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L-2010-161
10 CFR 26.9
10 CFR 26.205
September 2, 2010

U. S. Nuclear Regulatory Commission
Attention: Document Control Desk
One White Flint North
11555 Rockville Pike
Rockville, MD 20852-2738

RE: Turkey Point Units 3 and 4
Docket Nos. 50-250 and 50-251
Response to Request for Additional Information -
Request for Exemption from Certain Requirements
of the Fitness for Duty Rule for Managing Fatigue

By letter L-2009-219 dated October 13, 2009, as supplemented by letter L-2010-045, dated March 9, 2010, Florida Power and Light Co. (FPL) requested an exemption from certain requirements of the Fitness for Duty Rule for Managing Fatigue. Specifically, the letters requested exemption from certain specified requirements of Part 26 during preparations for severe weather conditions (i.e., tropical storm or hurricane force winds) and the recovery from severe weather conditions.

On July 15, 2010, the NRC issued a request for additional information regarding the exemption request. The attachment to this letter provides the requested information.

If there are any questions regarding this request, please contact Robert Tomonto at (305) 246-7327.

Sincerely,

PAUL W. RUBIN

for

Michael Kiley
Site Vice-President
Turkey Point Nuclear Plant

Attachments

cc: Regional Administrator, Region II, USNRC
Senior Resident Inspector, USNRC, Turkey Point Plant

A021
NRR

Response to Request for Additional Information Regarding Exemption Request from Certain Requirements of 10 CFR 26

NRC Question 1

What general criteria will the Emergency Coordinator look at to make the determination that there are enough people onsite to resume work hour controls?

Response

An attachment will be added to 0-ADM-116, Hurricane Season Readiness procedure that provides guidance to the Emergency Coordinator regarding the reestablishment of work hour controls. The guidance is as follows:

> Senior Management/Emergency Coordinator will reestablish work hour controls as soon as practical after the event has ended or the emergency declaration has been terminated. The following considerations should be weighed:
> - Adequate personnel both onsite and from relief crews are available for site protected work (e.g., return of employees to the area, safe access to the site, ability to implement the emergency plan, sufficient number of qualified personnel, etc.) and they have had sufficient time off to reset their work hour clock.
> - Status of the station following the severe weather event (i.e., site damage, critical equipment challenges or other key activities needed to put the station in a safe condition).
> - Ability to safely implement normal work activities using work hour controls.

NRC Question 2

Describe the Turkey Point methodology that will be used when transitioning back to work hour controls that will ensure that individuals are not fatigued on the first day back to work.

Response

An attachment will be added to 0-ADM-116, Hurricane Season Readiness procedure that provides guidance to the Emergency Coordinator regarding the reestablishment of work hour controls. The guidance is as follows:

> Senior Management/Emergency Coordinator will reestablish work hour controls as soon as practical after the event has ended or the emergency declaration has been terminated. The following considerations should be weighed:
> - Adequate personnel both onsite and from relief crews are available for site protected work (e.g., return of employees to the area, safe access to the site, ability

to implement the emergency plan, sufficient number of qualified personnel, etc.) and they have had sufficient time off to reset their work hour clock.

- Status of the station following the severe weather event (i.e., site damage, critical equipment challenges or other key activities needed to put the station in a safe condition)
- Ability to safely implement normal work activities using work hour controls.

NRC Question 3

The exemption request discusses the Turkey Point storm crew. Clarify whether the exemption is strictly for the storm crew and not for discretionary maintenance or the direction of discretionary maintenance that a risk informed evaluation has shown to be a significant to public health and safety.

Response

The exemption request covers the Turkey Point storm crew and personnel onsite who have a storm preparation activity as defined in 0-ADM-116, Hurricane Season Readiness. The guidance added to the procedure specifically states that suspension of work hours controls is not for discretionary maintenance but for storm preparation activities and those activities deemed critical for plant and public safety.

NRC Question 4

Section 3 of the exemption request mentions the Turkey Point hurricane plan, hurricane staffing procedure and the severe weather procedure. Provide these procedures and any other procedures related to severe wind site preparation or recovery.

Response

Copies of the following Turkey Point plant procedures are provided, as attached.

EPIP-20106, Natural Emergencies
0-ONOP-103.3, Severe Weather Preparations
0-ADM-116, Hurricane Season Readiness
EP-SR-1001, Nuclear Division Storm Coordinator Guideline

0-ADM-116, Hurricane Season Readiness, is being revised to incorporate the following information:

The existing caution on page 38 before step 2.D will be revised to read:

Restrictions on work hours will be suspended when the station officially enters hurricane/severe weather preparation activities for a storm projected to impact the station. Discretionary work will not be exempted from work hour controls unless deemed critical for plant or public safety by Senior Management or the Emergency Coordinator. Once

work hour restrictions are suspended, supervisors must still maintain the observation program for fatigue and provide personnel an opportunity to get adequate rest. Work hour controls will resume following the storm when sufficient resources are in place as determined by senior plant management and the employee's work hour clock has been reset. Attachment 34 documents the suspension and reestablishment of work hour controls and the guidance/considerations in place.

