conditions associated with more intense hurricanes.
- 1.3 Procedural guidance for weather disturbances not meeting the criteria for activating the Emergency Plan are found in 0-ONOP-103.3, Severe Weather Preparation.
- 1.4 This procedure shall be used when the natural emergency meets the criteria in Table 1 of EPIP-20101, Duties of Emergency Coordinator. Natural emergencies that do not meet the criteria of EPIP-20101 shall be handled in accordance with 0-ONOP-103.3, Severe Weather Preparations.

## 2.0 REFERENCES/RECORDS REQUIRED/COMMITMENT DOCUMENTS

### 2.1 References

- 2.1.1 Technical Specification 3.4.1.3, Reactor Coolant System - Hot Shutdown
- 2.1.2 Final Safety Analysis Review, Section 2, Site and Environment, and Figures 1.2-3 and 1.2-4
- 2.1.3 Turkey Point Plant Radiological Emergency Plan
- 2.1.4 Turkey Point [Fossil] Plant, Units 1 and 2 Hurricane Plans
- 2.1.5 Station Blackout Guidelines:
  1. NRC Reg. Guide 1.155, Station Blackout
  2. NUMARC 87-00, Guidelines and Technical Bases for NUMARC Initiatives Addressing Station Blackout at Light Water Reactors
- 2.1.6 National Oceanic and Atmospheric Administration Information - information on area tornado and hurricane reports





## 2.1.7 Plant Procedures

1. 0-ADM-016.1, Transient Combustible and Flammable Substances Program
2. 0-ADM-215, Plant Surveillance Tracking Program
3. 3-ARP-097.DG, Diesel Generator Panel Annunciator Response
4. 4-ARP-097.DG, Diesel Generator Panel Annunciator Response
5. 0-ONOP-003.10, 125 VDC System - Location of Grounds
6. 0-ONOP-003.11, Auxiliary 125 VDC System - Location of Grounds
7. 3-ONOP-004, Loss of Offsite Power
8. 4-ONOP-004, Loss of Offsite Power
9. 3-ONOP-004.1, System Restoration Following Loss of Offsite Power
10. 4-ONOP-004.1, System Restoration Following Loss of Offsite Power
11. 3-ONOP-004.2, Loss of 3A 4KV Bus
12. 4-ONOP-004.2, Loss of 4A 4KV Bus
13. 3-ONOP-004.3, Loss of 3B 4KV Bus
14. 4-ONOP-004.3, Loss of 4B 4KV Bus
15. 3-ONOP-019, Intake Cooling Water Malfunction |
16. 4-ONOP-019, Intake Cooling Water Malfunction |
17. 3-ONOP-023.2, Emergency Diesel Generator Failure
18. 4-ONOP-023.2, Emergency Diesel Generator Failure
19. 3-ONOP-041.7, Shutdown LOCA [Mode 3 (less than 1000 psig) or Mode 4]
20. 4-ONOP-041.7, Shutdown LOCA [Mode 3 (less than 1000 psig) or Mode 4]
21. 3-ONOP-041.8, Shutdown LOCA [Mode 5 or 6]



2.1.7 (Cont'd)

22. 4-ONOP-041.8, Shutdown LOCA [Mode 5 or 6]
23. 3-ONOP-050, Loss of RHR
24. 4-ONOP-050, Loss of RHR
25. 3-ONOP-075, Auxiliary Feedwater System Malfunction
26. 4-ONOP-075, Auxiliary Feedwater System Malfunction
27. 0-ONOP-103.3, Severe Weather Preparations
28. 0-OP-003.1, 125V Vital DC System
29. 3-OP-013, Instrument Air System
30. 4-OP-013, Instrument Air System
31. 0-OP-026, Cat 400 Operation
32. 0-OSP-012.1, Diesel Driven Service Water Pump Operability Test
33. 0-OSP-016.23, Diesel Driven Fire Pump Operability Test
34. 3-OSP-023.1, Diesel Generator Operability Test
35. 4-OSP-023.1, Diesel Generator Operability Test
36. 0-OSP-102.1, Flood Protection Stoplog Inspection
37. 0-PMI-103.1, Seismograph Quarterly Functional Check and Tri-Annual Battery Replacement
38. EPIP-20101, Duties of Emergency Coordinator
39. EPIP-20110, Criteria for and Conduct of Owner Controlled Area Evacuation
40. 0-EPIP-20112, Communication Network



## 2.1.8 Miscellaneous Documents (i.e., PC/M, Correspondence)

1. Security Force Instruction (SFI) 3002, Hurricane Preparedness
2. PC/M 87-212, EDG Enhancement Site Preparation
3. PC/M 89-124, Repair/Replace Stoplogs On East Side of Auxiliary Building
4. PC/M 90-390, Plant Perimeter Floodwell Repair
5. PC/M 90-449, CCW Area Pipe Trench Floodwells
6. PC/M 92-086, Secondary Containment of Unit 4 Turbine Lube Oil Reservoir
7. 5610-C-1695, Network of Barriers for Main Plant External Flood Protection
8. JPN-PTN-SECJ-88-079, Safety Evaluation Temporary External Flood Protection Barriers
9. JPN-PTP-90-1902, External Flood Protection Enhancement Program - Plant Drainage Evaluation
10. JPNS-PTN-90-0111, Turkey Point Units 3 and 4 RHR Pump Room Access Hatch Removals
11. JPNS-PTN-96-0352, dated May 13, 1996, Hurricane Shutdown Criteria

2.2 Records Required

2.2.1 None



### 2.3 Commitment Documents

2.3.1 L-91-184, PRA Transmittal Letter to NRC, dated June 25, 1991

2.3.2 Turkey Point Plant Units 3 & 4 Probabilistic Risk Assessment Individual Plant Examination Final Report, dated June 21, 1991

#### 2.3.3 Station Blackout

1. L-89-144, Information to Resolve Station Blackout
2. JPN-PTP-89-3253, Turkey Point Units 3 and 4 Response to NRC on Station Blackout Open Items
3. Turkey Point Units 3 and 4 - Safety Evaluation For Proposed Implementation Of The Station Blackout Rule (10CFR 50.63) (TAC Nos. 68618 and 68619), dated June 15, 1990
4. L-90-275, Implementation Of The Station Blackout Rule
5. L-90-338, Comments On NRC's Safety Evaluation for Station Blackout
6. L-90-56, Information To Resolve Station Blackout, dated March 29, 1990

2.3.4 L-94-107, dated May 5, 1994, Response to Generic Letter 87-02 concerning earthquake created relay chatter

Procedure No.:	Procedure Title:	Page: 10
0-EPIP-20106	Natural Emergencies	Approval Date: 5/31/96

### 3.0 RESPONSIBILITIES

- 3.1 It shall be the responsibility of the following individuals to protect personnel and the plant from the effects of the emergency and to comply with the steps outlined in Section 5.0 of this procedure:
  - 3.1.1 Emergency Coordinator
  - 3.1.2 Emergency Preparedness Coordinator
  - 3.1.3 TSC Projects Supervisor
  - 3.1.4 TSC Maintenance Manager
  - 3.1.5 TSC Mechanical Supervisor
  - 3.1.6 TSC I&C Supervisor
  - 3.1.7 TSC Electrical Supervisor
  - 3.1.8 TSC Operations Manager
  - 3.1.9 TSC Chemistry Supervisor
  - 3.1.10 TSC Health Physics Supervisor
  - 3.1.11 TSC Security Supervisor
  - 3.1.12 TSC Fire Protection Supervisor
  - 3.1.13 TSC Supervisor
  - 3.1.14 TSC Technical Assistant to the Emergency Coordinator
- 3.2 The Emergency Coordinator shall ensure notifications are performed per EPIP-20101, Duties of Emergency Coordinator, for natural emergencies meeting emergency action level criteria.
- 3.3 The TSC Operations Manager and the TSC Maintenance Manager will report the status of hurricane preparations to the Emergency Coordinator. All other managers and supervisors will report the status of hurricane preparations to the Emergency Preparedness Supervisor, who will keep the Emergency Coordinator appraised.



#### 4.0 DEFINITIONS

- 4.1 CATEGORY 1 HURRICANE: Hurricane with wind speed between 74 and 95 miles per hour (mph).
- 4.2 CATEGORY 2 HURRICANE: Hurricane with wind speed between 96 and 110 mph.
- 4.3 CATEGORY 3 HURRICANE: Hurricane with wind speed between 111 and 130 mph.
- 4.4 CATEGORY 4 HURRICANE: Hurricane with wind speed between 131 and 155 mph.
- 4.5 CATEGORY 5 HURRICANE: Hurricane with wind speed greater than 155 mph.
- 4.6 EYE: The center of a hurricane where calm prevails, with winds of no more than 20-30 mph and little or no rain.
- 4.7 HURRICANE: Same as a tropical storm, but the winds are over 73 mph and a well defined low barometric pressure center, called the EYE of the storm, is present.
- 4.8 HURRICANE ADVISORY: This is an information release put out every six hours, usually at 12 o'clock and 6 o'clock both day and night whenever a hurricane exists; the advisory is continually updated and this information is issued in the form of HURRICANE BULLETINS which are issued every 3 hours, day and night.
- 4.9 HURRICANE WARNING: This is a communication from NOAA, issued whenever a hurricane is between 12 and 24 hours from, and approaching, the U.S. coast and applies to an area approximately 50 miles either side of the expected landfall. This warning gives the expected time and location of landfall, as well as the hurricane's size, maximum winds, direction and speed of travel. The warning may also describe the coastal areas where high water, floods or high waves may be expected.



Procedure No.:	Procedure Title:	Page: 12
0-EPIP-20106	Natural Emergencies	Approval Date: 5/31/96

- 4.10 HURRICANE WATCH: This is a communication from NOAA, issued whenever a hurricane is between 24 and 48 hours from, and approaching, the U.S. coast and comprises an area approximately 100 miles either side of the expected landfall. It also gives the size, maximum winds, direction and speed of travel.
- 4.11 OWNER CONTROLLED AREA: That portion of the FPL property surrounding and including Turkey Point Plant which is subject to limited access and control as deemed appropriate by FPL.
- 4.12 POWER BLOCK: Structures comprising all permanent nuclear, power generation, and cooling structures, systems, and components within the Protected Area and permanent Safety Related or Quality Related utilities (e.g., air, water, and electric) both inside and outside the Protected Area.
- 4.13 TORNADO: A violently rotating column of air in contact with the ground, usually developing from severe thunderstorms or hurricanes.
- 4.14 TORNADO WARNING: This condition is declared once the surveillance means have shown that a tornado has been sighted. The area for which this warning is issued is usually smaller than that for which a watch is declared.
- 4.15 TORNADO WATCH: Meteorological conditions in the area described as favorable to the formation of tornadoes.
- 4.16 TROPICAL STORM: A weather disturbance of large size with winds of 39 to 73 mph, rotating in a counterclockwise direction, accompanied by torrential rains and an area of low barometric pressure.
- 4.17 TROPICAL STORM WARNING: This is a communication from NOAA issued whenever a tropical storm is 12 to 24 hours from and approaching, the U.S. coast.



5.0 PROCEDURECAUTIONS

- *Substantial portions of this procedure support Commitments 2.3.1. and 2.3.2. Do not delete material from this procedure without a full review of these commitments.*
- *Preparations for a hurricane are extensive. Start efforts early and take a conservative approach; pre-hurricane rain and winds may hamper preparation efforts.*
- *All unnecessary personnel in the Protected Area and all visitors in the Owner Controlled Area shall be required to leave when a hurricane warning is issued for the area. Flooding may make later evacuation impossible.*
- *If a hurricane passes directly over the plant area, do not assume the hurricane has passed when the winds subside and rain stops. This only means that the EYE of the hurricane is over the area, and within approximately one hour the winds will begin blowing again from the opposite direction as the second half of the hurricane passes.*
- *When a hurricane is near the area and high winds are occurring, or if there is significant likelihood that a tornado will strike the immediate plant site, keep all activities outside of the plant buildings to a minimum.*
- *Do not assume the emergency to be over until the receipt of official word from the NOAA/NWS that there is no longer a threat to the area.*

NOTES

- *The Emergency Coordinator has the authority to perform, or not to perform, the steps of this procedure as he deems necessary.*
- *Timely and efficient site preparations must be made prior to the issuance of the evacuation orders by the counties. Failure to do so, may result in a shortage of personnel to prepare the plant site for the hurricane.*
- *Testing of diesel equipment, with the exception of the EDG's, is not required if testing has been performed within the last 7 days.*
- *Walkdowns should not begin until maintenance has had an opportunity to initiate their tiedowns (approximately 24 hours into hurricane preparations).*
- *Walkdowns should end in time to allow maintenance the opportunity to close out the items (approximately 24 hours into hurricane preparations).*
- *Personnel staying onsite through the hurricane should be onsite at least one full shift before the hurricane is projected to hit.*



Procedure No.:  0-EPIP-20106	Procedure Title:  Natural Emergencies	Page: 14 Approval Date: 5/31/96
------------------------------------	---	--

5.1 Weather Reports for Emergency Classification Determination

5.1.1 Reliable information on approaching severe weather disturbances is expected to be available from the following sources. Any method of notification from the National Oceanic and Atmospheric Administration/National Weather Service (NOAA/NWS) may be used to receive weather reports for emergency classification determination.

1. The NOAA/NWS will issue warnings received by the State of Florida Department of Emergency Management (DEM). The Florida DEM will issue an All Points Bulletin from the State Warning Point via ESATCOM. The Bulletin will identify areas to be affected by the severe weather and will be reliable for Control Room notification,

OR

2. The NOAA/NWS will issue warnings received by the FPL System Operations Power Coordinator's Office which will relay the information to the Turkey Point Units 3 and 4 Control Room. The Control Room will receive this information through one of the normal or emergency communication channels described in 0-EPIP-20112, Communications Network.

5.2 Tornado

5.2.1 For a tornado that has been sighted in the Owner Controlled Area or a tornado striking any Power Block structure, the Emergency Coordinator should perform the following:

Initials/Date

\_\_\_\_\_/\_\_\_\_\_

\_\_\_\_\_/\_\_\_\_\_

\_\_\_\_\_/\_\_\_\_\_

\_\_\_\_\_/\_\_\_\_\_

1. Instruct plant personnel to immediately seek safe shelter.
2. Consult EPIP-20101, Duties of Emergency Coordinator, for direction.
3. Ensure that plant structures and equipment are surveyed for damage after the occurrence, and take appropriate action to maintain the units in a safe condition.
4. Request additional support via the Duty Call Supervisor to repair damaged equipment and commence clean-up.





### 5.3 Hurricane Warning

#### 5.3.1 Emergency Coordinator responsibilities include the following:

Initials/Date

- \_\_\_\_\_/\_\_\_\_\_ 1. Consult EPIP-20101, Duties of Emergency Coordinator, for direction.
- \_\_\_\_\_/\_\_\_\_\_ 2. Order all unnecessary work stopped.

NOTE

*Although Emergency Response Facilities (ERF) are not required to be activated at an Unusual Event, the Emergency Coordinator may request ERF staffing.*

- \_\_\_\_\_/\_\_\_\_\_ 3. Determine the need for additional staffing and consider alternative means of transportation for callout personnel to minimize the number of personal vehicles on site.

NOTE

*All nonessential personnel in the Protected Area and all visitors in the Owner Controlled Area shall be required to leave when a Hurricane Warning is issued for the area.*

- \_\_\_\_\_/\_\_\_\_\_ 4. Ensure the release of non-essential personnel in a phased, controlled manner as hurricane preparations are completed or as personal circumstances dictate.
- \_\_\_\_\_/\_\_\_\_\_ a. Release non-essential personnel giving sufficient time, in advance of severe weather to allow personnel to arrive safely at their homes and avoid any undue congestion with the public.
- \_\_\_\_\_/\_\_\_\_\_ 5. IF a hurricane is threatening landfall AND local evacuations are required of families of the storm duty crews, THEN instruct the Human Resources Manager to provide for the advanced evacuation.



Initials/Date5.3.1 (Cont'd)

\_\_\_\_/\_\_\_\_

6. Investigate the need for relocation of the TSC and/or OSC.

\_\_\_\_/\_\_\_\_

7. Establish a shift schedule for response personnel to provide for continuous plant support.

\_\_\_\_/\_\_\_\_

8. Brief the NPS on the personnel available for emergency teams and the capabilities/limitations of support.

\_\_\_\_/\_\_\_\_

9. Brief emergency response personnel on the following:

\_\_\_\_/\_\_\_\_

a. The storm

\_\_\_\_/\_\_\_\_

b. Safety precautions

\_\_\_\_/\_\_\_\_

c. Expected duties

\_\_\_\_/\_\_\_\_

d. Potential problems

\_\_\_\_/\_\_\_\_

e. Contingencies

\_\_\_\_/\_\_\_\_

f. Communications systems

\_\_\_\_/\_\_\_\_

10. Ensure adequate preparations are made by conferring with the following:

\_\_\_\_/\_\_\_\_

a. TSC Operations Manager

\_\_\_\_/\_\_\_\_

b. TSC Maintenance Manager

\_\_\_\_/\_\_\_\_

c. Emergency Preparedness Coordinator

\_\_\_\_/\_\_\_\_

11. Determine when it is safe for personnel to return to work and ensure appropriate notifications are made.



0-EPIP-20106

Natural Emergencies

Approval Date:

5/31/96

Initials/Date5.3.1 (Cont'd)

12. The following guidelines should be considered for a Category 5 Hurricane Warning and may be considered for lesser category hurricanes:

NOTE

*The Auxiliary Building is the preferred location for the TSC, but if flood levels are expected above 18 foot elevation the Cable Spreading Room, 4160V/480V rooms, or the Unit 4 EDG Building (upper floor) may be preferred.*

- \_\_\_\_\_/\_\_\_\_\_ a. Direct the relocation of the TSC, Security personnel and OSC to suitable locations.