Attachment 34, Suspension of Work Hour Controls during Severe Weather, will provide the following information:

Guidance/Considerations:

1. Suspension of work hour controls still requires the following be in place:
    - Adequate rest periods provided to onsite storm riders and severe weather preparation personnel.
    - Maintaining the Supervisory Observation Program for Fatigue.
    - Only station severe weather preparations, critical/required corrective maintenance activities and storm sequestered personnel are exempted from work hour controls. Discretionary work will still fall within work hour controls.
    - Work hour controls are suspended during any declared emergency (as allowed by 10CFR Part 26).
    - Senior Management/Emergency Coordinator will reestablish work hour controls as soon as practical after the event has ended or the emergency declaration has been terminated. The following considerations should be weighed:
        - Adequate personnel both onsite and from relief crews are available for site protected work (e.g., return of employees to the area, safe access to the site, ability to implement the emergency plan, sufficient number of qualified personnel, etc.) and they have had sufficient time off to reset their work hour clock.
        - Status of the station following the severe weather event (i.e., site damage, critical equipment challenges or other key activities needed to put the station in a safe condition).
        - Ability to safely implement normal work activities using work hour controls.

The name of Procedure 0-ADM-116 will be changed from Hurricane Season Readiness to Severe Weather Preparation.

FPL	TURKEY POINT PLANT EMERGENCY PLAN IMPLEMENTING PROCEDURE SAFETY RELATED **REFERENCE USE**	Procedure No. **0-EPIP-20106** Revision No. **0** Effective Date **06/22/10**

Title:

NATURAL EMERGENCIES

Responsible Department: **EMERGENCY PREPAREDNESS**

Special Considerations:

This is an Upgraded Procedure. Initial use should include increased awareness because of potential technical and/or sequential changes to the procedure. After initial use of this procedure, provide comments back to the Procedure Upgrade Project.

FOR INFORMATION ONLY
Before use, verify revision and change documentation (if applicable) with a controlled index or document.
DATE VERIFIED_____ INITIAL_____

Revision	Approved By	Approval Date
0	Mitch Epstein	06/09/10

UNIT #	
DATE	
DOCT	PROCEDURE
DOCN	0-EPIP-20106
SYS	
STATUS	COMPLETED
REV	0
# OF PGS	

REVISION SUMMARY	
Rev. No.	**Description**
0	**PCR 09-1801, 06/09/10, Roger N Powers** Revised step wording to reflect the change in definition of 'verify' and 'ensure'. Placed procedure into the Writers Guide format and 'Technical Procedure' template. Applied human factors in accordance with the Writers Guide. Moved actions from this procedure into 0-ADM-116 and 0-ONOP-103.3 as requested by EP.

TABLE OF CONTENTS

1.0 PURPOSE

1. This procedure provides instructions and guidelines for preparing, controlling, and recovering the plant following activation of the Emergency Plan for a natural emergency.

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.

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 and 0-ADM-116, Hurricane Season Readiness.

4. This procedure shall be used when the natural emergency meets the criteria in Attachment 1 and 2 of 0-EPIP-20101, Duties of Emergency Coordinator. Natural emergencies that do **NOT** meet the criteria of 0-EPIP-20101 shall be handled in accordance with 0-ONOP-103.3, Severe Weather Preparations and 0-ADM-116, Hurricane Season Readiness.

2.0 PRECAUTIONS AND LIMITATIONS

2.1 Precautions

None

2.2 Limitations

None

3.0 PREREQUISITES

None

4.0 INSTRUCTIONS

4.1 Responsibilities

1. Responsibilities shall be in accordance with Attachment 1.

NOTE

- 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.
- Management walkdowns should be completed approximately 24 hours before completing hurricane preparations to allow Maintenance the opportunity to close out the items.
- Personnel staying onsite through the hurricane should be onsite at least one full shift before Tropical Storm force winds are projected at PTN.
- The coordinates for Turkey Point are 25.3 Latitude and 80.2 Longitude.

CAUTION

- 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.

CAUTION

- 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.
- 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.
- 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.

4.2 Weather Reports for Emergency Classification Determination

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.

    - 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 via ESATCOM. The Bulletin will identify areas to be affected by the severe weather and will be reliable for Control Room notification.

    - 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.

4.3 Tornado

INITIAL

1. IF a tornado that has been sighted in the Owner Controlled Area OR a tornado strikes any Power Block structure, THEN the Emergency Coordinator should **PERFORM** the following:

   A. **NOTIFY** plant personnel to immediately seek safe shelter. _____

   B. **REFER TO** 0-EPIP-20101, DUTIES OF EMERGENCY COORDINATOR, for direction as necessary. _____

   C. **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. _____

   D. **REQUEST** additional support via the Duty Station Manager to repair damaged equipment and commence clean-up. _____

4.4 Hurricane Warning

INITIAL

1. Emergency Coordinator Responsibilities include the following:

   A. **REFER TO** 0-EPIP-20101, DUTIES OF EMERGENCY COORDINATOR, for direction as necessary. _____

   B. **ORDER** all unnecessary work stopped. _____

NOTE

- All nonessential personnel in the Protected Area and all visitors in the Owner Controlled Area should be required to leave when a Hurricane Warning is issued for the area.
- When deciding to release non-essential personnel, consideration should also be given to providing maintenance and hurricane preparation personnel enough time to properly tend to their homes and families, while still allowing plant preparations to continue.

   C. **ENSURE** the release of non-essential personnel in a phased, controlled manner as hurricane preparations are completed or as personal circumstances dictate. _____

   D. **INVESTIGATE** the need for relocation of the TSC, OSC or EOF. _____

   E. **BRIEF** the Shift Manager on the personnel available for emergency teams and the capabilities/limitations of support. _____

   F. **BRIEF** emergency response personnel on the following:

   - The storm _____
   - Safety precautions _____
   - Expected duties _____
   - Potential problems _____
   - Contingencies _____
   - Communications systems _____
   - Schedule of additional briefings _____

4.4 Hurricane Warning (continued) **INITIAL**

1. (continued)

G. **ENSURE** adequate preparations are made by conferring with the following:

- TSC Operations Manager _____
- TSC Maintenance Manager _____
- Emergency Preparedness Manager _____

H. **DETERMINE** when it is safe for personnel to return to work and **ENSURE** appropriate notifications are made. _____

I. **CONSIDER** the following guidelines 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.

(1) IF necessary, THEN **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 Shift Manager (SM) 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 SM during the storm.
- As conditions warrant, an alternate EOF can be established at the PSL EOF or the Juno Beach office building

(2) **BRIEF** the Shift Manager upon initiating relocation of the TSC/OSC, and **TRANSFER** Emergency Coordinator duties to him. _____

4.4 Hurricane Warning (continued) **INITIAL**

1. I. (continued)

(3) **RELOCATE** the following emergency response personnel to the Control Room:

- TSC Dose Assessment Technician _____
- EOF Communicator _____
- TSC/ENS Communicator _____

(4) **ESTABLISH** a ERDS link with the NRC prior to the storm arrival using Attachment 2, EMERGENCY RESPONSE DATA SYSTEM OPERATION. _____

4.5 Earthquake

INITIAL

1. WHEN information is received that an earthquake has occurred, THEN the Emergency Coordinator should **PERFORM** the following:

NOTE

- The Seismic Recorder is located in the Unit 3 South Electrical Penetration Room approximately 4 feet below 18' elevation deck plates.
- The Seismograph can detect if an earthquake has occurred and the severity of the event.

A. **NOTIFY** I&C Department to analyze data from the Seismic Recorder. _____

B. **DIRECT** I&C forward data to Engineering to evaluate seismic event against the seismic design basis. _____

C. **PERFORM** plant walkdowns/inspections to determine any detrimental effects from the event. _____

D. **IMPLEMENT** the Emergency Plan as necessary in accordance with 0-EPIP-20101, DUTIES OF EMERGENCY COORDINATOR. _____

NOTE

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).

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. _____

5.0 TERMS AND DEFINITIONS

1. CATEGORY 1 HURRICANE: Hurricane with wind speed between 74 and 95 miles per hour (mph).

2. CATEGORY 2 HURRICANE: Hurricane with wind speed between 96 and 110 mph.

3. CATEGORY 3 HURRICANE: Hurricane with wind speed between 111 and 130 mph.

4. CATEGORY 4 HURRICANE: Hurricane with wind speed between 131 and 155 mph.

5. CATEGORY 5 HURRICANE: Hurricane with wind speed greater than 155 mph.

6. EYE: The center of a hurricane where calm prevails, with winds of no more than 20-30 mph and little or no rain.

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.

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.

9. HURRICANE WARNING: This is a communication from NOAA, issued whenever a hurricane is 36 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.

10. HURRICANE WATCH: This is a communication from NOAA, issued whenever a hurricane is 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.

5.0 TERMS AND DEFINITIONS (continued)

11. HIGH WINDS: A wind of such velocity that the following hazards would be present:

- An employee would be exposed to being blown from an elevated location.
- An employee on material handling equipment could lose control of material being handled.
- An employee would be exposed to other hazards **NOT** controlled by the standard involved.

12. 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.

13. 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.

14. TORNADO: A violently rotating column of air in contact with the ground, usually developing from severe thunderstorms or hurricanes.

15. 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.

16. TORNADO WATCH: Meteorological conditions in the area described as favorable to the formation of tornadoes.

17. 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.

18. 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.