NOTE

- *Emergency Coordinator responsibilities should remain with (or be transferred back to) the Nuclear Plant Supervisor (NPS) upon the relocation of the TSC/OSC due to the lack of communication, assessment and support capabilities available.*
- *The Emergency Response Organization should remain at the relocated OSC and provide support resources, principally emergency teams, to the NPS during the storm.*

- \_\_\_\_\_/\_\_\_\_\_ b. Brief the NPS upon initiating relocation of the TSC/OSC, and transfer Emergency Coordinator duties to him.

- \_\_\_\_\_/\_\_\_\_\_ c. Relocate the following emergency response personnel to the Control Room:

- \_\_\_\_\_/\_\_\_\_\_ (1) TSC Dose Assessment Technician
- \_\_\_\_\_/\_\_\_\_\_ (2) EOF Communicator
- \_\_\_\_\_/\_\_\_\_\_ (3) TSC/ENS Communicator
- \_\_\_\_\_/\_\_\_\_\_ (4) ERDADS Operator



0-EPIP-20106

## Natural Emergencies

Approval Date:

8/29/96

Initials/Date5.3.1.12 (Cont'd)

\_\_\_\_/\_\_\_\_

- d. Evaluate the oncoming storm and select desired guidelines and contingency actions for implementation:

\_\_\_\_/\_\_\_\_

- (1) Discuss with the TSC Operations Manager the guidelines from Enclosure 3 and Enclosure 4 to determine if any should be implemented.

\_\_\_\_/\_\_\_\_

- (2) Discuss with the TSC Maintenance Manager to select and prioritize desired guidelines from Step 5.3.4.

**CAUTION**

*Evacuation of a remote station during the hurricane presents great risk to personnel; adequate provisions must be made ahead of time to minimize this risk.*

- e. Ensure that the following remote field stations are habitable and well equipped (tools, fuses, oil, filters) for local actions:

\_\_\_\_/\_\_\_\_

- (1) 480V Load Center Rooms

\_\_\_\_/\_\_\_\_

- (2) Auxiliary Building

\_\_\_\_/\_\_\_\_

- (3) Cable Spreading Room

\_\_\_\_/\_\_\_\_

- (4) EDG Buildings

\_\_\_\_/\_\_\_\_

- f. Establish prospective routes within the plant that personnel will use to minimize exposure to severe weather and equip the routes with safety lines [Reference Substep 2.1.5.1].





Initials/Date

5.3.2 Emergency Preparedness Coordinator responsibilities include the following:

NOTE

*The Emergency Preparedness Coordinator has overall responsibility for storm preparedness.*

- \_\_\_\_\_/\_\_\_\_\_ 1. Ensure the Emergency Coordinator is kept informed of the preparation status.

NOTE

*Steps of this procedure may be only partially implemented based on management judgment.*

- \_\_\_\_\_/\_\_\_\_\_ 2. Ensure the instructions of this procedure are being properly and expeditiously implemented.
- \_\_\_\_\_/\_\_\_\_\_ 3. Coordinate with the Human Resources Manager plans to evacuate the families of emergency crews, so that those remaining can devote their full efforts to the plant.
- \_\_\_\_\_/\_\_\_\_\_ 4. Collect staffing requirements from responsible departments to ensure completion of Attachment 1. |
- \_\_\_\_\_/\_\_\_\_\_ 5. Perform frequent walkdowns of the plant site and exterior with various key managers inspecting for and reducing potential missiles. [Reference Substep 2.1.5.1]
- \_\_\_\_\_/\_\_\_\_\_ 6. Coordinate activities of the various plant departments to resolve working level problems that may arise during storm preparations and any licensing issues.
- \_\_\_\_\_/\_\_\_\_\_ 7. Coordinate the following with the Materials Management Manager:
- \_\_\_\_\_/\_\_\_\_\_ a. Purchase and properly store a three day supply of the following for Operations, Maintenance, Security, and support personnel staying on site during the storm:
- \_\_\_\_\_/\_\_\_\_\_ (1) Food items
- \_\_\_\_\_/\_\_\_\_\_ (2) Water, beverages



0-EPIP-20106

## Natural Emergencies

Approval Date:

8/29/96

Initials/Date5.3.2.7.a (Cont'd)

\_\_\_\_/\_\_\_\_

(3) Paper plates, cups

\_\_\_\_/\_\_\_\_

(4) Plastic utensils

\_\_\_\_/\_\_\_\_

(5) Paper towels

\_\_\_\_/\_\_\_\_

(6) Soap

\_\_\_\_/\_\_\_\_

b. Make arrangements for purchase of portable bedding for on site emergency responders, as required, by the Emergency Coordinator.

\_\_\_\_/\_\_\_\_

c. Ensure all on site vehicles have been fueled, and gas storage tanks/diesel fuel storage tanks are full.

\_\_\_\_/\_\_\_\_

d. Verify adequate supply of emergency items are available.

\_\_\_\_/\_\_\_\_

e. Wrap, elevate, relocate, or otherwise protect spare motors and other parts or tools that may be required for recovery.

\_\_\_\_/\_\_\_\_

f. Verify the gas cylinders are properly secured in the gas house outside the protected area (southwest of main truck gate).

\_\_\_\_/\_\_\_\_

8. Coordinate with the Business Systems Manager the need to make arrangements for any offsite vendors for personnel, services, or supplies, as needed, to support recovery efforts immediately following the storm.

\_\_\_\_/\_\_\_\_

9. Coordinate the following with the Land Utilization Site Manager:

\_\_\_\_/\_\_\_\_

a. Make arrangements (including with any outside contractor within Land Utilization responsibility) to remove, tie down, or otherwise secure equipment and material to keep it from blowing away.

\_\_\_\_/\_\_\_\_

b. Ensure that equipment is immediately available following passage of storm force winds to clear Palm Drive following the hurricane.

\_\_\_\_/\_\_\_\_

c. Stage water truck in a secure location.

\_\_\_\_/\_\_\_\_

d. Survey the Sea Survival area and secure or remove loose material.

\_\_\_\_/\_\_\_\_

e. Secure canal pumps.



Procedure No.: <b>0-EPIP-20106</b>	Procedure Title: <b>Natural Emergencies</b>	Page: <b>21</b> Approval Date: <b>8/29/96</b>
---------------------------------------	--	--

Initials/Date

5.3.2 (Cont'd)

\_\_\_\_/\_\_\_\_  
\_\_\_\_/\_\_\_\_  
\_\_\_\_/\_\_\_\_  
\_\_\_\_/\_\_\_\_  
\_\_\_\_/\_\_\_\_  
\_\_\_\_/\_\_\_\_  
\_\_\_\_/\_\_\_\_  
\_\_\_\_/\_\_\_\_  
\_\_\_\_/\_\_\_\_  
\_\_\_\_/\_\_\_\_  
\_\_\_\_/\_\_\_\_  
\_\_\_\_/\_\_\_\_

10. Coordinate the following with the Safety Supervisor:
  - a. Inspect the site for potential safety hazards.
  - b. Inspect life lines for adequacy.
  - c. Ensure medical support and adequate medical supplies are available.
  - d. Investigate the relocation of the Onsite Medical Facility to the OSC.
11. Coordinate with the Maintenance Manager to make arrangements with all outside contractors within plant responsibility to remove, tie down, or otherwise secure equipment and material to keep it from blowing away.
12. Perform communications checks of all emergency communication systems in accordance with EPAD-007, Emergency Response Facilities and Equipment Surveillance.
  - a. Prestage Emergency Communications Systems (satellite telephone system, etc.) as required for post-storm use in Control Room.
13. Arrange for personnel trained in communications equipment to be onsite during the hurricane.
14. Make arrangements for televisions/radios, and required antenna systems to monitor media broadcasts of news and weather information.
15. Establish a means of communications with the fossil plants.
16. Assist the Emergency Coordinator in determining the need for additional staffing.
17. Assist the Emergency Coordinator in investigating the need for relocation of the TSC and OSC.



0-EPIP-20106

## Natural Emergencies

Approval Date:

8/29/96

Initials/Date

5.3.2 (Cont'd)

\_\_\_\_/\_\_\_\_

18. IF it is necessary to relocate the TSC and OSC, THEN determine alternate locations for relocation and ensure that the location is available.

\_\_\_\_/\_\_\_\_

19. Ensure the TSC and OSC are fully prepared with supplies and emergency equipment in accordance with EPAD-007, Emergency Response Facilities and Equipment Surveillance, for possible activation.

\_\_\_\_/\_\_\_\_

20. Establish a point of contact with Dade County and NOAA/NWS to obtain periodic status reports on the following:

\_\_\_\_/\_\_\_\_

a. Tropical storm/Hurricane

\_\_\_\_/\_\_\_\_

b. County storm preparations (evacuation plans, etc.)

\_\_\_\_/\_\_\_\_

c. Police and fire/rescue unit availability

\_\_\_\_/\_\_\_\_

d. County water supply

\_\_\_\_/\_\_\_\_

- (1) Determine the need to isolate the county water supply based upon declared contamination or possible contamination through communications with the county.

\_\_\_\_/\_\_\_\_

- (2). IF it is necessary to isolate the water supply, THEN request a clearance issued to the NPS to close Raw Water Storage Tank Inlet Isolation Valves 730 and 885.

\_\_\_\_/\_\_\_\_

21. Ensure a siren restoration/inspection crew is on standby at the EOF.

\_\_\_\_/\_\_\_\_

22. Provide information to the EOF for press releases as soon as practical, and verify press releases are distributed as appropriate.

\_\_\_\_/\_\_\_\_

23. Discuss with the Emergency Coordinator/Recovery Manager and ECO the need to partially or fully staff the EOF/ENC.

\_\_\_\_/\_\_\_\_

24. Ensure the EOF has established contact with the FPL storm center, located adjacent to the EOF.





0-EPIP-20106

## Natural Emergencies

Approval Date:

8/29/96

Initials/Date5.3.2 (Cont'd)

\_\_\_\_/\_\_\_\_

25. Ensure dumpsters are emptied prior to the closure of the county landfills.

\_\_\_\_/\_\_\_\_

26. Coordinate removal of the microwave dish on top of the Nuclear Administration Building.

\_\_\_\_/\_\_\_\_

27. Ensure all required activities from 0-ONOP-103.3, Severe Weather Preparations, have been completed as necessary.

\_\_\_\_/\_\_\_\_

28. Install life lines between important operating areas of the plant in case personnel must be sent to these areas during high winds.

\_\_\_\_/\_\_\_\_

29. Contact FPL Aviation or FPL Storm Center through EOF to arrange for helicopters to bring support personnel and equipment to the site immediately after passage of the storm.

\_\_\_\_/\_\_\_\_

30. Establish phone numbers for personnel to call following the hurricane and ensure these numbers are provided to plant personnel.

\_\_\_\_/\_\_\_\_

31. Establish a staging location for those employees not staying onsite to meet following the hurricane and ensure the location is known to plant personnel.

\_\_\_\_/\_\_\_\_

32. Contact St. Lucie management, Juno Beach Staff or elsewhere to arrange for relief workers following the hurricane.

\_\_\_\_/\_\_\_\_

33. Keep plant personnel apprised of storm status.

\_\_\_\_/\_\_\_\_

34. Perform the site facilities responsibilities of Step 5.3.13.

35. The following guidelines should be considered for a Category 5 Hurricane Warning, and may be considered for lesser category hurricanes:

\_\_\_\_/\_\_\_\_

a. Make preparations, as directed, to relocate the TSC and OSC:

\_\_\_\_/\_\_\_\_

(1) Dismiss TSC/OSC staff who are not on the Emergency Response Teams and are not required to assure the effectiveness of the emergency response organization. Notify appropriate managers.

0-EPIP-20106

## Natural Emergencies

Approval Date:

5/31/96

Initials/Date5.3.2.34.a (Cont'd)

\_\_\_\_/\_\_\_\_

- (2) Coordinate with the TSC Maintenance Manager to move all portable emergency equipment and supplies to a location accessible from the new TSC/OSC location.

\_\_\_\_/\_\_\_\_

- (3) IF space permits, THEN coordinate with the TSC Maintenance Manager to relocate at least 5 desks and 60 chairs to the new TSC/OSC location.

\_\_\_\_/\_\_\_\_

- (4) Establish dedicated phone lines to the Control Room from the relocated TSC/OSC and ensure sufficient portable radios and cellular phones are available, or contact the FPL Miami Radio Shop and/or Telecommunications to locate additional radio equipment.

\_\_\_\_/\_\_\_\_

- (5) Coordinate with the TSC Maintenance Manager to set up facilities for collecting human waste at a location accessible for the new TSC/OSC location.

\_\_\_\_/\_\_\_\_

- (6) Coordinate with the Nuclear Materials Management Manager to stage bedding, food, and water at a location accessible from the new TSC/OSC location.

\_\_\_\_/\_\_\_\_

- (7) IF the new TSC/OSC location is the Auxiliary Building, THEN coordinate with the TSC Health Physics Supervisor to establish suitable work areas.

\_\_\_\_/\_\_\_\_

- (8) Establish a berthing area and an area for eating and drinking in the Cable Spreading Room or other designated location.

\_\_\_\_/\_\_\_\_

- (9) Coordinate with the TSC Health Physics Supervisor to establish a control point at the door from the Auxiliary Building to the New Electrical Equipment Room within two hours of the approach of the storm.

\_\_\_\_/\_\_\_\_

- (10) Ensure a continuous path of access is maintained from the Auxiliary Building to the New Electrical Equipment Room to the Cable Spreading Room.



Procedure No.:  0-EPIP-20106	Procedure Title:  Natural Emergencies	Page: 25 Approval Date: 5/31/96
------------------------------------	---	--

Initials/Date

5.3.3 TSC Projects Supervisor responsibilities include the following:

- |           |   |
|-----------|---|
| ____/____ | 1. Survey construction sites (if applicable) to ensure all light material is either tied down or placed indoors.  |
| ____/____ | 2. Survey site laydown areas to secure or remove loose objects.   |
| ____/____ | 3. Check tie downs on all temporary/portable buildings/structures that could be damaged by strong winds and consult facility drawings to ensure all structures are checked. |
| ____/____ | 4. Ensure that PTF hurricane preparations are satisfactory so as not to impact the nuclear units and coordinate walkdowns at the "island" laydown areas.                    |
| ____/____ | 5. Coordinate with the Emergency Coordinator the need to augment FPL manpower with craft personnel, if available.   |

5.3.4 TSC Maintenance Manager responsibilities include the following:

- |           |   |
|-----------|---|
| ____/____ | 1. Ensure the Emergency Coordinator is kept informed of the preparation status. |
|-----------|---|

NOTE

*Individuals appointed to emergency teams with personal considerations that can be addressed by the Company should be identified to the Human Resources Manager.*

- |           |  |
|-----------|--|
| ____/____ | 2. Solicit volunteers for emergency staffing and coordinate activity with the Emergency Preparedness Coordinator to resolve any personal considerations. |
| ____/____ | 3. Contact additional Maintenance Department personnel that are necessary for hurricane preparations.  |



Initials/Date5.3.4 (Cont'd)

\_\_\_\_/\_\_\_\_

4. Establish emergency teams to meet the following criteria:

\_\_\_\_/\_\_\_\_

- a. Provide for emergency maintenance.

\_\_\_\_/\_\_\_\_

- b. Provide for around-the-clock coverage.

\_\_\_\_/\_\_\_\_

5. Establish backup crews for contingency support.

6. The following guidelines should be considered for a Category 5 Hurricane Warning, and may be considered for lesser category hurricanes:

\_\_\_\_/\_\_\_\_

- a. Assist the Emergency Coordinator in establishing a shift schedule for response personnel, and preposition reliefs to preclude the need to move personnel during the storm.

\_\_\_\_/\_\_\_\_

- b. Establish a tool and spare parts area in a secure location where a minimum but sufficient number of tools will be available for each maintenance discipline's use.



Procedure No.:  0-EPIP-20106	Procedure Title:  Natural Emergencies	Page: 27 Approval Date: 8/29/96
------------------------------------	---	------------------------------------

Initials/Date

5.3.4.6 (Cont'd)

\_\_\_\_/\_\_\_\_

c. Discuss with the Emergency Coordinator what additional protection may be required for the following areas:

\_\_\_\_/\_\_\_\_

(1) 4KV Bus Rooms:

\_\_\_\_/\_\_\_\_

(a) Seal all doors and penetrations on the 18 foot elevation. Consider at least sandbagging, possibly welding the doors.

\_\_\_\_/\_\_\_\_

(b) Provide a means for measuring water level in the rooms.

\_\_\_\_/\_\_\_\_

(2) AFW Cage:

\_\_\_\_/\_\_\_\_

(a) Extend or plug the lube oil reservoir vents to prevent water intrusion.

\_\_\_\_/\_\_\_\_

(b) Bag the pump governors to protect against water intrusion.

\_\_\_\_/\_\_\_\_

(c) Bag the alternate shutdown communications headset and handset connections.

\_\_\_\_/\_\_\_\_

(3) Unit 4 EDG Building:

\_\_\_\_/\_\_\_\_

(a) Remove decking and install a ladder so access between the upper and lower levels is possible without travel outside.

\_\_\_\_/\_\_\_\_

(b) Seal and sandbag the ground floor doors.



Initials/Date

5.3.4.6.c (Cont'd)**CAUTION**

*Due to the exposed location of the Unit 3 EDG fuel oil transfer pumps, the Unit 3 EDGs may not be available for an extended period in the storm. Priority should be placed on protecting the Unit 4 EDGs, then protecting Unit 3 EDGs as time permits.*

\_\_\_\_/\_\_\_\_

## (4) Unit 3 EDG Building:

\_\_\_\_/\_\_\_\_

- (a) Provide as much flood protection as possible without impeding the ability of personnel to evacuate toward the turbine building.

\_\_\_\_/\_\_\_\_

- (b) Create a sandbag and herculite floodwall to protect from flooding of the radiator compartment.