6.0 RECORDS

None

7.0 REFERENCES AND COMMITMENTS

7.1 References

7.1.1 Implementing

1. Plant Procedures
   - A. 0-ONOP-103.3, Severe Weather Preparations
   - B. 0-EPIP-20101, Duties of Emergency Coordinator
   - C. 0-EPIP-20112, Communication Network
   - D. 0-ADM-116, Hurricane Season Readiness

7.1.2 Developmental

1. Technical Specifications
   - A. Technical Specification 3.4.1.3, Reactor Coolant System - Hot Shutdown
2. Final Safety Analysis Report
   - A. Section 2, Site and Environment, and Figures 1.2-3 and 1.2-4
3. Plant Drawings
   - A. 5610-C-1695, Network of Barriers for Main Plant External Flood Protection
   - B. 5610-C-1015, Site Security System, OSRE Installation
4. Plant Procedures
   - A. 0-ADM-016.1, Transient Combustible and Flammable Substances Program
   - B. 0-ADM-215, Plant Surveillance Tracking Program
   - C. 3-ARP-097.DG, Diesel Generator Panel Annunciator Response

7.1.2 Developmental (continued)

4. (continued)

D. 4-ARP-097.DG, Diesel Generator Panel Annunciator Response

E. 0-ONOP-003.10, 125 VDC System - Location of Grounds

F. 0-ONOP-003.11, Auxiliary 125 VDC System - Location of Grounds

G. 3-ONOP-004, Loss of Offsite Power

H. 4-ONOP-004, Loss of Offsite Power

I. 3-ONOP-004.1, System Restoration Following Loss of Offsite Power

J. 4-ONOP-004.1, System Restoration Following Loss of Offsite Power

K. 3-ONOP-004.2, Loss of 3A 4KV Bus

L. 4-ONOP-004.2, Loss of 4A 4KV Bus

M. 3-ONOP-004.3, Loss of 3B 4KV Bus

N. 4-ONOP-004.3, Loss of 4B 4KV Bus

O. 0-ONOP-013, Loss of Instrument Air

P. 3-ONOP-019, Intake Cooling Water Malfunction

Q. 4-ONOP-019, Intake Cooling Water Malfunction

R. 3-ONOP-023.2, Emergency Diesel Generator Failure

S. 4-ONOP-023.2, Emergency Diesel Generator Failure

T. 3-ONOP-041.7, Shutdown LOCA [Mode 3 (less than 1000 psig) or Mode 4]

U. 4-ONOP-041.7, Shutdown LOCA [Mode 3 (less than 1000 psig) or Mode 4]

V. 3-ONOP-041.8, Shutdown LOCA [Mode 5 or 6]

7.1.2 Developmental (continued)

4. (continued)

W. 4-ONOP-041.8, Shutdown LOCA [Mode 5 or 6]

X. 3-ONOP-050, Loss of RHR

Y. 4-ONOP-050, Loss of RHR

Z. 3-ONOP-075, Auxiliary Feedwater System Malfunction

AA. 4-ONOP-075, Auxiliary Feedwater System Malfunction

BB. 0-OP-003.1, 125V Vital DC System

CC. 3-OP-013, Instrument Air System

DD. 4-OP-013, Instrument Air System

EE. 0-OP-016.5, Halon Suppression System

FF. 0-OP-100 Security Diesel Operation

GG. 0-OSP-012.1, Diesel Driven Service Water Pump Operability Test

HH. 0-OSP-016.23, Diesel Driven Fire Pump Operability Test

II. 3-OSP-023.1, Diesel Generator Operability Test

JJ. 0-OSP-074.3, Standby Steam Generator Feedwater Pumps Availability Test

KK. 0-OSP-102.1, Flood Protection Stoplog Inspection

LL. 0-OSP-200.1, Schedule of Plant Checks and Surveillances

MM. 0-PMI-103.1, Seismograph Quarterly Functional Check and Tri-Annual Battery Replacement

NN. 0-EPIP-20110, Criteria for and Conduct of Owner Controlled Area Evacuation

OO. EPIP-20134, Offsite Notifications and Protective Actions, Recommendations

7.1.2 Developmental (continued)

5. Regulatory Guidelines

A. Station Blackout Guidelines:

(1) NRC Regulatory Guide 1.155, Station Blackout

(2) NUMARC 87-00, Guidelines and Technical Bases for NUMARC Initiatives Addressing Station Blackout at Light Water Reactors

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

A. Turkey Point Radiological Emergency Plan

B. Security Force Instruction (SFI) 3002, Hurricane Preparedness

C. Turkey Point [Fossil] Plant, Units 1 and 2 Hurricane Plans

D. PC/M 87-212, EDG Enhancement Site Preparation

E. PC/M 89-124, Repair/Replace Stoplogs On East Side of Auxiliary Building

F. PC/M 90-390, Plant Perimeter Floodwell Repair

G. PC/M 90-449, CCW Area Pipe Trench Floodwells

H. PC/M 92-086, Secondary Containment of Unit 4 Turbine Lube Oil Reservoir

I. JPN-PTN-SECJ-88-079, Safety Evaluation Temporary External Flood Protection Barriers

J. JPN-PTP-90-1902, External Flood Protection Enhancement Program - Plant Drainage Evaluation

K. JPNS-PTN-90-0111, Turkey Point Units 3 and 4 RHR Pump Room Access Hatch Removals

L. JPNS-PTN-96-0352, dated May 13, 1996, Hurricane Shutdown Criteria

M. National Oceanic and Atmospheric Administration Information - Information on Area Tornado and Hurricane Reports

7.1.2 Developmental (continued)

6. (continued)

N. EP AD-007, Emergency Response Facilities and Equipment Surveillance

O. PC/M 97-024, Fire Barrier Upgrades

P. PC/M 01-022, Security Enhancements in Support of 2001 OSRE

Q. PC/M 89-298, Revision 0, Tie Down of Temporary Structures

R. Calculation PTN-4-JPES-C-88-01006, Wind Load Restraint for Temporary Trailers

S. Calculation PTN-0-JPNS-C-89-01005, Wind Analysis on Temp Structures

T. Calculation PTN-0-JPNS-C-89-01007, Wind Analysis on Temporary Structures

U. Calculation PTN-BFSC-01-2003, Evaluation for Installation of Security Features in Support of OSRE (PC/M 01-022)

V. MRA 30007869-01, dated 6/5/00

W. SPEC-C-013, latest revision, Installation Guidelines for Miscellaneous Non System Related Items on Existing Structures

X. PC/M 04-016, TPCW Supplemental Cooling Installation of Temporary Towers

Y. PC/M 08-003, Replace Seismograph

7.1.3 Management Directives

None

7.2 Commitments

None

ATTACHMENT 1
RESPONSIBILITIES
(Page 1 of 1)

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 4.0 of this procedure:

   - Emergency Coordinator
   - Emergency Preparedness Manager
   - OSC Manager
   - OSC Mechanical Coordinator
   - OSC I&C Coordinator
   - OSC Electrical Coordinator
   - TSC Operations Manager
   - TSC Chemistry Supervisor
   - TSC Radiation Protection Supervisor
   - TSC Security Supervisor
   - Fire Protection Supervisor
   - TSC Supervisor
   - TSC Technical Assistant to the Emergency Coordinator
   - PTN Information Management (IM) Nuclear

2. The Emergency Coordinator shall ensure notifications are performed per 0-EPIP-20101, DUTIES OF EMERGENCY COORDINATOR, for natural emergencies meeting emergency action level criteria.

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 Coordinator, who will keep the Emergency Coordinator apprised.

ATTACHMENT 2
EMERGENCY RESPONSE DATA SYSTEM OPERATION
(Page 1 of 1)

NOTE

Activation of the Emergency Response Data System (ERDS) is required as soon as possible within one hour of the declaration of an Alert or higher emergency classification level. ERDS can be started from any terminal.

1.0 ERDS ACTIVATION

1. **SELECT** Utilities from the ERDADS display bar.
2. **SELECT** Datalink Health menu

   Data Health ERDS Activate

NOTE

Normally the NRC Operations Center will determine when the ERDS link is terminated.

2.0 ERDS DEACTIVATION

1. **SELECT** Utilities from the ERDADS display bar.
2. **SELECT** Datalink Health Menu

   Data Health ERDS Deactivate

FPL

TURKEY POINT PLANT

OFF-NORMAL OPERATING PROCEDURE

QUALITY RELATED

CONTINUOUS USE

Procedure No.	Revision No.	Effective Date
0-ONOP-103.3	**0**	**06/22/10**

Title:

SEVERE WEATHER PREPARATIONS

Responsible Department: **OPERATIONS**

Special Considerations:

This is an Upgraded Procedure. Initial use should include increased awareness because of potential technical and/or sequential changes to the procedure. After initial use of this procedure, provide comments back to the Procedure Upgrade Project.

FOR INFORMATION ONLY
Before use, verify revision and change documentation (if applicable) with a controlled index or document.
DATE VERIFIED_____ INITIAL_____

Revision	Approved By	Approval Date
0	Randy Flynn	06/19/10

UNIT #	
DATE	
DOCT	PROCEDURE
DOCN	0-ONOP-103.3
SYS	
STATUS	COMPLETED
REV	0
# OF PGS	

REVISION SUMMARY	
Rev. No.	**Description**
0	**PCR 09-1635, 06/19/10, Roger N. Powers** In accordance with **PCR 08-1560** and **CR 2005-28786**, upgraded procedure to latest format; placed in approved Word template and added attachments for each identified position to spell out their responsibilities. In accordance with **PCR 08-5721, 08-5722** and **CR 2008-28002**, deleted requirement to test EDGs within 24 hours prior to arrival of the storm. Applied human factor changes in accordance with Writers Guide. Revised step wording to reflect the change in Writers Guide definition of 'verify' and 'ensure'. Verified that **PCR 08-1558** had already been incorporated into a previous version of this procedure. Deleted post storm restoration actions for the Shift Manager and Maintenance Manager since procedure is Severe Weather 'Preparations'. In accordance with **PCR 09-1647** and attached markup from EP, moved actions from 0-EPIP-20106 into this procedure and moved actions from this procedure into 0-ADM-116. In accordance with **CR 2008-28759** and **MRA CR-2008-28759-01**, added steps to address the temporary boric acid tanker. Note added prior to step 1 of section 3.2, Subsequent Actions in Note block per **PCR 10-001** and **CR 2009-35304** to notify operator that the online risk monitor may require updating per 0-ADM-225.