\_\_\_\_/\_\_\_\_

## (5) Auxiliary Building:

\_\_\_\_/\_\_\_\_

- (a) Bag alternate shutdown headset and handset connections.

\_\_\_\_/\_\_\_\_

- (b) Provide a means for measuring water level in the building.

\_\_\_\_/\_\_\_\_

- (c) Consider sandbags around MCCs so as to allow access but prevent flooding at low levels.

\_\_\_\_/\_\_\_\_

- (d) Sandbag pipe trenches under the outer walls of the CCW rooms and the SI pump room as required.

\_\_\_\_/\_\_\_\_

- (e) Seal outer doors (consider sandbags where appropriate).

\_\_\_\_/\_\_\_\_

- (f) Consider covering the MCCs under areas where water leakage has been known to occur (under ceiling joints).



Initials/Date5.3.4.6.c (Cont'd)

\_\_\_\_/\_\_\_\_

## (6) Auxiliary Building 10 Foot Elevation:

\_\_\_\_/\_\_\_\_

- (a) Bag alternate shutdown headset and handset connections.

\_\_\_\_/\_\_\_\_

## (7) Electrical Equipment Room:

\_\_\_\_/\_\_\_\_

- (a) Provide a means for measuring water level in the room.

\_\_\_\_/\_\_\_\_

- (b) Sandbag at the door to the Auxiliary Building so as to allow access but prevent flooding at low levels.

\_\_\_\_/\_\_\_\_

## (8) Component Cooling Water Pump Rooms:

\_\_\_\_/\_\_\_\_

- (a) Protect components from water and wave action as much as possible (e.g., via sandbagging).

\_\_\_\_/\_\_\_\_

- (b) Check that area deckplates are bolted down and hurricane clips installed.

\_\_\_\_/\_\_\_\_

## (9) A MCCs:

\_\_\_\_/\_\_\_\_

- (a) When Operations no longer requires access, shield or wrap the MCCs in protective material to minimize water intrusion.

\_\_\_\_/\_\_\_\_

- (b) Sandbag to allow access but prevent flooding at low levels.

\_\_\_\_/\_\_\_\_

## (10) B MCC Rooms:

\_\_\_\_/\_\_\_\_

- (a) Seal the doors when Operations no longer requires access.

\_\_\_\_/\_\_\_\_

## (11) Computer Room:

\_\_\_\_/\_\_\_\_

- (a) Seal the doors when Operations no longer requires access.



0-EPIP-20106

## Natural Emergencies

Approval Date:

8/29/96

Initials/Date5.3.4.6.c (Cont'd)

\_\_\_\_/\_\_\_\_

## (12) Spent Fuel Pit Pumps:

\_\_\_\_/\_\_\_\_

- (a) Bag the non-running motors to protect against water intrusion.

\_\_\_\_/\_\_\_\_

- (b) Sandbag and herculite the entrance to the heat exchanger rooms.

\_\_\_\_/\_\_\_\_

## (13) Non-Vital DC Battery and Bus Rooms:

\_\_\_\_/\_\_\_\_

- (a) Seal the doors when Operations no longer requires access.

\_\_\_\_/\_\_\_\_

## (14) Turbine Building:

\_\_\_\_/\_\_\_\_

- (a) Walkdown and bag appropriate equipment (including alternate shutdown headset and handset connections) to protect against water intrusion.

\_\_\_\_/\_\_\_\_

- (b) Verify deckplates are securely bolted down and hurricane clips installed.

\_\_\_\_/\_\_\_\_

- (c) Verify any 18 foot elevation outer wall penetrations are securely plugged.

\_\_\_\_/\_\_\_\_

- d. Provide support for the remote stations referenced in Enclosure 4:

CAUTION

*Portable pumps and generators may be used in manned locations only if exhaust gases can be safely directed outside.*

\_\_\_\_/\_\_\_\_

- (1) Station Maintenance personnel and equipment (tools, fuses oil, filters) at remote stations that may require dewatering.

Initials/Date

5.3.4.6.d (Cont'd)

- |  |   |
|--|---|
| <p>_____/_____</p> <p>_____/_____</p> <p>_____/_____</p> <p>_____/_____</p> <p>_____/_____</p> <p>_____/_____</p> <p>_____/_____</p> | <p>(2) <u>IF</u> possible, <u>THEN</u> position electricians and equipment to provide continuous voltage indication supporting early ground detection at remote stations where ground isolation may be required to measure grounds and voltages.</p> <p>(a) Control Room</p> <p>(b) Cable Spreading Room</p> <p>(c) 480V Load Centers A-D rooms</p> <p>(d) Auxiliary Building</p> <p>(3) Deploy portable generators where needed.</p> <p>(4) Provide materials at remote stations to allow sealing of leaking penetrations (such as door thresholds), water collection and water removal.</p> <p>(5) Ensure adequate food and water is provided at remote stations for the duration of tropical storm force winds.</p> <p>(6) Provide facilities for the collection of human waste at remote stations and the Control Room (since the sewage system may be out of service).</p> |
|--|---|

5.3.5 TSC Mechanical Supervisor responsibilities include the following:

NOTES

- The combined capacity of pumps (a) through (f) below should equal or exceed 4900 GPM with pumps (a) and (b) making up the bulk of this capacity. The capacity of pumps (g) and (h) should equal or exceed 250 GPM each.
- The installation of drain plugs and portable dewatering pumps is intended for larger hurricanes where the storm surge might result in plant flooding (Category 4 and 5). Full or partial implementation, particularly the installation of dewatering pumps in the condenser pits, may be considered for lesser storms.

1. Install portable dewatering pumps, portable electric generators with fuel supplies, and associated suction and discharge hoses in the following areas:
- a. Unit 3 Condenser Pit Sump (locate at northeast corner near existing sump; suction 2-25', 1-90 degree elbow, 1-30' with strainer and footer valve; discharge 2-25').



Initials/Date5.3.5.1 (Cont'd)

\_\_\_\_/\_\_\_\_

- b. Unit 4 Condenser Pit Sump (locate at northeast corner near existing sump; suction 4-25', 2-90 degree elbows, 1-30' with strainer and footer valve; discharge 2-25').

NOTE

*All other pumps should have the following associated equipment; suction 2-25' with strainer and footer valves, discharge 4-25'.*

\_\_\_\_/\_\_\_\_

- c. On the floor, just east of Unit 3 HDP.

\_\_\_\_/\_\_\_\_

- d. On the floor, just east of Unit 4 HDP.

\_\_\_\_/\_\_\_\_

- e. By Unit 3 Blowdown Flash Tank.

\_\_\_\_/\_\_\_\_

- f. In Catch Basin #15 (in RCA . west of Unit 4 West Electrical Penetration Room).

\_\_\_\_/\_\_\_\_

- g. Unit 3 CCW Pump Room north end.

\_\_\_\_/\_\_\_\_

- h. Unit 4 CCW Pump Room south end.

\_\_\_\_/\_\_\_\_

- i. Unit 3 RHR Room Sump.

\_\_\_\_/\_\_\_\_

- j. Unit 4 RHR Room Sump.

\_\_\_\_/\_\_\_\_

- k. Auxiliary Building Sump.

\_\_\_\_/\_\_\_\_

- l. Unit 3 EDG Floor Drains.

CAUTION

*If exhaust gases can be safely directed outside, portable pumps and generators may be used in manned locations.*

\_\_\_\_/\_\_\_\_

- m. Unit 3 4KV A and B Bus Switchgear Room.

\_\_\_\_/\_\_\_\_

- n. Unit 4 4KV A and B Bus Switchgear Room.

\_\_\_\_/\_\_\_\_

- o. Radwaste Building Truck Bay with discharge to Radwaste Building Floor Drain to #2 WHT.



Initials/Date

5.3.5 (Cont'd)

NOTES

- Drain plug installation shall not be initiated unless the approaching hurricane is judged to present imminent potential of external flooding.
- Early rains may cause standing water in some areas which obscures drains and hampers drain plug installation. Installation must start early, but should be worked after or concurrent with the deployment of portable dewatering pumps.

- \_\_\_\_\_/\_\_\_\_\_ 2. Install drain plugs per Enclosure 2 after or during installation of portable dewatering pumps as necessary based on the potential for flooding (normally category 4 or 5).

NOTES

- Sandbag dikes may be used to fortify either side of a stoplog.
- " \*" indicates with Hold Down Pin installed.
- TPCW areas do not require flood protection. Floodwalls are identified in Drawing 5610-C-1695.
- Do not install stoplogs that may impede personnel from performing other duties until preparations have been completed.

- \_\_\_\_\_/\_\_\_\_\_ 3. Install stoplogs on plant flood protection walls as follows:

- \_\_\_\_\_/\_\_\_\_\_ a. Stoplogs 1\* and 2 - South of Unit 4 Steam Generator Feed Pump Room.
- \_\_\_\_\_/\_\_\_\_\_ b. Stoplog 3 - Southeast of Unit 4 Lube Oil Reservoir.
- \_\_\_\_\_/\_\_\_\_\_ c. Stoplog 5 - Entrance to Unit 4 Condenser Pit.
- \_\_\_\_\_/\_\_\_\_\_ d. Stoplogs 6 and 7 - East of Unit 4 Main Transformer.



0-EPIP-20106

## Natural Emergencies

5/31/96

Initials/Date5.3.5.3 (Cont'd)

\_\_\_\_/\_\_\_\_

e. Stoplog 8 - Southeast of Unit 3 Lube Oil Reservoir.

\_\_\_\_/\_\_\_\_

f. Stoplogs 9\* and 10 - South Wall of Unit 3 Condenser Pit.

\_\_\_\_/\_\_\_\_

g. Stoplog 11 - Entrance to Unit 3 Condenser Pit.

\_\_\_\_/\_\_\_\_

h. Stoplogs 12 and 13 - East of Unit 3 Main Transformer.

\_\_\_\_/\_\_\_\_

i. Stoplogs 14 and 15\* - Between Unit 3 4160 Volt Switchgear Room and EDG Building.

\_\_\_\_/\_\_\_\_

j. Stoplog 16\* - Entrance to Unit 3 Spent Fuel Pit Heat Exchanger Room (sandbags as required at both lower corners).

\_\_\_\_/\_\_\_\_

k. Stoplog 17\* - Entrance to Unit 3 New Fuel Storage Area.

\_\_\_\_/\_\_\_\_

l. Stoplog 18\* - Entrance to Auxiliary Building Chemical Storage Area (East door to BAST Room).

\_\_\_\_/\_\_\_\_

m. Stoplog 19\* - Entrance to Unit 3 Component Cooling Water Pump Area.

\_\_\_\_/\_\_\_\_

n. Stoplog 20\* - Entrance to Unit 4 Component Cooling Water Pump Area.

\_\_\_\_/\_\_\_\_

o. Stoplog 21\* - Entrance to Unit 4 New Fuel Storage Area.

\_\_\_\_/\_\_\_\_

p. Stoplog 22\* - Entrance to Unit 4 Spent Fuel Pit Heat Exchanger Room.

\_\_\_\_/\_\_\_\_

q. Radwaste Building Stoplogs.

\_\_\_\_/\_\_\_\_

(1) Stoplog SL-1 - Northeast door to Radwaste Building.

\_\_\_\_/\_\_\_\_

(2) Stoplog SL-2 - Southeast door to Radwaste Building.

\_\_\_\_/\_\_\_\_

(3) Stoplog SL-4 - Top and Bottom - Overhead doorway Truck Ramp to Radwaste Building.

Initials/Date5.3.5 (Cont'd)**CAUTION**

*Prior to sandbagging manhole covers, ensure no personnel are in the tendon galleries.*

- |           |  |
|-----------|--|
| ____/____ | 4. Ensure east tendon gallery manhole covers (one per unit) are installed and covered with sandbags. |
| ____/____ | 5. Remove sandblast booth.   |
| ____/____ | 6. Close the following outside doors, inflate seals and install latch pins where applicable:         |
| ____/____ | a. Cable Spreading Room (Doors 132-1, 132-2 and 104-3 to roof)                                       |
| ____/____ | b. Unit 3 New Fuel Storage Room (rollup door)  |
| ____/____ | c. Unit 4 New Fuel Storage Room (rollup door)  |
| ____/____ | d. Unit 3 Spent Fuel Pit/Install Latch Pins  |
| ____/____ | e. Unit 4 Spent Fuel Pit/Install Latch Pins  |
| ____/____ | f. Unit 3 CCW Surge Tank Room  |
| ____/____ | g. Unit 4 CCW Surge Tank Room  |
| ____/____ | h. West Auxiliary Building Main Passageway to Turbine Building (Door 58-2)                           |
| ____/____ | i. Unit 3 480 V Load Center Room (Door 96-1)   |
| ____/____ | j. Unit 4 480 V Load Center Room (Door 94-1)   |
| ____/____ | k. Unit 3 4160V Switchgear Room (Doors 70-1, 70-2, 71-1)   |
| ____/____ | l. Unit 4 4160 V Switchgear Room (Doors 67-1, 67-2, 68-1)  |

0-EPIP-20106

## Natural Emergencies

8/29/96

Initials/Date5.3.5.6 (Cont'd)

\_\_\_\_/\_\_\_\_

m. CVCS Holdup Tank Enclosure (2)

\_\_\_\_/\_\_\_\_

n. 3A EDG Room (Doors 73-1, 75-1)

\_\_\_\_/\_\_\_\_

o. 3B EDG Room (Doors 72-1, 74-1)

\_\_\_\_/\_\_\_\_

p. East Auxiliary Building Main Passageway to Unit 4  
CCW Room (Door 58-1)

\_\_\_\_/\_\_\_\_

q. Control Building Elevator Vestibule (4)

\_\_\_\_/\_\_\_\_

r. Containment Purge Supply Fan Room

\_\_\_\_/\_\_\_\_

s. Auxiliary Building Laundry Room (Door 46-2)

\_\_\_\_/\_\_\_\_

t. Intake Storage Room (1)

\_\_\_\_/\_\_\_\_

u. Unit 3, B MCC Room (Doors 63-1, 63-2)

\_\_\_\_/\_\_\_\_

v. Unit 4, B MCC Room (Doors 61-1, 61-2)

\_\_\_\_/\_\_\_\_

w. Unit 3 Electrical Penetration Rooms (Doors 20-1  
South, 19-1 West)

\_\_\_\_/\_\_\_\_

x. Unit 4 Electrical Penetration Rooms (Doors 26-1  
North, 27-1 West)

\_\_\_\_/\_\_\_\_

y. Generator Exciter Switchgear Enclosures (2)

\_\_\_\_/\_\_\_\_

z. Radwaste Building Doors (East, North, Loading  
Ramp, Elevator)

\_\_\_\_/\_\_\_\_

aa. Condensate Polisher/E Load Center/B43 MCC  
Building

\_\_\_\_/\_\_\_\_

bb. Computer Room (Doors 62-1, 62-2)

\_\_\_\_/\_\_\_\_

cc. DC Enclosure Building

\_\_\_\_/\_\_\_\_

dd. Boric Acid Storage Room (Door 41-1)



0-EPIP-20106

## Natural Emergencies

8/29/96

Initials/Date5.3.5.6 (Cont'd)

- ee. Safety Injection Pump Rooms (2)
- ff. Amertap Control Center/4G MCC Enclosure (2)
- gg. C Bus - 4160 Volt Switchgear Enclosure (2)
- hh. Nuclear Gas House (1)
- ii. Control Room to Auxiliary Building Roof (Door 108 A-2)
- jj. Control Room to Fan Room (Doors 108 A-3, 108 A-4)
- kk. Load Center F & G Enclosures (2)
- ll. Unit 4 EDG Building (Doors 133-1, 133-3, 138-1, 138-2, 136-1, 141-1)
- mm. Dry Storage Warehouse

7. Verify the following roof hatches are installed and bolted in place. |

- a. Auxiliary Building - Stairwell to 10 ft. elevation
- b. Auxiliary Building - RHR Pump and Hx Rooms
- c. Auxiliary Building - Monitor Tank Room
- d. Auxiliary Building - Demin Cubicles
- e. Auxiliary Building - BA Evaporator Rooms
- f. Radwaste Building

8. Ensure main passageways are cleared.





Initials/Date

5.3.5 (Cont'd)NOTE

*If unable to secure any of the items in Substeps 5.3.5.9 through 5.3.5.10 below, store them in the Machine Shop, Maintenance Shop or Dry Storage Building.*

## 9. Remove items from areas subject to high winds, for example:

\_\_\_\_/\_\_\_\_  
 \_\_\_\_/\_\_\_\_  
 \_\_\_\_/\_\_\_\_  
 \_\_\_\_/\_\_\_\_  
 \_\_\_\_/\_\_\_\_  
 \_\_\_\_/\_\_\_\_  
 \_\_\_\_/\_\_\_\_  
 \_\_\_\_/\_\_\_\_

- a. Loose trash and debris
- b. Tools
- c. Sheet metal
- d. Empty containers, trash cans, drums
- e. Unnecessary hoses, electrical cords, welding cable
- f. Temporary power panels
- g. Lumber, pallets, platforms, work stations
- h. Cleaning equipment
- i. Portable resin funnels on Auxiliary Building roof

## 10. Tie down or secure the following loose equipment:

\_\_\_\_/\_\_\_\_  
 \_\_\_\_/\_\_\_\_  
 \_\_\_\_/\_\_\_\_  
 \_\_\_\_/\_\_\_\_  
 \_\_\_\_/\_\_\_\_  
 \_\_\_\_/\_\_\_\_

- a. Gas trailers (N<sub>2</sub> Trailer in RCA, etc.)
- b. Portable dewars
- c. Ladders
- d. Needed hoses, electrical cords
- e. Gang boxes
- f. Signs



Initials/Date

## 5.3.5 (Cont'd)

NOTE

*Chemicals/oil should be stored securely above any expected flood level and in locations which will withstand expected winds.*

\_\_\_\_/\_\_\_\_

11. Store all chemical drums in the chemical waste building or other secure building, and oil drums in the oil house and/or chemical waste building.