TABLE OF CONTENTS

1.0 PURPOSE

This procedure provides instructions on preparation of the site for severe weather conditions. If weather conditions continue to deteriorate, refer to 0-EPIP-20106, Natural Emergencies, for additional guidance in conjunction with performing this procedure.

2.0 ENTRY CONDITIONS

NOTE

- A *TORNADO WATCH* is issued when meteorological conditions in the area are favorable to the formation of tornadoes.
- A *TORNADO WARNING* is issued when a tornado has been sighted in the area.
- A *TROPICAL STORM WARNING* is issued when a tropical storm is 12 to 24 hours from and approaching the United States coast.
- A *HURRICANE WATCH* is issued when a hurricane is 48 hours from and approaching the United States coast. Normally issued for an area approximately 100 miles to either side of the expected landfall.
- A *HURRICANE WARNING* is issued when a hurricane is 36 hours from and approaching the U.S. coast. Normally issued for an area approximately 50 miles to either side of the expected landfall.

- *TORNADO WATCH* has been issued that impacts the site.
- *TORNADO WARNING* has been issued that impacts the site.
- *TROPICAL STORM WARNING* has been issued that may impact the site.
- *HURRICANE WATCH* has been issued that may impact the site.
- *HURRICANE WARNING* has been issued that may impact the site.

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED

3.0 OPERATOR ACTIONS

3.1 Immediate Actions

None

3.2 Subsequent Actions

NOTE

- The following steps may be performed in any sequence.
- Plant conditions that are altered in preparation for a natural emergency may be restored to their normal configuration using applicable plant procedures upon discontinuation of the emergency condition.
- The Shift Manager may omit non applicable steps of this procedure, as necessary.
- The online risk monitor may be required to be updated per 0-ADM-225, Online Risk Assessment and Management.

1.	**CHECK** that a *TORNADO WATCH* has been issued for the site.	**GO TO** Section 3.2 Step 2.
	A. **NOTIFY** the following positions that a *TORNADO WATCH* has been issued and **REQUEST** they evaluate any ongoing work in their area of responsibility: • Maintenance Manager • Security • Station Area Operations	
	B. **DISCONTINUE** use of the crane.	
	C. **CONSULT** 0-ADM-115, Notification of Plant Events.	

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
3.2	**Subsequent Actions (continued)**	
1.	**(continued)**	
	D. IF an EDG or Station Blackout Crosstie are unavailable, THEN **NOTIFY** personnel to restore unavailable component to service as soon as possible. [Section 5.2 Commitment 1]	
	E. WHEN *TORNADO WATCH* has been lifted, THEN **EXIT** this procedure and **CONTINUE** with procedure and step in effect.	
2.	**CHECK** that a *TORNADO WARNING* has been issued for the site.	**GO TO** Section 3.2 Step 3.
	A. **ANNOUNCE** that a Tornado has been sighted in the area.	
	(1) **REQUEST** all personnel take cover.	
	(2) **REQUEST** all personnel notify applicable supervisor of their location, if possible.	

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
3.2	**Subsequent Actions (continued)**	
2.	**(continued)**	
	B. **NOTIFY** the Maintenance Manager and Operations Manager that a *TORNADO WARNING* has been issued and **REQUEST** they: **(1)** **EVALUATE** any ongoing work in their area of responsibility. **(2)** **PLACE** ongoing work in a safe condition as necessary.	
	C. **CONSULT** 0-EPIP-20101, Duties of the Emergency Coordinator, AND 0-ADM-115, Notification of Plant Events, for direction.	
	D. WHEN *TORNADO WARNING* has been lifted, THEN **EXIT** this procedure and **CONTINUE** with procedure and step in effect.	
3.	**CHECK** that a *TROPICAL STORM WARNING* has been issued for the site.	**GO TO** Section 3.2 Step 4.
	A. **PERFORM** Attachment 1 Step 1.	
	B. WHEN *TROPICAL STORM WARNING* has been lifted, THEN **EXIT** this procedure and **CONTINUE** with procedure and step in effect.	

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
3.2	**Subsequent Actions (continued)**	
4.	**CHECK** that a *HURRICANE WATCH* has been issued for the site.	**GO TO** Section 3.2 Step 5
	A. PERFORM Attachment 1 Step 2.	
	B. WHEN *HURRICANE WATCH* has been lifted, THEN **EXIT** this procedure and **CONTINUE** with procedure and step in effect.	
5.	**CHECK** that a *HURRICANE WARNING* has been issued for the site.	**EXIT** this procedure and **CONTINUE** with procedure and step in effect.
	A. PERFORM Attachment 1 Step 3.	
	B. WHEN *HURRICANE WARNING* has been lifted, THEN **EXIT** this procedure and **CONTINUE** with procedure and step in effect.	