\_\_\_\_/\_\_\_\_

12. Fuel and tie down the diesel instrument air compressors and stage additional secured fuel drums/tanks adjacent to the compressors.

\_\_\_\_/\_\_\_\_

13. Consult Engineering for additional preparation requirements for empty tanks (i.e., installing temporary tie down anchors). Engineering will provide such additional requirements on a cases by cases basis.

\_\_\_\_/\_\_\_\_

14. Check and if necessary, clean fuel oil tank roof vents to assure adequate pressure relief.

\_\_\_\_/\_\_\_\_

15. Bolt or otherwise secure the hatches on the chemical feed tanks.

\_\_\_\_/\_\_\_\_

16. IF the Unit 3 OR Unit 4 Hydrogen Recombiner is in operation, THEN the Hydrogen Recombiner shall be secured from service AND the attached hoses isolated and disconnected from the permanently installed piping flanges.

\_\_\_\_/\_\_\_\_

17. Clean the intake trash pit.

\_\_\_\_/\_\_\_\_

18. Tie down intake trash rakes and hoists in such a manner that they are secure, yet readily available if needed.

\_\_\_\_/\_\_\_\_

19. Dog the intake area gantry crane, the cask crane and the turbine deck gantry crane and ensure the hooks are fully raised.



Initials/Date5.3.5 (Cont'd)

20. Designate storm duty vehicles and perform the following:

- a. Establish a designated location for storm duty vehicles inside the Protected Area and RCA.
- b. Ensure these vehicles are serviced and fueled.
- c. Move unnecessary vehicles outside the Protected Area.

21. Remove or adequately secure scaffolding that would be exposed to high winds.

22. Tie down or remove portable toilets, air compressors, and gangboxes; wire the gangboxes shut.

23. Disassemble and remove temporary buildings not having tie-downs (i.e., the wooden buildings at the containment equipment hatches).

24. Move valuable equipment to high ground.

25. IF winds greater than 120 mph are expected, THEN ensure the Water Treatment Plant ECOLOCHEM trailers are tied down.

26. Ensure personnel/equipment ramps over conduits on Aux Building Roof, Control Room Roof, and other locations are, bolted down, tied down, or removed and stored in secure locations.

27. Secure any plywood doors on the Issues Warehouse. |

28. Take portable bedding to Control Room six hours before hurricane is projected to hit. |

29. Establish emergency staffing to meet the staffing plans outlined in Attachment 1. |

30. Perform the site facilities duties of Step 5.3.13.

5.3.6 TSC I&amp;C Supervisor responsibilities include the following:

- 1. Check that all instruments located outdoors are in weatherproof condition by inspecting cases, gaskets, etc. and weatherproof those that need it with plastic film.
- 2. Tape up or protect glass gage face covers as necessary.



0-EPIP-20106

Natural Emergencies

Approval Date:

8/29/96

Initials/Date5.3.6 (Cont'd)

\_\_\_\_/\_\_\_\_

3. Position sandbags in the following areas to control any potential flooding or inleakage that may develop as necessary based on the potential for flooding, normally a Category 4 or 5 (numbers are approximate):

NOTE

*When constructing dikes use Figure 1 for guidance.*

\_\_\_\_/\_\_\_\_

- a. 4KV A and B Bus Switchgear Rooms (50 each door)

\_\_\_\_/\_\_\_\_

- b. Turbine Area 18 ft Elevation - North and South Ends (500 each)

\_\_\_\_/\_\_\_\_

- c. Computer Room (60)

\_\_\_\_/\_\_\_\_

- d. Auxiliary Building East - West Hallway/Laundry Room Door, SI Pump Room Doors (50 each door)

\_\_\_\_/\_\_\_\_

- e. BAST Room Door (30)

\_\_\_\_/\_\_\_\_

- f. Radwaste Building Doors (50 each door)

\_\_\_\_/\_\_\_\_

- g. HP Building, Maintenance Building, Nuclear Administration Building, Nuclear Entrance Building, Training Building doors (30 each)

\_\_\_\_/\_\_\_\_

- h. CCW Rooms (200 each)

\_\_\_\_/\_\_\_\_

- i. Dry Storage Warehouse (100)

\_\_\_\_/\_\_\_\_

- j. TSC (100)

\_\_\_\_/\_\_\_\_

- k. If resources permit, the following areas may also be done:

\_\_\_\_/\_\_\_\_

- (1) Machine Shop

\_\_\_\_/\_\_\_\_

- (2) Nuclear Materials Issue Warehouse

\_\_\_\_/\_\_\_\_

- (3) Central Receiving Facility





0-EPIP-20106

## Natural Emergencies

Approval Date:

8/29/96

Initials/Date5.3.6.3.k (Cont'd)

\_\_\_\_/\_\_\_\_

(4) Main Truck Gate Entry Building

\_\_\_\_/\_\_\_\_

(5) Water Treatment Gate Entry Building

\_\_\_\_/\_\_\_\_

(6) Security Emergency Diesel Generator Enclosure.

\_\_\_\_/\_\_\_\_

4. Verify the gas cylinders are properly secured in the Gas House inside the RCA (East of Unit 4 Dearator).

\_\_\_\_/\_\_\_\_

5. Establish emergency staffing to meet the staffing plans outlined in Attachment 1.

## 5.3.7 TSC Electrical Supervisor responsibilities include the following:

\_\_\_\_/\_\_\_\_

1. Ensure all doors to plant transformer control panels, outdoor electrical cabinets, etc. are closed and secured.

\_\_\_\_/\_\_\_\_

2. Coordinate with System Protection to ensure the switchyard is prepared for severe weather.

\_\_\_\_/\_\_\_\_

3. Determine if prestaging of portable generators is necessary (OSC, etc.).

\_\_\_\_/\_\_\_\_

4. Provide tarpaulins and ropes at various locations throughout the Auxiliary Building, and a supply of plastic film (pliofilm) in the Control Room, Cable Spreading Room, 4KV Switchgear Rooms and Computer Room.

\_\_\_\_/\_\_\_\_

5. Verify that the hatch cover/grating above each Heater Drain Pump, Condensate Pump, Steam Generator Feed Pump, and Auxiliary Transformer is secured.

0-EPIP-20106

Natural Emergencies

8/29/96

Initials/Date5.3.7 (Cont'd)NOTES

- *Before locking dampers closed or installing protective covers, ensure Operations will not require use of the blocked fans.*
- *When the vent fans listed in Substep 5.3.8.18 are stopped, the following air intake, exhaust, or vent openings should be closed off.*
- *Protective covers on these dampers are required only if the dampers are inoperable.*

6. Verify that the dampers of those openings equipped with dampers are locked in the closed position.

- a. Spent Fuel Pit Inlet Air Vents
- b. New Fuel Storage Room Fan Inlet Vent
- c. Spent Fuel Pit Heat Exchanger Room Fan Inlet Vent
- d. Spent Fuel Pit Heat Exchanger Room Exhaust Vent
- e. Containment Purge Supply Fan Air Intake

7. Secure electrical service to temporary facilities.

8. Protect the phone equipment rooms located in the support buildings (i.e., sandbags, visqueen, caulking).

9. Coordinate removal of the microwave dish on the NAB.

10. Provide weather protection for Lighting Panels, Fire Protection Panels, and Distribution Panels as appropriate.

11. Establish emergency staffing to meet the staffing plans outlined in Attachment 1.

12. Perform the site facilities duties of Step 5.3.13.



Procedure No.:  0-EPIP-20106	Procedure Title:  Natural Emergencies	Page: 44 Approval Date: 8/29/96
------------------------------------	---	--

Initials/Date

5.3.8 TSC Operations Manager responsibilities include the following:

- \_\_\_\_\_/\_\_\_\_\_ 1. Ensure the Emergency Coordinator is kept informed of the preparation status.

NOTE

*Individuals appointed to emergency teams with personal considerations that can be addressed by the Company should be identified to the Human Resources Manager.*

- \_\_\_\_\_/\_\_\_\_\_ 2. Solicit volunteers for emergency staffing to resolve any personal conflicts and coordinate staffing with the Emergency Preparedness Coordinator.

- \_\_\_\_\_/\_\_\_\_\_ 3. Establish emergency teams to meet the staffing plans outlined in Attachment 1.

NOTES

- Substeps 5.3.8. 4 through 5.3.8.14 are commitments. [Commitment - Step 2.3.3]
- Station Blackout commitments do not allow the use of RHR when only 1 EDG is available to power both units, therefore, if more than 1 EDG starts and picks up load following the Loss of Offsite Power, RHR may be restarted.

- \_\_\_\_\_/\_\_\_\_\_ 4. Place the units in an optimum configuration to maintain plant safety in preparation for the arrival of the hurricane. To determine the optimum plant configuration, consideration should be given to the probability of the storm being a Categories 3, 4 and 5 prior to landfall, diameter of the projected area involving hurricane force winds, the uncertainty of the projected track of the hurricane, the timeframe between forecast and projected landfall, the current plant operating configuration, and the timeframe for Operations to make the desired mode change..

- \_\_\_\_\_/\_\_\_\_\_ a. For storms projected to reach a Category 1 or 2, the unit(s) shall be placed in HOT STANDBY (Mode 3) at least two (2) hours before the projected onset of sustained hurricane force winds at the site and both units shall remain off-line for the duration of the hurricane force winds (or restoration of reliable offsite power). Continued cooldown in accordance with Substep 5.3.8.5.b. is also acceptable.

Initials/Date5.3.8.4 (Cont'd)

\_\_\_\_\_/\_\_\_\_\_

b. For storms projected to reach Category 3, 4, or 5 prior to landfall, the units shall be shutdown, maintaining RCS temperature between 343°F and 350°F Tave. and steam generator pressure greater than 85 psig. RHR should be placed in service and AFW should be aligned and operable. These plant conditions shall be established at least two (2) hours before the projected onset of sustained hurricane force winds at the site and both units shall remain off-line for the duration of the hurricane force winds (or restoration of reliable offsite power).

\_\_\_\_\_/\_\_\_\_\_

5. Perform a review of the EOOSL for equipment out of service for maintenance or testing to identify those whose redundancy is desired to support reliable plant operation during the storm, and ensure work is prioritized to promptly restore such equipment to an operable status.

\_\_\_\_\_/\_\_\_\_\_

6. Review 0-OSP-200.1, Schedule of Plant Checks and Surveillances, and 0-ADM-215, Plant Surveillance Tracking Program, for Technical Specification surveillance requirements, and conduct all surveillances, if possible, that will come due during the storm.

\_\_\_\_\_/\_\_\_\_\_

7. Determine if and when operator rounds on outside equipment are to be temporarily suspended during the storm, and document instructions in the Night Orders.

NOTE

*EDG's should be run for at least one hour at greater than 50 percent load.*

\_\_\_\_\_/\_\_\_\_\_

8. Perform an operability run of each EDG using 3/4-OSP-023.1, Diesel Generator Operability Test, AND return the diesel generator to standby service within 24 hours prior to projected onset of sustained hurricane force winds at the site.



0-EPIP-20106

## Natural Emergencies

Approval Date:

8/29/96

Initials/Date5.3.8 (Cont'd)

## 9. Fill the following tanks:

- a. Condensate Storage Tanks
- b. Raw Water Tanks
- c. Demineralized Water Storage Tank
- d. Primary Water Tanks
- e. Refueling Water Storage Tanks
- f. Circulating Water Pump Lube Water Storage Tank

## 10. Verify battery chargers and applicable station vital batteries are operational using 0-OP-003.1, 125V Vital DC System.

## 11. Ensure that adequate inventories of nitrogen, and carbon dioxide are available to accommodate a unit shutdown and subsequent startup.

## 12. Review the following procedures in preparation for a Station Blackout, loss of offsite power or loss of intake cooling water:

- a. 3/4-ONOP-004, Loss of Offsite Power
- b. 3/4-ONOP-019, Intake Cooling Water Malfunction
- c. 3/4-ONOP-041.7, Shutdown LOCA [Mode 3 (less than 100 psig) or Mode 4]
- d. 3/4-ONOP-041.8, Shutdown LOCA [Mode 5 or 6]
- e. 3/4-ONOP-050, Loss of RHR

## 13. Remind FPL System Operations of the importance of expeditiously re-establishing power to the site if a Loss of offsite Power or Station Blackout occurs.

## 14. Perform a test run of the Security diesel using 0-OP-026, Cat 400 Operation.

## 15. Make all permissible liquid and gaseous releases before the hurricane is within two hours of the plant to minimize waste water and waste gas inventories.

## 16. Open redundant outdoor 480V receptacle circuit breakers using Enclosure 1, and issue a clearance to the NPS on all breakers opened.





Procedure No.:  0-EPIP-20106	Procedure Title:  Natural Emergencies	Page: 47 Approval Date: 8/29/96
------------------------------------	---	------------------------------------

Initials/Date

5.3.8 (Cont'd)

NOTES

- Fans may be operated on a selected basis as operating conditions dictate.
- Do not allow Maintenance to secure dampers on fans which may be needed.

17. Stop the vent fans listed below so the TSC Electrical Supervisor may lock close dampers and install protective covers:

\_\_\_\_/\_\_\_\_

a. Spent fuel pit ventilation fan

\_\_\_\_/\_\_\_\_

b. New fuel storage room vent fan

\_\_\_\_/\_\_\_\_

c. Spent fuel pit heat exchanger room vent fan

\_\_\_\_/\_\_\_\_

d. Containment purge supply and exhaust fans

\_\_\_\_/\_\_\_\_

e. Auxiliary building supply vent fans

\_\_\_\_/\_\_\_\_

f. Containment penetration cooling fans, if not required

\_\_\_\_/\_\_\_\_

g. Diesel generator room vent fans - verify in automatic

\_\_\_\_/\_\_\_\_

18. Consult Engineering for additional preparation requirements for empty tanks (i.e., filling of tank) on a case by case basis and ensure tanks are vented to atmosphere where practicable.

\_\_\_\_/\_\_\_\_

19. Ensure adequate inventories of chemicals (such as boric acid, ammonia, hydrazine) are available and staged in a secure area that will minimize exposure to high winds and water.

20. IF personnel are relocated to areas containing Halon Systems, THEN perform the following steps:

\_\_\_\_/\_\_\_\_

a. Issue a clearance to the NPS to isolate Halon Systems including battery backup power supplies.

\_\_\_\_/\_\_\_\_

b. Notify the TSC Fire Protection Supervisor to issue required Fire Protection Impairments.



0-EPIP-20106

## Natural Emergencies

8/29/96

Initials/Date5.3.8 (Cont'd)

\_\_\_\_/\_\_\_\_

21. Verify Unit 3 and Unit 4 cask washdown area drains are closed by having drain covers installed and bolted.

\_\_\_\_/\_\_\_\_

22. Shutdown Amertap Systems and tag open power supply breakers to all pumps and valves. Issue a clearance to the NPS.

\_\_\_\_/\_\_\_\_

23. IF applicable, THEN suspend all fuel movement AND place all refueling equipment in a safe condition.

\_\_\_\_/\_\_\_\_

24. When the hurricane is less than six (6) hours from the plant, arrange to have portable bedding brought to the Control Room and other suitable locations.

\_\_\_\_/\_\_\_\_

25. Start all traveling screens at the approach of the storm.

\_\_\_\_/\_\_\_\_

26. Ensure the CAT 400 Security Diesel is in standby using 0-OP-026, Cat 400 Operation, prior to the evacuation of CAS/SAS.

\_\_\_\_/\_\_\_\_

27. Issue a clearance to the NPS on the Intake Gantry Crane, Cask Crane, and Turbine Gantry Crane to require post hurricane testing.

\_\_\_\_/\_\_\_\_

28. Perform a test run of the diesel driven SSGFP using 0-OSP-74.3, Standby Steam Generator Feed Pumps Availability Test.

\_\_\_\_/\_\_\_\_

29. Perform a test run of the diesel driven fire pump using 0-OSP-016.23, Diesel Driven Fire Pump Operability Test.

\_\_\_\_/\_\_\_\_

30. Perform a test run of the diesel driven service water pump using 0-OSP-012.1, Diesel Driven Service Water Pump Operability Test.

\_\_\_\_/\_\_\_\_

31. Perform a test run of the Diesel Instrument Air Compressors using 3/4-OP-013, Instrument Air System.

\_\_\_\_/\_\_\_\_

32. Ensure nitrogen bottles for MSIVs, steam dump to atmosphere valves, and AFW flow control valves are filled and properly secured.



Initials/Date5.3.8 (Cont'd)

33. The following guidelines should be considered for a Category 5 Hurricane Warning, and may be considered for lesser category hurricanes:

- \_\_\_\_\_/\_\_\_\_\_ a. Assist the Emergency Coordinator in establishing a shift schedule for response personnel and preposition reliefs to preclude the need to move personnel during the storm.
- \_\_\_\_\_/\_\_\_\_\_ b. Determine with the Emergency Coordinator and/or NPS, if any of the guidelines from Enclosure 3, Operations Guidelines for Category 5 Hurricane with Significant Flooding, and Enclosure 4, Loss of Communications - Remote Station Guidelines, should be implemented.

\_\_\_\_\_/\_\_\_\_\_ 34. Annotated steps of this procedure and applicable plant procedures may be used to restore the plant to a normal configuration upon discontinuation of the emergency.

## 5.3.9 TSC Chemistry Supervisor responsibilities include the following:

- \_\_\_\_\_/\_\_\_\_\_ 1. Arrange to have the fuel oil storage tanks for the Emergency Diesel Generators topped off.
- \_\_\_\_\_/\_\_\_\_\_ 2. IF required, THEN isolate acid and caustic sources when adequate inventories of acid and caustic are available.
- \_\_\_\_\_/\_\_\_\_\_ 3. WHEN the hurricane is less than two hours from the plant, THEN ensure the NPS has terminated all radioactive release permits.
- \_\_\_\_\_/\_\_\_\_\_ 4. Ensure Staffing Plans are in place to meet the positions specified in Attachment 1. 1
- \_\_\_\_\_/\_\_\_\_\_ 5. Perform the site facilities duties of Step 5.3.13.

## 5.3.10 TSC Health Physics Supervisor responsibilities include the following:

- \_\_\_\_\_/\_\_\_\_\_ 1. Instruct Health Physics personnel to inspect outside areas for radioactive materials that need to be stored inside or protected from severe weather.
- \_\_\_\_\_/\_\_\_\_\_ 2. Instruct Health Physics personnel to inspect the low level Radwaste Storage Warehouse and Radwaste Building and consider moving highly contaminated components stored at ground level to a higher elevation.



0-EPIP-20106

## Natural Emergencies

Approval Date:

8/29/96

Initials/Date5.3.10 (Cont'd)

\_\_\_\_/\_\_\_\_

3. Temporarily store all contaminated waste at the RCA Waste Segregation Building in a C-van and coordinate securing C-vans.

\_\_\_\_/\_\_\_\_

4. The following guidelines should be considered for a Category 5 Hurricane Warning, and may be considered for lesser category hurricanes:

\_\_\_\_/\_\_\_\_

- a. Perform detailed surveys of the main passageways and establish suitable work areas if the TSC/OSC is relocated to the Auxiliary Building.

\_\_\_\_/\_\_\_\_

- b. Locate sufficient HP supplies and equipment (including monitoring instrumentation) in the Auxiliary Building to support the emergency teams.

\_\_\_\_/\_\_\_\_

- c. Temporarily relocate the RCA control point to the door between the New Electrical Equipment Room and the Auxiliary Building two hours prior to the approach of the storm and secure the normal entrances to the RCA.

\_\_\_\_/\_\_\_\_

5. Determine the need for batteries to support air sampling and acquire from Issues Warehouse as necessary.

\_\_\_\_/\_\_\_\_

6. Acquire the Health Physics instrumentation list for inventory tracking purposes.

\_\_\_\_/\_\_\_\_

7. Ensure radioactive waste processing and ventilation is terminated prior to and during the hurricane.

\_\_\_\_/\_\_\_\_

8. Collect radioactive sources from buildings not designed as Class 1 structures (Issues Warehouse, Florida City Substation, Nuclear Maintenance Building, etc.), and store them in the Auxiliary Building, or other suitable structures. (Special Nuclear Materials may remain in the warehouse based on location and size).

\_\_\_\_/\_\_\_\_

9. Distribute assigned dosimetry to personnel assigned to stay onsite during the hurricane.

\_\_\_\_/\_\_\_\_

10. Ensure survey instruments are staged in the sheltering locations.

\_\_\_\_/\_\_\_\_

11. Ensure Staffing Plans are in place to meet the positions specified in Attachment 1.

\_\_\_\_/\_\_\_\_

12. Perform the site facilities duties of Step 5.3.13.

Procedure No.:	Procedure Title:	Page: 51
0-EPIP-20106	Natural Emergencies	Approval Date: 8/29/96

Initials/Date

5.3.11 TSC Security Supervisor responsibilities include the following:

1. Ensure that all visitors have been evacuated in an orderly manner from the Owner Controlled Area in accordance with EPIP-20110, Criteria for and Conduct of Owner Controlled Area Evacuation.
2. Maintain an accurate list of personnel who are to remain on site and verify this list against a Security printout of personnel on site.
3. Coordinate the deployment of Security personnel during the severe weather.
4. Implement Security Force Instruction (SFI) 3002, Hurricane Preparedness.
5. Verify that the CAT 400 Security Diesel is in standby.
6. Perform the site facilities duties of Step 5.3.13.

5.3.12 TSC Fire Protection Supervisor responsibilities include the following:

1. Fuel all fire protection equipment.
2. Relieve personnel as directed.
3. Conduct a tour of Fire Watch Posts and the Plant to ensure the following are performed:
  - a. Fire protection equipment storage areas are secured.
  - b. All fire hose cabinet doors are shut and secured.
  - c. All fire hose reels are secured from moving.
  - d. All local alarm panel doors are closed.
  - e. All compensatory hoses are tied down.
  - f. All portable fire extinguishers are properly secured or tied down.





Procedure No.:	Procedure Title:	Page: 52
0-EPIP-20106	Natural Emergencies	Approval Date: 8/29/96

Initials/Date

5.3.12 (Cont'd)

\_\_\_\_/\_\_\_\_

4. Ensure at least two crews of fire watch personnel are available onsite to support post hurricane activities immediately following the hurricane.

\_\_\_\_/\_\_\_\_

5. Document a review of the transient combustibles placed in the power block per 0-ADM-016.1, Transient Combustible and Flammable Substances Program.

\_\_\_\_/\_\_\_\_

6. Upon notification of recovery process, the Fire Watch Shift Supervisor should:

\_\_\_\_/\_\_\_\_

- a. Notify and call in needed personnel.

\_\_\_\_/\_\_\_\_

- b. Conduct a tour of all posts.

\_\_\_\_/\_\_\_\_

- c. Return to normal shift schedule and staffing.

5.3.13 Site Facilities Responsibilities:

\_\_\_\_/\_\_\_\_

1. Responsibility for the site facilities are as follows:

- a. Emergency Preparedness Coordinator:

\_\_\_\_/\_\_\_\_

- (1) Central Receiving Facility

\_\_\_\_/\_\_\_\_

- (2) Issues Warehouse

\_\_\_\_/\_\_\_\_

- (3) Overflow Building

\_\_\_\_/\_\_\_\_

- (4) Nuclear Processing Building

\_\_\_\_/\_\_\_\_

- (5) Old I&C Building (with the exception of the TSC)

\_\_\_\_/\_\_\_\_

- (6) Fab Shops/Trailers (as assigned)

- b. TSC Mechanical Supervisor:

\_\_\_\_/\_\_\_\_

- (1) Nuclear Administration Building

\_\_\_\_/\_\_\_\_

- (2) Machine Shop Building



Initials/Date5.3.13.1 (Cont'd)

## c. TSC Electrical Supervisor:

- (1) Nuclear Maintenance Building

## d. TSC Chemistry Supervisor:

- (1) WTP Nuclear Chemistry/Chemical Storage

- (2) Cold Chemistry Lab

## e. TSC Health Physics Supervisor:

- (1) RCA Control Point Building

- (2) Dry Storage Warehouse

- (3) Radwaste Building

- (4) RCA Dressout Building

## f. TSC Security Supervisor:

- (1) Nuclear Entrance Building

- (2) Main Truck Gate Entry Building

- (3) Water Treatment Gate Entry Building

- (4) Security Emergency Diesel Generator Enclosure

## g. TSC Supervisor:

- (1) Technical Support Center

## h. TSC Technical Assistant to the Emergency Coordinator:

- (1) Nuclear Training Building



0-EPIP-20106

Natural Emergencies

Approval Date:

8/29/96

Initials/Date5.3.13 (Cont'd)

\_\_\_\_/\_\_\_\_

2. Ensure that the following steps are taken to secure the facility prior to evacuation:

NOTE

*The individuals responsible for these actions are listed in Substep 5.3.13.1.*

\_\_\_\_/\_\_\_\_

- a. Verify high value items are stored off the ground floor and away from windows:

\_\_\_\_/\_\_\_\_

(1) Computers and peripherals

\_\_\_\_/\_\_\_\_

(2) Laboratory equipment

\_\_\_\_/\_\_\_\_

(3) Instruments

\_\_\_\_/\_\_\_\_

(4) Photocopying equipment

\_\_\_\_/\_\_\_\_

(5) Communications equipment

\_\_\_\_/\_\_\_\_

- b. Verify that plant documents are stored off of the ground floor and away from windows:

\_\_\_\_/\_\_\_\_

(1) Plant procedures

\_\_\_\_/\_\_\_\_

(2) Engineering drawings

\_\_\_\_/\_\_\_\_

(3) Quality Assurance records

\_\_\_\_/\_\_\_\_

(4) Personnel records

\_\_\_\_/\_\_\_\_

(5) Procurement documentation

\_\_\_\_/\_\_\_\_

(6) Contracts, invoices, budget information

\_\_\_\_/\_\_\_\_

(7) Maintenance documents

\_\_\_\_/\_\_\_\_

(8) FSAR, Tech Specs, Vendor Manuals

\_\_\_\_/\_\_\_\_

- c. Verify that sandbags required per Substep 5.3.6.3 have been or are being installed satisfactory.

0-EPIP-20106

## Natural Emergencies

Approval Date:

8/29/96

Initials/Date5.3.13.2 (Cont'd)

\_\_\_\_/\_\_\_\_

d. Nonessential equipment is deenergized.

\_\_\_\_/\_\_\_\_

e. Windows and glass doors are boarded over, as time permits.

\_\_\_\_/\_\_\_\_

f. Window blinds are closed.

\_\_\_\_/\_\_\_\_

g. Doors to rooms having windows are closed.

\_\_\_\_/\_\_\_\_

h. Outside doors are shut securely.

\_\_\_\_/\_\_\_\_

i. Grounds around the facility are free of potential hazards.

5.4 Earthquake

5.4.1 When information is received that an earthquake has occurred, the Emergency Coordinator should perform the following:

NOTES

- The Seismic Recorders are located in the Unit 3 South Electrical Penetration Room approximately four feet below 18' elevation deck plates.
- I&C personnel should reference 0-PMI-103.1, Seismograph Quarterly Functional Check and Tri-Annual Battery Replacement, for evaluation of the Seismic Recorders.
- The Seismograph can detect if an earthquake has occurred and the severity of the event. When determining severity, the Recorder's film must be developed. The film can determine if the Seismic Design Basis was exceeded and if the plant may continue safe operation.

\_\_\_\_/\_\_\_\_

1. Notify I&C Department that an evaluation of the Seismic Recorders is required.

\_\_\_\_/\_\_\_\_

2. Perform plant walkdowns/inspections to determine any detrimental effects from the event.

\_\_\_\_/\_\_\_\_

3. Implement the Emergency Plan as necessary in accordance with EPIP-20101, Duties of Emergency Coordinator.





Initials/DateNOTE

*The effects of earthquake shock waves can create relay chatter which can result in alarms and equipment out of service due to relay actuation. Mercury level switches also exhibit momentary earthquake shock wave actuations and can create false level alarms (high or low).*

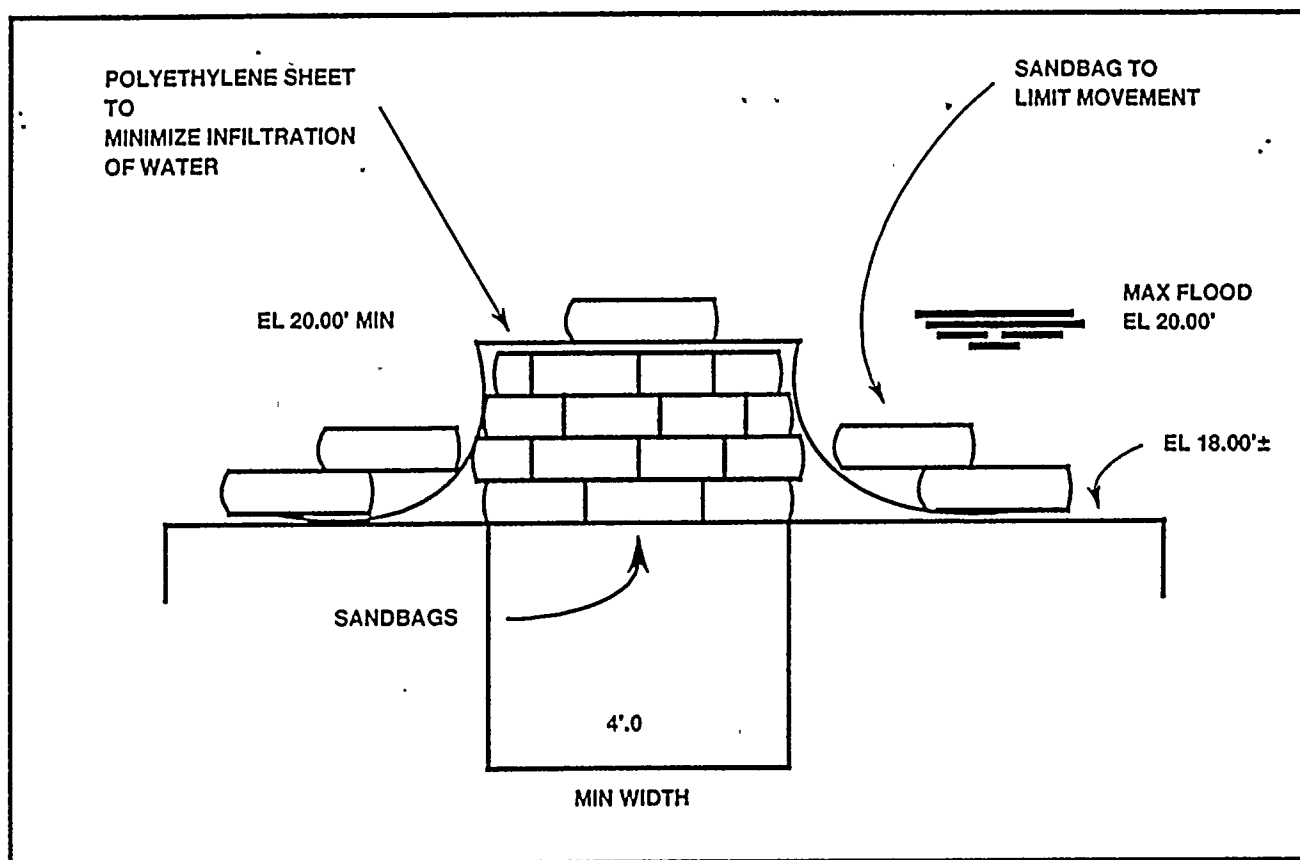
\_\_\_\_\_/\_\_\_\_ 5.4.2 Use the sequence of events recorders to identify relay chatter events and level switch related problems. Resetting of the relays may have been automatic or may require manual resetting if the relay has a lockout feature.

END OF TEXT



FIGURE 1  
(Page 1 of 1)

DETAILS FOR FLOOD PROTECTION DIKE



Side View of Typical Sandbag Dike

NOTES:

1. The location of dikes placed along walls shall be chosen to limit obstructions with the mounted items to walls. Care shall be used when placing dikes to insure equipment/components are not obstructed.
2. Polyethylene sheets should have a minimum thickness of 4 mils.
3. Sandbag size and placement should be determined by field personnel based on availability and positioned to provide dike dimensions similar to those shown above.
4. Position sandbags used to protect doors on the side of the door that will allow opening the door and maintaining access.



Procedure No.: <b>0-EPIP-20106</b>	Procedure Title: <b>Natural Emergencies</b>	Page: <b>58</b>
		Approval Date: <b>8/29/96</b>

**ENCLOSURE 1**  
(Page 1 of 2)

**480 VOLT RECEPTACLE LIST**

**NOTE**

*The following breakers are to be verified tagged and opened per Substep 5.3.8.17 of this procedure. The TSC Operations Manager has responsibility to ensure this is completed.*

<b><u>BREAKER NO.</u></b>	<b><u>RECEPTACLE NO./LOCATION</u></b>
30653	17 and 17A, Unit 3 Containment
30661	5, West End, Aux. Building East-West Passageway
30674	6, 6A and 6B East End and Exterior East Wall of Aux. Bldg
30736	7, North End, Aux. Building North-South Passageway
30905	11 and 12, North End of Intake Area
30760	8, Unit 3 Cask Wash Area (See Footnote 1)
34341	Unit 3 Condensate Polisher Area Receptacles
40653	17 and 17A, Unit 4 Containment
40903	15 and 16, Intake Area (at Traveling Screens)
44341	Unit 4 Condensate Polisher Area Receptacles
0870	9, South End of Aux. Building North-South Passageway
0871	10, Unit 4 Cask Wash Area (See Footnote 1)
1023	13, Water Treatment Plant Area
B1605	01 and 02 Radwaste Control Area, West Wall
B1704	03, Radwaste North-South Passageway, North End
B2028	Radwaste North-South Passageway, South End and Outside Receptacles



## ENCLOSURE 1

(Page 2 of 2)

## 480 VOLT RECEPTACLE LIST

BREAKER NO.RECEPTACLE NO./LOCATION

Panel 3P14, Bkr 1	Two Receptacles Outside North Wall and Two Outside East Wall of No. 3 4160 Switchgear Room
Panel 3P14, Bkr 2	One receptacle at Southeast Corner No. 3 Auxiliary Transformer
Panel 3P14, Bkr 3	One Receptacle at No. 3 Bowser Filter One Receptacle West of 3A MSR One Receptacle at Southwest Corner of Condensate Retubing Pit, Ground Level (See Footnote 2)
Panel 3P14, Bkr 4	One Receptacle in Auxiliary Feedwater Pump Area One Receptacle East of 3D MSR
Panel 3P14, Bkr 5	One Receptacle, Turbine Deck, West Side Between Units 3 & 4 One Receptacle Under South End of Steam Platform
Panel 3P14, Bkr 6	One Receptacle on Mezzanine Level at Panel 3P14 One Receptacle at Northeast Corner of Turbine Deck
Panel 3P14, Bkr 7	One Receptacle at Northwest Corner of Turbine Deck
Panel 4P14, Bkr 1	One Receptacle at East Wall No. 4 4160 Room
Panel 4P14, Bkr 2	One Receptacle at Southeast Corner No. 4 Auxiliary Transformer
Panel 4P14, Bkr 3	One Receptacle at South Side of Condensate Retubing Pit, Ground Level One Receptacle East of Bowser Filter One Receptacle West of 4A MSR
Panel 4P14, Bkr 4	One Receptacle East of 4D MSR One Receptacle East of No. 4 SGFW Pump Room
Panel 4P14, Bkr 5	One Receptacle at Southwest Corner of Turbine Deck One Receptacle Under South Edge of Steam Platform
Panel 4P14, Bkr 6	One Receptacle on Mezzanine Level at Panel 4P14 One Receptacle on Turbine Deck, South of Control Room Door
DP10-5	Fan Room Area Receptacles
DP10-6	Fan Room Area Receptacles and DP441