4.0 RECORDS

1. The meteorological forecasts of the NATIONAL HURRICANE CENTER or NOAA via System Operations or Nuclear Division Strom Coordinator must be obtained at least once every 6 hours until the *HURRICANE WATCH* or *WARNING* is lifted.

2. A Unit Narrative Log entry shall be made to document the justification for **NOT** performing any applicable actions required by this procedure and the concurrence of the Plant General Manager.

5.0 REFERENCES AND COMMITMENTS

5.1 References

5.1.1 Implementing

1. 0-ADM-115, NOTIFICATION OF PLANT EVENTS
2. 0-EPIP-20101, DUTIES OF THE EMERGENCY COORDINATOR
3. 0-EPIP-20106, NATURAL EMERGENCIES
4. 0-OP-011, SCREEN WASH SYSTEM
5. 0-OP-100, SECURITY DIESEL OPERATION
6. 0-OSP-016.23, DIESEL DRIVEN FIRE PUMPS OPERABILITY TEST
7. 0-OSP-016.26, ELECTRICAL DRIVEN FIRE PUMPS OPERABILITY TEST
8. 0-OSP-016.34, PORTABLE DIESEL FIRE PUMP OPERABILITY TEST AND EXTENSIVE DAMAGE MITIGATION EQUIPMENT SURVEILLANCE
9. 3/4-OSP-200.3, SECONDARY PLANT PERIODIC TEST
10. 0-SMM-102.1, FLOOD PROTECTION STOPLOG AND PENETRATION SEAL INSPECTION

5.1.2 Developmental

1. FSAR Section 2
2. Plant Drawings
   - **A.** 5610-C-511, Sheet 1

5.1.2 Developmental (continued)

3. Plant Procedures

   A. QI 2-PTN-4, HOUSEKEEPING

4. Miscellaneous Documents

   A. Turkey Point Plant Radiological Emergency Plan

   B. Turkey Point Fossil Plant, Units 1 and 2 Hurricane Plans

   C. National Oceanic and Atmospheric Administration Information - Information On Area Tornado And Hurricane Reports.

   D. PC/M 94-137, Replacement of Rolling Turbine Covers

   E. Condition Report CR 00-0983, INPO Concern - PTN-3 EDG Fuel Oil Storage and Supply Licensing and Design Bases

   F. PC/M 04-036, Oil Spill Prevention and Control Compliances for 40CFR112

   G. PTN-ENG-SENS-07-021, Temporary Sealing of Plant Equipment

5.2 <u>Commitments</u>

1. Safety Evaluation by the Office of NRC Related to Amendment Numbers 215 and 209.

2. Station Blackout

   A. L-89-144, Information to Resolve Station Blackout

   B. JPN-PTP-89-3253, Turkey Point Units 3 and 4 Response to NRC on Station Blackout Open Items

   C. 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

   D. L-90-275, Implementation Of The Station Blackout Rule

   E. L-90-338, Comments On NRC's Safety Evaluation for Station Blackout

   F. L-90-56, Information To Resolve Station Blackout, dated March 29, 1990

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NOTE

The following steps may be performed in any sequence.

1. IF a *TROPICAL STORM WARNING* has been issued that may impact the site, THEN Shift Manager shall **ENSURE** the following actions are completed:

   A. **CONSULT** 0-ADM-115, NOTIFICATION OF PLANT EVENTS.

NOTE

If the design basis rain amount of 13 inches in a 24-hour period occurs, the solenoid valves supplying fuel oil from the Unit 3 diesel fuel oil storage tank (DFOST) to the day tank transfer pumps will be submerged in water that has collected in the storage tank berm. The solenoid valves are fail closed valves and the bypass valves must be opened in the event of a failure of the solenoid valves.

   B. **ENSURE** the following is performed to ensure oil flow from Unit 3 DFOST to day tank transfer pumps:

      (1) IF required, THEN **DRAIN** Unit 3 diesel fuel oil storage tank berm using drain pump 3P250.

      (2) **OPEN** 3-70-10A, Transfer Pump 3P10A Suction Valve SV-3-2051A Bypass Valve, using manual reach rod.

      (3) **OPEN** 3-70-10B, Transfer Pump 3P10B Suction Valve SV-3-2051B Bypass Valve, using manual reach rod.

   C. IF TSA to provide defense in depth backup power to SFP cooling water pumps from opposite unit is in effect, THEN **DIRECT** removal of TSA to return both units to their normal SFP cooling and electrical distribution configuration.

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1. C. (continued)

NOTE

Battery powered lighting is available near the Unit 4 SFP cooling system equipment room in portable light storage locker PL-9 (Unit 4 CCW area).

(1) IF lighting is required to remove TSA, THEN **OBTAIN** battery powered lighting.