Footnote 1: Power Supply to Emergency Spent Fuel Pit Cooling Water Pumps  
Footnote 2: Power Supply to Lube Oil Reservoir Oil Renovators (DeLaval)





## ENCLOSURE 2

(Page 1 of 8)

## DRAIN PLUGS LOCATIONS AND INSTALLATION

NOTE

*If a drain plug cannot be properly installed in a drain, install a sandbag dike at least two feet high around the drain.*

DRAIN ID	SIZE	DESCRIPTION	LOCATION	NOTES
2	2"	Equipment Drain	South of No. 4 Instrument Air Compressor	Remove pipe clamps and relocate equip drain lines
3	2"	Equipment Drain	On the east side of the Unit 4 Instrument Air Receiver	Loosen threaded drain pipe and loosen clamp on half-inch drain pipe
5	4"	Floor Drain	West of 4B Heater Drain Pump	Cut off the TPCW drain; unthread and remove the Heater Drain Pump drain pipe
6	4"	Hub Drain	East of 4S Instrument Air Compressor	Cut Instrument Air drains; relocate small drain tube
9	4"	Floor Drain	East of CV-4-1515 (by FI-4-5120)	None
11	4"	Hub Drain	Under 4-30-788 (South of 4A RHDT)	Inflatable plug
12	4"	Floor Drain	Under B Breathing Air Compressor	Inflatable plug
13	4"	Hub Drain	South side of 4B RHDT	None
14	4"	Floor Drain	By CV-4-1504	None
15	2"	Equipment Drain	Inside Unit 4 Silica Analyzer cabinet	None
16	4"	Floor Drain	West of Unit 4 Silica Analyzer cabinet	None
18	4"	Floor Drain	By column J-35 in the walkway outside of the Unit 4 SGFW Pump Room	None
19	4"	Hub Drain	Under valve 4-60-212 (CV-4-2203 bypass valve)	None
20	4"	Floor Drain	South of Unit 4 Generator Hydrogen Gas Dryer	None



## ENCLOSURE 2

(Page 2 of 8)

## DRAIN PLUGS LOCATIONS AND INSTALLATION

DRAIN ID	SIZE	DESCRIPTION	LOCATION	NOTES
21	4"	Hub Drain	South of 4A MCC by the corner of the wall	None
22	4"	Floor Drain	North of 4A Isophase Bus Fan	None
23	4"	Equipment Drain	South of #3 Instrument Air Compressor	Cut drain pipes or loosen clamps; turn threaded drains out of the way; inflatable plug needed
24	4"	Floor Drain	By valve 3-50-562 (3B HDP suction valve)	None
25	2"	Equipment Drain	On the northeast corner of the Unit 3 Instrument Air Dryer	Loosen clamp and move threaded drain out of the way; inflatable plug needed
26	2"	Equipment Drain	On the west side of the U3 Heater Drain Pump Foundation	Move threaded drains out of the way
27	4"	Floor Drain	East of CV-3-1515	None
29	4"	Hub Drain	Under Valve 3-30-788 (South of 3A RHDT)	Inflatable plug
30	4"	Floor Drain	West of the Chemical Addition pumps	None
32	2"	Hub Drain	East of Chemical Addition Tanks	None
33	2"	Hub Drain	East of Chemical Addition Tanks	None
34	4"	Hub Drain	South of 3B RHDT	None
35	4"	Floor Drain	By CV-3-1504	None
38	4"	Floor Drain	Outside the entrance to 4B 4160 Volt Switchgear Room	None
39	2"	Equipment Drain	Inside the Unit 3 Silica Analyzer cabinet	None
40	4"	Floor Drain	In the Walkway by Fire Locker Number 1	None
41	4"	Floor Drain	West of C AFW Pump in the Walkway	None
44	2"	Equipment Drain	At the south end of the Unit 4 Gland Steam Condenser	Loosen clamp and move drain pipe
45	4"	Floor Drain	By the Unit 3 Generator Hydrogen Alarm Panel	None
46	4"	Hub Drain	Behind Valve 3-60-212 (CV-3-2203 Bypass Valve)	None
47	4"	Floor Drain	South of the Unit 3 Generator Hydrogen Gas Dryer	None



## ENCLOSURE 2

(Page 3 of 8)

## DRAIN PLUGS LOCATIONS AND INSTALLATION

DRAIN ID	SIZE	DESCRIPTION	LOCATION	NOTES
48	4"	Floor Drain	North of the 3A Isophase Bus Fan	None
49	4"	Hub Drain	South of the 3A MCC Non-vital side	None
52	4"	Floor Drain	Outside the entrance to 3A 4160 Volt Switchgear Room	None
63	8"	Outlet pipe of Catch Basin 15	In the RCA, West of the Unit 4 West Electrical Penetration Room	Install temporary pump in the catch basin with discharge routed to outside the Flood Protection Barrier concurrent with plug installation
68	4"	Floor Drain	North end of Unit 3 CCW Room in the Valve Pit	None
69	4"	Floor Drain	By the North Pedestal of 3B CCW Heat Exchanger	None
70	4"	Floor Drain	Just south of 3B CCW Heat Exchanger	None
71	4"	Floor Drain	Unit 3 CCW Room by 3B CCW Pump	None
72	4"	Floor Drain	Unit 4 CCW Room just east of the Aux Building Doors	None
73	4"	Floor Drain	Unit 4 CCW Room in the Pump Area	None
74	4"	Floor Drain	Unit 4 CCW Room just North of 4B CCW Heat Exchanger	None
75	4"	Floor Drain	By the South Pedestal of 4B CCW Heat Exchanger	None
76	4"	Floor Drain	South end of Unit 4 CCW Room in the valve pit	None
77	3"	Floor Drain	Unit 4 Bowser Lube Oil Conditioner under Valve 4-40-020 in the southeast corner	None
78	3"	Floor Drain	Unit 4 Bowser Lube Oil Conditioner on the north side of the conditioner under FG-4-3401	None
79	3"	Hub Drain	Unit 4 Bowser Lube Oil Conditioner to the east of the Unit 4 Lube Oil Transfer Pump	None
80	3"	Hub Drain	Outside the northeast corner of the Unit 4 Bowser Lube Oil Conditioner pit	Cut drain line



Procedure No.:  0-EPIP-20106	Procedure Title:  Natural Emergencies	Page: 63 Approval Date: 8/29/96
------------------------------------	---	--

**ENCLOSURE 2**  
(Page 4 of 8)

**DRAIN PLUGS LOCATIONS AND INSTALLATION**

DRAIN ID	SIZE	DESCRIPTION	LOCATION	NOTES
83	3"	Floor Drain	In the Unit 4 SGFW Pump Room on the south end between the motors	None
84	3"	Equipment Drain	Just North of 4A SGFW Pump	Unthreaded drain pipe; use inflatable plug
85	3"	Floor Drain	In the Unit 4 SGFW Pump Room just west of valve 4-20-218 (4B SGFW Pump discharge check valve) under the deck plate	None
86	2"	Equipment Drain	Just north of 4B SGFW Pump	Unthreaded drain pipe; use inflatable plug
87	2"	Equipment drain	In the southwest corner of the Unit 4 Generator Seal Oil Pit	Loosen clamps to move drain pipe; use inflatable plug.
88	3"	Floor Drain	In the northwest corner of the Unit 4 Auxiliary Transformer Pit	None
89	3"	Floor Drain	Just north of the Unit 4 Auxiliary Transformer Pit	None
90	3"	Hub Drain	In the southeast corner of the Unit 3 Bowser Lube Oil Conditioner Pit under Valve 3-40-025.	Inflatable plug
91	3"	Floor Drain	In the Unit 3 Bowser Lube Oil Conditioner Pit just north of the conditioner under FG-3-3401	None
92	3"	Hub Drain	In the Unit 3 Bowser Lube Oil Conditioner Pit just east of the Unit 3 Lube Oil Transfer Pump	None
93	3"	Hub Drain	In the northeast corner of the Unit 3 Bowser Lube Oil Conditioner Pit	Cut Pipe
96	3"	Floor Drain	In the Unit 3 SGFW Pump Room on the south end between the motors	None
97	3"	Equipment Drain	Just north of 3A SGFW Pump	Loosen unions and threaded drain pipe if required; use inflatable plug.
98	3"	Floor Drain	In the Unit 3 SGFW Pump Room just west of Valve 3-20-218 (3B SGFW Pump discharge check valve) under the deck grating	None
99	2"	Equipment Drain	Just north of 3B SGFW Pump	Loosen unions to move drain pipe out of the way.





## ENCLOSURE 2

(Page 5 of 8)

## DRAIN PLUGS LOCATIONS AND INSTALLATION

DRAIN ID	SIZE	DESCRIPTION	LOCATION	NOTES
100	3"	Equipment Drain	In the southwest corner of the Unit 3 Generator Seal Oil enclosure	None
101	3"	Floor Drain	In the northwest corner of the Unit 3 Auxiliary Transformer Pit	None
102	3"	Floor Drain	Just north of the Unit 4 Auxiliary Transformer Pit	None
103	2"	Hub Drain	In the 3A EDG Room under C air receiver	Move threaded drains out of the way; use inflatable plug.
106	2"	Hub Drain	In the 3B EDG Room under C air receiver	Inflatable plug
107	3"	Floor Drain	In the 3B EDG Room just east of the electrical control room	None
108	4"	Floor Drain	In the 3A EDG Room just east of the Electrical Control Panel	None
109	2"	Hub Drain	In the 3A EDG Radiator Room on the southeast side of the radiator	None
110	2"	Hub Drain	In the 3B EDG Radiator Room on the southeast side of the radiator	None
111	4"	Floor Drain	In the 3B EDG Room under the air dryer skid	None
112	4"	Floor Drain	In the 3A EDG Room under the air dryer skid	None
114	2"	Equipment Drain	Between the 4A and 4B Heater Drain Pumps on the west side of the foundation	None
115	4"	Floor Drain	To the northeast of the Unit 4 Generator Hydrogen Alarm Panel	None



0-EPIP-20106

Natural Emergencies

Approval Date:

8/29/96

## ENCLOSURE 2

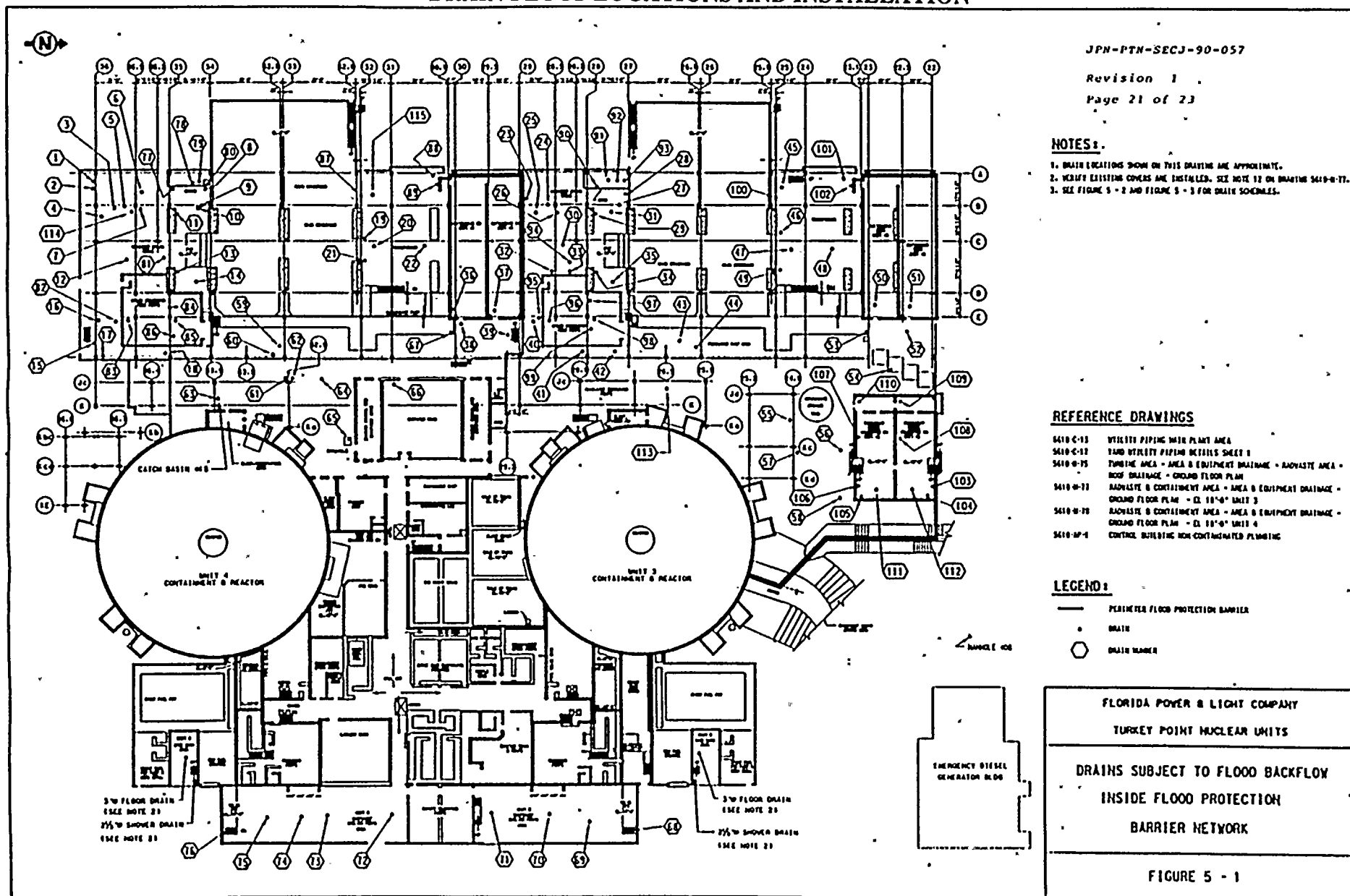
(Page 6 of 8)

## DRAIN PLUGS LOCATIONS AND INSTALLATION

DRAIN ID	SIZE	DESCRIPTION	LOCATION	NOTES
NNA	12"	Manhole #3B Inlet Pipe	West of the New Unit 4 EDG Building	Buried Plug inlet pipe on west side of the manhole.
NNA	2"	Floodwell Drain	Unit 3 CCW Pipe Trench	Plug 2" drain line in bottom of trench Floodwell. Drain line is north of centerline in Floodwell. Coordinate removing deckplates with Mechanical Maintenance or Projects Department. Contact Health Physics prior to entering the trench.
NNA	2"	Floodwell Drain	Unit 4 CCW Pipe Trench	Plug 2" drain line in bottom of trench Floodwell. Drain line is south of centerline in Floodwell. Coordinate removing deckplates with Mechanical Maintenance or Projects Department. Contact Health Physics prior to entering the trench.
NNA	8"	Catch Basin #15 Outlet Pipe	West of Unit 4 West Electrical Penetration Room near Column Line K-33.9	Plug 8" Outlet Pipe in Catch Basin.



# ENCLOSURE 2 (Page 7 of 8) DRAIN PLUGS LOCATIONS AND INSTALLATION





ENCLOSURE 2  
(Page 8 of 8)  
DRAIN PLUGS LOCATIONS AND INSTALLATION

FIGURE 1  
DETAIL FOR PLUGGING FLOOR DRAINS

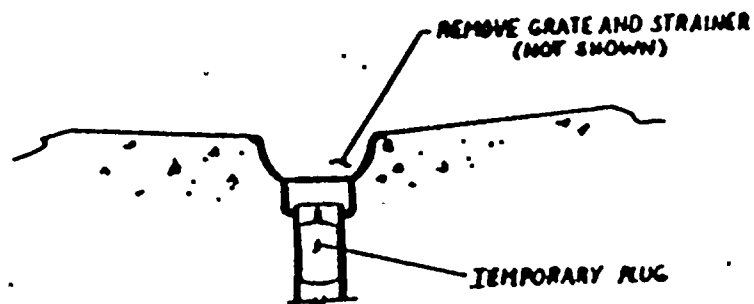


FIGURE 2  
DETAIL FOR PLUGGING HUB DRAINS  
AND EQUIPMENT DRAINS

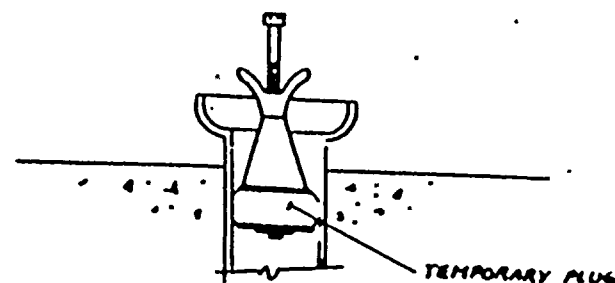


FIGURE 3  
DETAIL FOR PLUGGING CATCH BASIN  
OR MANHOLE DRAIN PIPE

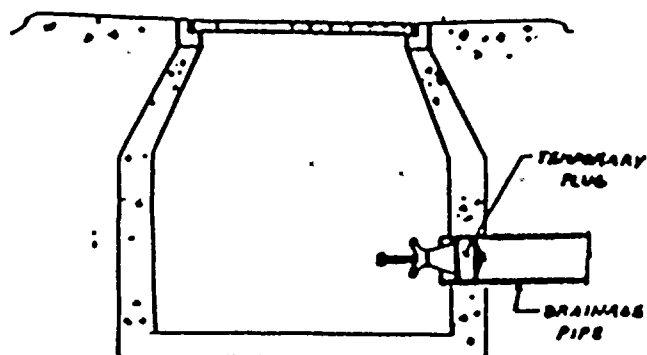
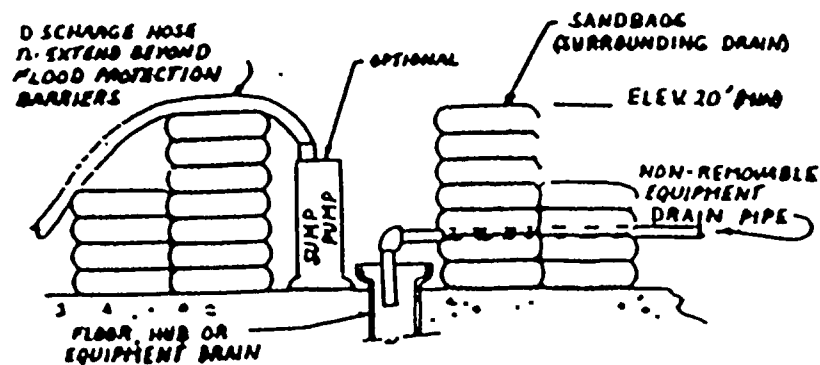


FIGURE 4  
DETAILS FOR FLOOD PROTECTION  
IN WHICH  
DRAIN CANNOT BE PLUGGED







## ENCLOSURE 3

(Page 1 of 15)

OPERATIONS GUIDELINES FOR CATEGORY 5 HURRICANE  
WITH SIGNIFICANT FLOODING1.0 DISCUSSION

- 1.1 This enclosure provides guidelines for Plant Operations before, during, and after a Category 5 hurricane with significant flooding outside of the design basis. The degree to which these guidelines are used is per NPS discretion after consultation with the Emergency Coordinator.
- 1.2 The guidelines address plant damage - particularly from flooding - outside of the plant design basis. The focus is on personnel safety and maintaining the RCS below 350°F to minimize RCP seal degradation. The following core cooling contingencies are addressed for the units initially in Mode 5:
- 1.2.1 RHR Loops
  - 1.2.2 AFW Train 2
  - 1.2.3 AFW Train 1 (pre-throttled)
  - 1.2.4 Bleed and Feed
- 1.3 In addition, measures are presented for maintaining essential equipment and instrumentation and safely deploying personnel at remote stations.

2.0 PREPARATION2.1 Modes 1-4

- 2.1.1 Shutdown/cooldown to approximately 300°F in accordance with \*-GOP-103, Power Operation to Hot Standby/\*-GOP-305 Hot Standby to Cold Shutdown:
1. Do not open the main generator disconnects in the switchyard; do open the main generator links in case backfeed is required later.
  2. Purge the generator with carbon dioxide; shutdown seal oil and lube oil systems.
  3. Isolate steam generator blowdown.
  4. Maintain steam generators at approximately 70 percent narrow range level.



Procedure No.:	Procedure Title:	Page: 69
0-EPIP-20106	Natural Emergencies	Approval Date: 8/29/96

ENCLOSURE 3  
(Page 2 of 15)

OPERATIONS GUIDELINES FOR CATEGORY 5 HURRICANE  
WITH SIGNIFICANT FLOODING

NOTE

*The following evolution throttles auxiliary feedwater and steam flows under natural circulation conditions with the RCS at approximately 300°F. The purpose is to prepare for a beyond-design scenario where neither RHR cooling nor AFW flow control valve operation are possible. The objective is to throttle flows to maintain RCS temperature and steam generator levels at near-equilibrium.*

- 2.1.2 Throttle steam flow and AFW train 1 flow for natural circulation conditions with the RCS at approximately 300°F. If both units were initially in Modes 1-4, coordinate between units to perform this evolution simultaneously:
1. Place AFW train 1 flow control valves in manual with zero demand.
  2. Start AFW "A" in accordance with \*-OP-075, Auxiliary Feedwater System.
  3. Open all MSIV Bypass MOVs.
  4. Open \*-043 and \*-044, hogger jet ejector main steam isolation valves.
  5. Stop all running NCC and CRDM fans.
  6. Stop all running RHR pumps and RCPs for up to one hour per Tech Spec 3.4.1.3.
  7. Verify natural circulation:
    - a. RCS subcooling based on core exit TCs - Greater than 30°F
    - b. S/G pressures - Stable or Decreasing
    - c. RCS hot leg temperatures - Stable or Decreasing
    - d. Core exit TCs - Stable or Decreasing
    - e. RCS cold leg temperatures - Within 35°F of saturation temperature for S/G Pressure.



## ENCLOSURE 3

(Page 3 of 15)

OPERATIONS GUIDELINES FOR CATEGORY 5 HURRICANE  
WITH SIGNIFICANT FLOODING2.1.2 (Cont'd)

8. Make the following adjustments until steam generator levels and RCS average temperature are as close as possible to equilibrium.
  - a. Close the steam dump to atmosphere valves.
  - b. Throttle open \*-072, hogger jet ejector main steam isolation valve. If needed, add other dummy steam loads (such as water box air ejectors or steam trap drains) to allow throttling of \*-072.
  - c. Take local control of CV-\*-2816, CV-\*-2817, and CV-\*-2818, AFW train 1 flow control valves, and throttle them open while closing the main feedwater bypass valves.
  - d. Continue Steps b and c until steam generator levels are maintained at approximately 70 percent and RCS average temperature is maintained at approximately 300°F with steam dump to atmosphere valves and main feedwater bypass valves closed.
  - e. Lock the train 1 AFW flow control valves in the throttled position.
9. Stop AFP "A" in accordance with \*-OP-075, Auxiliary Feedwater System, and maintain steam generator levels with the main feedwater bypass valves.
10. Return AFW to standby in accordance with \*-OP-075, Auxiliary Feedwater System, leaving the train 1 AFW flow control valves locked in the throttled position.
11. Start desired RHR pump.
12. Start desired NCC and CRDM fans.



## ENCLOSURE 3

(Page 4 of 15)

OPERATIONS GUIDELINES FOR CATEGORY 5 HURRICANE  
WITH SIGNIFICANT FLOODING

2.1.3 Continue plant cooldown to Mode 5 in accordance with \*-GOP-305, Hot Standby to Cold Shutdown:

1. Fill the pressurizer to 90 percent narrow range level.

**CAUTIONS**

- *Do not make up to the RCS during the cooldown (except to compensate for known leakage) or an overfill situation may result upon plant heat up.*
- *Maintain pressurizer temperature as high as possible above RCS temperature without challenging the OMS set point or exceeding a 320°F differential.*

2. Cooldown on RHR until pressurizer level drops to 22 percent.

3. Maintain the plant on RHR in Mode 5; do not heat up.

2.1.4 See Subsection 2.4, Prepare Equipment and Station Personnel on Each Unit, for further preparatory guidelines.





ENCLOSURE 3  
(Page 5 of 15)

OPERATIONS GUIDELINES FOR CATEGORY 5 HURRICANE  
WITH SIGNIFICANT FLOODING

2.2 Mode 5

2.2.1 IF the RCS is NOT filled and vented, THEN perform the following:

**CAUTION**

*Drain down condition with steam generators unavailable and RCS integrity breached is the most dangerous plant configuration during the storm. The following actions should begin early and be given high priority:*

1. Commence immediate action to restore steam generator operability (replace man ways, etc.).
2. Simultaneously commence action to restore RCS integrity (if breached)
3. When RCS integrity is achieved, commence fill and vent per \*-OP-041.8, Filling and Venting the Reactor Coolant System.

2.2.2 IF the RCS is filled and vented, THEN perform the following:

1. Establish containment integrity as soon as possible.
2. Maintain RCS temperature as low as possible.
3. Draw a pressurizer bubble per \*-OP-041.2, Pressurizer Operation.
4. Maintain pressurizer temperature as high as possible above RCS temperature without challenging the OMS set point or exceeding a 320°F differential.
5. Secure steam generators from wet lay up, if applicable.
6. Maintain steam generators at approximately 70 percent narrow range level.
7. Line up AFW and place it in standby per \*-OP-075, Auxiliary Feedwater System.
8. See Subsection 2.4, Prepare Equipment and Station Personnel On Each Unit, for further preparatory guidelines.

ENCLOSURE 3  
(Page 6 of 15)

OPERATIONS GUIDELINES FOR CATEGORY 5 HURRICANE  
WITH SIGNIFICANT FLOODING

2.3 Mode 6

2.3.1 IF the reactor is NOT defueled, THEN perform the following:

1. Terminate all fuel transfer operations and secure fuel transfer equipment.
2. Transfer the conveyor cart to the spent fuel pit.
3. Close the tube gate valve.
4. Establish containment integrity.
5. Maintain RCS temperature as low as possible.
6. Fill the cavity to normal band.
7. Select further preparatory actions as applicable from Subsection 2.4, Prepare Equipment and Station Personnel On Each Unit.

2.3.2 IF the reactor is defueled, THEN perform the following:

1. Maintain the spent fuel pit temperature as low as possible.
2. Verify the spent fuel pit level is in the normal band.
3. Verify the transfer canal is filled (at least on the spent fuel pit side) with the transfer tube gate valve closed.
4. Select further preparatory actions as applicable from Subsection 2.4, Prepare Equipment and Station Personnel On Each Unit.



## ENCLOSURE 3

(Page 7 of 15)

OPERATIONS GUIDELINES FOR CATEGORY 5 HURRICANE  
WITH SIGNIFICANT FLOODING2.4 Prepare Equipment and Station Personnel On Each Unit:

- 2.4.1 Determine whether splitting the CCW headers is necessary to minimize missile vulnerability of exposed piping and/or splitting CCW to the Safety Injection Pumps so that each unit supplies its own Safety Injection Pumps.
- 2.4.2 Observing \*-OP-30, Component Cooling Water System, precautions, isolate CCW to selected non-essential de-energized equipment.
- 2.4.3 Isolate containment to the extent practical.
- 2.4.4 Verify the spent fuel pit level and temperature are satisfactory.
- 2.4.5 Test the Diesel Driven Fire Pump in accordance with 0-OSP-012.1, Diesel Driven Service Water Pump Operability Test.
- 2.4.6 To allow pressurizer backup heater operation, place the keylock switch on the back of 3D/4D load center in bypass and reset the lockout relay in the appropriate electrical penetration room.
- 2.4.7 Personnel should be positioned at the following remote stations to perform local actions:
  - 1. Auxiliary Building (if tenable)-1 SRCO/SRO, 4 SNPO/NO
  - 2. Each unit's 480V Vital Load Center Room (also includes 4kv rooms)-1 SRCO/SRO, 2 SNPO/NPO/TO's
  - 3. Unit 3 EDG Building-2 SNPO/NPO/TO's
  - 4. Unit 4 EDG Building -4 SNPO/NPO/TO's
  - 5. Cable Spreading Room-1 SRCO/SRO, 4 SNPO/NPO/TO's
  - 6. Inverter Room-2 NWE/SRCO/RCO's not involved in Control Room duties.

Procedure No.:  0-EPIP-20106	Procedure Title:  Natural Emergencies	Page: 75 Approval Date: 8/29/96
------------------------------------	---	--

ENCLOSURE 3  
(Page 8 of 15)

OPERATIONS GUIDELINES FOR CATEGORY 5 HURRICANE  
WITH SIGNIFICANT FLOODING

- 2.4.8 Determine whether assigning experienced supervisory operators to the remote stations is necessary.
- 2.4.9 Ensure these personnel are in position prior to the arrival of the storm and have appropriate safety equipment, materials to stop flooding or make minor repairs, and needed keys (such as ICCS, vital area).
- 2.4.10 Ensure remote station personnel responsible for ground isolation have a copy of the breaker list and relevant ONOPs.

NOTE

*Enclosure 4 provides guidance for personnel at remote stations in case all communications with the control room are lost. Each station should have a full copy so that each knows what the others plan to do if communications are lost.*

- 2.4.11 Instruct remote station personnel to continuously monitor local conditions and equipment status; Enclosure 4 is to be used if (and only if) all communication between the control room and remote stations is lost.
- 2.4.12 Turn off selected non-essential loads to minimize the potential for bus grounding in accordance with Technical Specification requirements.



Procedure No.:  0-EPIP-20106	Procedure Title:  Natural Emergencies	Page: 76 Approval Date: 8/29/96
------------------------------------	---	--

ENCLOSURE 3  
(Page 9 of 15)

OPERATIONS GUIDELINES FOR CATEGORY 5 HURRICANE  
WITH SIGNIFICANT FLOODING

3.0 MITIGATION

CAUTION

*As the hurricane passes, no personnel should be allowed to leave stations. Exceptions should be conducted using applicable guidance contained in EPIP-20111, Re-Entry.*

NOTES

- *EOPs and ONOPs should be carefully evaluated during a Category 5 hurricane since these procedures assume that most areas of the plant are accessible. Deviations from procedures shall comply with approved administrative procedures.*
- *Control Room personnel should constantly monitor their equipment in case it grounds or is secured by an operator performing ground isolation from a remote station.*

3.1 IF Offsite Power is lost, THEN perform the following:

3.1.1 Consult \*-ONOP-004, Loss of Offsite Power.

3.1.2 Locally open \*-358 and close LCV-\*-115C since LCV-\*-115C will fail as is.

3.2 IF all AC is lost, THEN perform the following:

3.2.1 Consult \*-ONOP-004, Loss of Offsite Power, and \*-ONOP-050, Loss of RHR.

3.2.2 IF RHR was is service, THEN see loss of RHR guidance below.

3.2.3 Determine the need to save sufficient capacity to start an EDG prior to using the spare battery for DC loads.



R





Procedure No.:	Procedure Title:	Page: 77
0-EPIP-20106	Natural Emergencies	Approval Date: 8/29/96

ENCLOSURE 3  
(Page 10 of 15)

OPERATIONS GUIDELINES FOR CATEGORY 5 HURRICANE  
WITH SIGNIFICANT FLOODING

3.3 IF all DC power is lost in addition to loss of all AC, THEN perform the following:

3.3.1 Consult the TSC about the possibility of having I&C obtain instrumentation readings from the Hagan racks and other locations.

3.3.2 Consult the TSC about the possibility of having Electrical operate MOV's from dead breakers using portable generators/transformers.

3.4 IF RHR is lost, THEN perform the following:

NOTE

*If RCS temperature rises above the value initially established in Section 2, Preparation, of Enclosure 4, pressurizer level should be allowed to rise. The plant should stabilize at approximately the conditions established during the natural circulation evolution performed in Section 2.*

3.4.1 Consult \*-ONOP-050, Loss of RHR.

3.4.2 IF use of AFW becomes necessary, THEN train 2 should be used as long as possible.

3.4.3 Determine whether using other available control valves or the manual isolation valves to the hogger jet ejector are necessary if steam dump to atmosphere valves cannot be used to throttle steam.

3.4.4 Maintain steam generators between 40 percent and 70 percent narrow range level and RCS average temperature less than 350°F.

3.4.5 IF AFW train 2 is lost, THEN perform the following:

1. Consult \*-ONOP-075, Auxiliary Feedwater System Malfunction.

2. Open MOV-\*-1403.

3. Close MOV-\*-1405.

3.4.6 Maintain steam generators between 40 percent and 70 percent narrow range level and RCS average temperature less than 350°F.



## ENCLOSURE 3

(Page 11 of 15)

OPERATIONS GUIDELINES FOR CATEGORY 5 HURRICANE  
WITH SIGNIFICANT FLOODING3.4.6 (Cont'd)NOTE

*After running an auxiliary feedwater pump, approximately three hours is required for the governor oil pressure to completely bleed down. While less than three hours bleed-down time may be adequate to prevent overspeed upon restart, the risk of losing the pump or having to perform a local reset of the overspeed trip must be weighed against the benefit gained and the alternatives available.*

1. Cycle MOV-\*-1403 for steam generator level control if necessary.
2. If local actions appear necessary, consult the Emergency Coordinator.
3. Request the TSC to begin researching bleed and feed contingencies.

3.5 IF CCW is lost, THEN perform the following:

- 3.5.1 Stop any running RHR pump.
- 3.5.2 Consult \*-ONOP-030, Component Cooling Water Malfunction.
- 3.5.3 If CCW is lost on one unit, determine whether cross-tying CCW system is necessary.
- 3.5.4 If CCW is lost on both units, connect service water to the charging pumps. If service water is not available and charging pump operation is required, alternate charging pumps to minimize pump heat up.
- 3.5.5 Review loss of RHR and loss of spent fuel pit cooling guidance.

3.6 IF ICW is lost, THEN perform the following:

- 3.6.1 Stop any running RHR pump
- 3.6.2 Consult \*-ONOP-019, Intake Cooling Water Malfunction.
- 3.6.3 Review loss of CCW guidance.



## ENCLOSURE 3

(Page 12 of 15)

OPERATIONS GUIDELINES FOR CATEGORY 5 HURRICANE  
WITH SIGNIFICANT FLOODING

3.7 IF Instrument Air is lost, THEN perform the following:

3.7.1 Consult 0-ONOP-013, Loss of Instrument Air.

3.7.2 After verifying letdown isolation and any running charging pump go to maximum speed, perform the following:

1. Stop any running charging pump.
2. Open \*-358, manual bypass around LCV-\*-115B
3. Close LCV-\*-115C.

3.7.3 After verifying HCV-\*-758 failed open resulting in RCS cooldown and pressurizer level drop, perform the following:

1. Throttle CCW to the RHR heat exchanger to return RCS temperature and pressurizer level to the values initially established in Section 2, Preparation, of Enclosure 3.

3.7.4 Cycle charging pumps as needed to maintain the desired pressurizer level.

NOTE

*AFW flow control valves, PORVs, and steam dump to atmosphere valves will go to backup nitrogen upon a loss of Instrument Air.*

3.7.5 Place AFW Train 2 flow controllers in MANUAL to conserve nitrogen.

3.8 IF Spent Fuel Pit Cooling is lost and boiling occurs, THEN possible sources of makeup include RWST purification pumps, primary water pumps, CVCS holdup tank pumps, the water treatment plant, service water, fire water, and portable pumps.



ENCLOSURE 3  
(Page 13 of 15)

OPERATIONS GUIDELINES FOR CATEGORY 5 HURRICANE  
WITH SIGNIFICANT FLOODING

NOTE

*0-ONOP-16.10, Pre-Fire Plan Guidelines and Safe Shutdown Manual Actions, contains valuable information on equipment in rooms and their power supplies. This information may be useful if a room is flooding and equipment in it needs to be de-energized.*

3.9 IF plant flooding is imminent, THEN perform the following:

3.9.1 For Auxiliary building flooding:

1. De-energize the remaining MCCs
2. Open \*-358 and close LCV-\*115C on both units
3. Evacuate through the New Electrical Equipment Room to the Cable Spreading Room.

3.9.2 For Turbine Building Flooding, start the 3A EDG and run it in 'idle in case the 3A MCC floods.

3.9.3 For Computer Room flooding, de-energize ERDADS.

3.10 Refer to Enclosure 4, Loss of Communications - Remote Station Guidelines, if all onsite communications are lost.

Procedure No.:  0-EPIP-20106	Procedure Title:  Natural Emergencies	Page: 81 Approval Date: 8/29/96
------------------------------------	---	--

ENCLOSURE 3  
(Page 14 of 15)

OPERATIONS GUIDELINES FOR CATEGORY 5 HURRICANE  
WITH SIGNIFICANT FLOODING

4.0 RECOVERY

CAUTION

*The site is likely to present unforeseen hazards to recovery teams, such as weakened structures, faulted piping, electrical hazards, dispersed hazardous chemicals, and an absence of fire fighting capability. Recovery teams and general access must be controlled to minimize risk.*

- 4.1 Dispatch, as necessary, teams to search for missing personnel, assess damage, and perform repairs on critical systems once tropical storm force winds recede.
- 4.2 Determine which of the following guidelines are applicable before energizing plant equipment:

NOTE

*If electrical equipment is needed for plant or public safety before a full operability assessment can be completed.*

- 4.2.1 No electrical equipment should be re-energized until it is checked by an electrician.
- 4.2.2 IF reactor safety is challenged AND time does not permit equipment recovery actions (such as rinse and dry, megger), THEN energize the minimum equipment necessary to meet the challenge and, if possible, station a watch at a safe distance from the equipment.
- 4.2.3 Spare motors may be available from the nuclear units, fossil units, or Issues Warehouse, and if time permits, install spares to allow wetted motors to be recovered.





ENCLOSURE 3  
(Page 15 of 15)

OPERATIONS GUIDELINES FOR CATEGORY 5 HURRICANE  
WITH SIGNIFICANT FLOODING

4.2.4 For electrical components wetted by the storm surge or wave action, have Electrical perform a fresh water rinse, dry, and megger, as necessary, and after successful meggering, energize any installed heaters.

4.2.5 For electrical components wetted, by rain, have Electrical dry and megger the equipment, as necessary, and after successful meggering, energize any installed heaters.

4.3 Remove all stop logs and drain plugs to allow any trapped water to drain out as soon as practical.

NOTE

*Federal, state, or local assistance may be required in the wake of the storm due to damage to plant systems and impaired site access.*

4.4 Make required reports and transmit a prioritized list of needs to outside agencies as soon as communications are re-established.

NOTE

*Priority must be placed on the restoration of electrical power and establishing or maintaining RCS or spent fuel pit cooling support systems (depending on where the fuel is).*

4.5 Restore the plant to a normal configuration upon discontinuation of the emergency, using annotated steps of this procedure and applicable plant procedures.



## ENCLOSURE 4

(Page 1 of 9)

## LOSS OF COMMUNICATIONS - REMOTE STATION GUIDELINES

1.0 480V LOAD CENTER ROOM OPERATORNOTE

*These instructions are provided in case all communications are lost between the Control Room and your station. Before resorting to these default instructions, attempt to contact the Control Room on all communications circuits. Use of these instructions must be tempered by your understanding of the current situation and good judgement.*

- 1.1 Monitor the 4KV Bus Rooms for flooding and the 480V Load Center Rooms for water intrusion and attempt to contain or divert minor flooding to keep it away from the buses.

CAUTION

*Even if a 4kv bus feeder breaker is tripped, breaker control power is normally present and presents an electrical safety hazard.*

- 1.2 IF flooding of a bus is imminent, THEN trip the feeder breaker for that bus and remain out of that bus's room.
- 1.3 Continually check the 4KV buses for grounds in accordance with \*-ONOP-005.4, 4KV Bus \*A, \*B, or \*D Ground, and if a ground is detected, perform ground isolation:
- 1.3.1 IF the 4KV ground is isolated to a non-load center load, THEN leave the breaker open.



## ENCLOSURE 4

(Page 2 of 9)

## LOSS OF COMMUNICATIONS - REMOTE STATION GUIDELINES

NOTES

- *If a remote station operator observes that a load center or MCC is deenergized, then he will locally perform ground isolation. He will expect the 480V Load Center Room Operator to reenergize the load center or MCC, as discussed below.*
- *If a ground is localized to H Load Center, both feeder breakers should be opened to isolate the ground. When re-energizing the load center, only one feeder breaker should be closed for the first five minutes. If no ground is detected, then the other feeder breaker may be closed.*

1.3.2 IF the 4KV ground is isolated to a load center, THEN perform the following:

1. IF the 480V ground is isolated to a non-MCC Load, THEN leave the breaker open.
2. IF the ground is isolated to an MCC, THEN perform the following:
  - a. Open the MCC's feeder breaker(s) for ten minutes.
  - b. Attempt to reclose the feeder breaker(s) after ten minutes.
  - c. IF the ground is NOT present, THEN leave the breaker closed.
  - d. IF H MCC ground is still clear after 5 minutes, THEN close the other feeder breaker.
  - e. IF the ground is still present, THEN reopen the breaker for another ten minutes.
  - f. Repeat until the ground disappears or until communications are re-established.



## ENCLOSURE 4

(Page 3 of 9)

## LOSS OF COMMUNICATIONS - REMOTE STATION GUIDELINES

2.0 AUXILIARY BUILDING OPERATORNOTE

*These instructions are provided in case all communications are lost between the Control Room and your station. Before resorting to these default instructions, attempt to contact the control Room on all communications circuits. Use of these instructions must be tempered by your understanding of the current situation and good judgement.*

- 2.1 Monitor the Auxiliary Building for flooding. Attempt to contain or divert minor flooding away from the MCCs and the charging pumps.

CAUTION

*MCC local feeder breakers are actually disconnect switches; do not interrupt load with them.*

- 2.2 IF flooding of an MCC is imminent, THEN shed all loads on the MCC and then open the local feeder breaker for that MCC.
- 2.3 IF water level throughout the Auxiliary Building is rising and all MCCs and charging pumps are threatened, THEN perform the following:
- 2.3.1 Shed all loads on the MCCs.
  - 2.3.2 Open the MCCs' local feeder breakers.
  - 2.3.3 Open \*-358 and close LCV-\*-115C on both units.
  - 2.3.4 Evacuate to the Cable Spreading Room via the New Electrical Equipment Room.



## ENCLOSURE 4

(Page 4 of 9)

## LOSS OF COMMUNICATIONS - REMOTE STATION GUIDELINES

NOTES

- *If a load center room operator observes that an MCC is grounded, he will open the load center breaker for that MCC. After ten minutes, the operator will reclose the breaker. He will repeat this until the ground is isolated by the Auxiliary Building Operator or until communications are re-established.*
- *Coordinate any ground isolation efforts on the 3D MCC with the Cable Spreading Room Operator.*

CAUTIONS

- *Ensure the MCC local feeder breaker (disconnect) is open when ground isolation is being performed.*
- *All applicable safety precautions for working with energized equipment must be followed. Electricians troubleshooting grounds and measuring voltages need to be very careful to prevent injury. Emergency medical response may be delayed and will be limited by the hurricane.*

2.4 IF an MCC voltage suddenly goes to zero, THEN perform the following:

2.4.1 Open the local feeder breaker for that MCC.

2.4.2 Have an electrician check whether the MCC is grounded.

2.4.3 IF the MCC is grounded, THEN have an electrician determine which load is grounded.

2.4.4 Open the grounded load breaker.



## ENCLOSURE 4

(Page 5 of 9)

## LOSS OF COMMUNICATIONS - REMOTE STATION GUIDELINES

2.4.5 IF the voltage to the MCC is still zero, THEN close the MCC local feeder breaker, OR perform the following:

1. Recording all changes made, shed all loads on the MCC.
2. Close the MCC's local feeder breaker.
3. Except for the grounded load, restore MCC loads.

2.4.6 IF the ground is not isolable, THEN leave the local feeder breaker open.

2.5 IF no ground is found on a de-energized MCC, THEN close the local feeder breaker.

2.6 IF the MCC remains de-energized for ten minutes, THEN repeat Subsection 2.4 every thirty minutes until the MCC is re-energized OR until communications are re-established.

### 3.0 CABLE SPREADING ROOM OPERATOR

#### NOTE

*These instructions are provided in case all communications are lost between the Control Room and your station. Before resorting to these default instructions, attempt to contact the Control Room on all communications circuits. Use of these instructions must be tempered by your understanding of the current situation and good judgement.*

3.1 Monitor the Cable Spreading Room for water intrusion and periodically open all DC bus and MCC enclosures in the Cable Spreading and Electrical Equipment Rooms to check for water.



## ENCLOSURE 4

(Page 6 of 9)

## LOSS OF COMMUNICATIONS - REMOTE STATION GUIDELINES

NOTE

*Timely ground isolation is required to protect against double grounds which are much harder to locate.*

3.2 Continuously monitor DC bus voltage and ground indication in accordance with 0-ONOP-003.10, 125 VDC System - Location of Grounds, and 0-ONOP-003.11, Auxiliary 125 VDC System - Location of Grounds.

3.3 IF a DC ground is detected, THEN perform ground isolation in accordance with applicable off-normal procedure.

3.4 Continuously monitor voltage in the Electrical Equipment Room:

NOTE

*If a Load Center Room Operator observes that a load center or MCC is grounded, he will open the breaker for that load center or MCC. After ten minutes, the operator will reclose the breaker. He will repeat this until the ground is isolated by the Cable Spreading Room Operator or until communications are reestablished.*

3.4.1 IF voltage is lost to an H load center, THEN open both local feeder breakers and have an electrician determine grounded load(s):

1. IF the 480V ground is isolated to a non-MCC load, THEN leave that load's breaker open.

NOTE

*If the ground is isolated to 3D vital MCC, coordinate ground isolation efforts with the Auxiliary Building operator.*

2. IF the ground is isolated to a D vital MCC, THEN perform the following:

a. Open the MCC's feeder breaker.

## ENCLOSURE 4

(Page 7 of 9)

## LOSS OF COMMUNICATIONS - REMOTE STATION GUIDELINES

3.4.1 (Cont'd)

3. WHEN ground is isolated, THEN reclose the H Load Center feeder breakers

a. Verify that the grounded load breaker is open.

b. IF the ground is isolated, THEN reclose the MCC feeder breaker and restore loads as necessary.

c. IF the ground is not isolable, THEN leave the MCC feeder breaker open.

3.4.2 Frequently check 120V AC panels to be energized.

3.4.3 IF the 120V AC panel is de-energized or grounded, THEN perform the following:

1. Open the local feeder breaker.

2. Have an electrician determine grounded load(s).

3. Open grounded load breaker(s)

4. WHEN grounded loads are clear, THEN close the feeder breaker.



## ENCLOSURE 4

(Page 8 of 9)

## LOSS OF COMMUNICATIONS - REMOTE STATION GUIDELINES

4.0 UNIT 3 EDG OPERATORNOTE

*These instructions are provided in case all communications are lost between the Control Room and your station. Before resorting to these default instructions, attempt to contact the Control Room on all communications circuits. Use of these instructions must be tempered by your understanding of the current situation and good judgement.*

CAUTION

*Stand clear of the EDGs since they may start at any time.*

- 4.1 Monitor the rooms for water intrusion and attempt to contain or divert minor flooding that threatens the safe operation of an EDG.
- 4.2 IF flooding in a room threatens energized electrical equipment, THEN open appropriate local breakers.
- 4.3 IF the electrical equipment cannot be isolated locally due to flooding, THEN attempt to isolate the equipment from a remote power source (i.e., Load Breaker at MCC, LC for MCC, 4KV Bus for LC, EDG for 4KV Bus) stopping the EDG and remaining on elevated platforms above the flooding.
- 4.4 IF the room becomes untenable, THEN evacuate to the Cable Spreading Room or Load Center Room.
- 4.5 Continuously monitor running EDGs, AND IF trouble is noted, THEN consult 3-ONOP-023.2, Emergency Diesel Generator Failure for guidance and attempt to rectify the problem.
- 4.6 IF the EDG load suddenly drops to zero, THEN check the EDG output breaker, AND IF open, the bus is probably grounded.
- 4.7 IF an EDG runs unloaded for four hours AND no communications from the Control Room or Load Center Room are received, THEN stop the EDG and place it in standby.





## ENCLOSURE 4

(Page 9 of 9)

## LOSS OF COMMUNICATIONS - REMOTE STATION GUIDELINES

5.0 UNIT 4 EDG OPERATORNOTE

*These instructions are provided in case all communications are lost between the Control Room and your station. Before resorting to these default instructions, attempt to contact the Control Room on all communications circuits. Use of these instructions must be tempered by your understanding of the current situation and good judgement.*

CAUTION

*Stand clear of the EDGs since they may start at any time.*

- 5.1 Monitor the rooms for water intrusion and attempt to contain or divert minor flooding that threatens the safe operation of an EDG.
- 5.2 IF flooding in a room threatens energized electrical equipment, THEN open appropriate local breakers.
- 5.3 IF the electrical equipment cannot be isolated locally due to flooding, THEN attempt to isolate the equipment from a remote power source (i.e. Load Breaker at MCC, LC for MCC, 4KV Bus for LC, EDG for 4KV Bus) stopping the EDG and remaining out of the room.
- 5.4 Continuously monitor running EDGs. IF trouble is noted, THEN consult 4-ONOP-023.2, Emergency Diesel Generator Failure, for guidance and attempt to rectify the problem.
- 5.5 IF EDG load suddenly drops to zero, THEN check the EDG output breaker. IF open, the bus is probably grounded. IF an EDG runs unloaded for four hours, and no communications from the Control Room or load center room are received, THEN stop the EDG and place it in standby.
- 5.6 Continually check the D 4KV buses for signs of grounds. IF any grounded equipment is discovered, THEN secure that load immediately.



Procedure No.:  0-EPIP-20106	Procedure Title:  Natural Emergencies	Page: 92 Approval Date: 8/29/96
------------------------------------	---	------------------------------------

**ATTACHMENT 1**  
(Page 1 of 2)  
**RECOMMENDED MINIMUM HURRICANE STAFFING LEVELS**

TSC	CR
*EC Primary _____ Alternate _____	(1) NPS Primary _____ Alternate _____
*TSC Tech Asst. to EC Primary _____ Alternate _____	(2) ANPS Primary _____ Alternate _____
*TSC HP Supervisor Primary _____ Alternate _____	Primary _____ Alternate _____
*TSC Maint Mgr Primary _____ Alternate _____	(3) RO's Primary _____ Alternate _____
*TSC Chem Supv Primary _____ Alternate _____	Primary _____ Alternate _____
*TSC ENS Comm Primary _____ Alternate _____	(6) NLO's Primary _____ Alternate _____
*TSC Dose Assess Tech Primary _____ Alternate _____	Primary _____ Alternate _____
*TSC Reactor Engineer Primary _____ Alternate _____	Primary _____ Alternate _____
*TSC Elec Supv Primary _____ Alternate _____	Primary _____ Alternate _____
(4) Damage Assessment Engineers Primary _____ Alternate _____ Primary _____ Alternate _____ Primary _____ Alternate _____ Primary _____ Alternate _____	Alternate _____ EOF *RM Primary _____ Alternate _____
Other Protection & Control Communications Rep.	*RM Ops Advisor Primary _____ Alternate _____
* Minimum Staffing Required for Facility Activation	*ERDAD's Operator or TSC Communicator Primary _____ Alternate _____
	*(2) Dose Assessment Coord Primary _____ Alternate _____ Primary _____ Alternate _____
	*HRD Communiator Primary _____ Alternate _____

0-EPIP-20106

Natural Emergencies

## ATTACHMENT 1

(Page 2 of 2)

## RECOMMENDED MINIMUM HURRICANE STAFFING LEVELS

* OSC	
*OSC Supervisor	(12) HP Techs
Primary _____	*Primary _____
Alternate _____	*Alternate _____
(5) Mechanics	*Primary _____
*Primary _____	*Alternate _____
*Alternate _____	*Primary _____
*Primary _____	*Alternate _____
*Alternate _____	*Primary _____
Primary _____	*Alternate _____
Alternate _____	*Primary _____
Primary _____	*Alternate _____
Alternate _____	*Primary _____
Primary _____	*Alternate _____
Alternate _____	Primary _____
(1) Foreman	Alternate _____
Primary _____	Primary _____
Alternate _____	Alternate _____
(2) Utility Workers	(2) I&C Supervisors
Primary _____	Primary _____
Alternate _____	Alternate _____
Primary _____	Primary _____
Alternate _____	Alternate _____
(1) Chief	(4) I&C Specialist
Primary _____	*Primary _____
Alternate _____	*Alternate _____
(3) Electricians	Primary _____
*Primary _____	Alternate _____
*Alternate _____	Primary _____
*Primary _____	Alternate _____
*Alternate _____	Primary _____
*Primary _____	Alternate _____
*Alternate _____	(2) Chem Techs
Materials Management	*Primary _____
Primary _____	*Alternate _____
Alternate _____	*Primary _____
Primary _____	*Alternate _____
Alternate _____	
* Minimum Staffing Required for Facility Activation	

Completed By: \_\_\_\_\_

Date: \_\_\_\_\_

FINAL PAGE