D. **EVALUATE** storm staffing needs and **DEVELOP** storm crew roster, if needed.

E. **ENSURE** diesel oil storage tanks, including EDG day tanks, are topped off.

NOTE

If the Unit 3 Diesel Oil Storage System is rendered inoperable and operation of the emergency diesel generators is required for safe shutdown, an emergency supply of diesel fuel oil will be needed within 24 hours to refill the day tanks. The supply truck must contain a pump and a sufficient amount of hose to make the necessary connections to the remote fill lines.

F. **ARRANGE** with diesel oil suppliers for emergency deliveries.

G. **TEST RUN** intake trash rakes and traveling screens using 0 OP 011, SCREEN WASH SYSTEM.

H. **BEGIN** filling [Section 5.2 Commitment 2]:

- Condensate Storage Tanks
- Raw Water Storage Tanks
- Demineralized Water Storage Tanks
- Primary Water Storage Tanks
- Refueling Water Storage Tanks
- Circulating Water Pump Lubricating Water Storage Tank.

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1. (continued)

I. **INSPECT** areas surrounding operating equipment for loose objects or other conditions that may damage operating equipment.

J. **ENSURE** chemical totes and mobile flow trailers are tied down.

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Shift Manager
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2. IF a *HURRICANE WATCH* has been issued that may impact the site, THEN Shift Manager shall **ENSURE** the following actions are completed:

   A. **ENSURE** actions for a *TROPIC STORM WARNING* has been completed.

   B. **CONSULT** 0-ADM-115, NOTIFICATION OF PLANT EVENTS.

   C. **ENSURE** temporary containment cooling chiller units and hoses are removed from Auxiliary Building Roof.

   D. As weather conditions warrant, **MOVE** B.5.b Portable Diesel Fire Pump (PDFP) and equipment trailer to a location that will provide protection during storm (i.e. indoor shelter).

> **NOTE**
> Testing of equipment is **NOT** required if testing has been performed within the last 7 days.

   E. **TEST RUN** turbine DC oil pumps for any unit with hydrogen in the main generator using 3/4-OSP-200.3, SECONDARY PLANT PERIODIC TEST.

   F. **PERFORM** test run of Security diesel using 0-OP-100, SECURITY DIESEL OPERATION. [Section 5.2 Commitment 2]

   G. **ENSURE** Turbine Rolling Covers have been removed from Turbine Deck or tied down and the wheels chocked at discretion of the Maintenance Manager.

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CAUTION

- If a *HURRICANE WARNING* is issued in an area which may impact the FPL grid within the FPL service area, an EDG or the Station Blackout Crosstie should be removed from service only for corrective maintenance, e.g., maintenance required to ensure or restore operability.
- If an EDG or Station Blackout Crosstie is unavailable when a *HURRICANE WARNING* is issued for an area that may impact the FPL grid, the unavailable components should be restored to service as soon as possible.

[Section 5.2 Commitment 1]

3. IF a *HURRICANE WARNING* has been issued that may impact the site, THEN Shift Manager shall **ENSURE** the following actions are completed:

   A. **ENSURE** applicable actions for a *HURRICANE WATCH* have been completed.

   B. **EVALUATE** with Operations Manager the guidelines from Attachment 2 and Attachment 3 to determine if any should be implemented.

   C. **CONSULT** 0-EPIP-20106, NATURAL EMERGENCIES for additional guidance while performing this procedure.

   D. **ANNOUNCE** that a *HURRICANE WARNING* is in effect, providing distance, speed, expected time and location of landfall.

   E. **COORDINATE** connection of ERDS link with NRC.

   F. **ENSURE** Emergency Coordinator is kept informed of 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.

   G. **SOLICIT** volunteers for emergency staffing to resolve any personal conflicts and **COORDINATE** staffing with Emergency Preparedness Coordinator.

   H. **ESTABLISH** emergency teams to meet staffing plans outlined in Attachment 31 of 0-ADM-116, HURRICANE SEASON PREPARATION.

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3. (continued)

NOTE

- Attachment 1 Step 3.I through Attachment 1 Step 3.P are commitments. [Section 5.2 Commitment 2]
- 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 time frame between forecast and projected landfall, the current plant operating configuration, and the time frame for Operations to make the desired mode change.

I. **PLACE** units in an optimum configuration to maintain plant safety in preparation for arrival of hurricane. [Section 5.2 Commitment 2]

NOTE

- 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 Attachment 1 Step 3.I(2) may also be applicable.

(1) IF units are in MODE 1 or 2 AND storm is projected to reach a category 1 or 2, THEN **SHUTDOWN** to MODE 3 (Hot Standby) at least 2 hours prior to projected onset of sustained hurricane force winds at site.

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3. I. (continued)

NOTE

Both units shall remain off-line for the duration of the hurricane force winds or restoration of reliable offsite power.

If the unit(s) are in MODE 4, 5 or defueled, the Emergency Coordinator will determine the optimum configuration to maintain plant safety.

(2) IF unit(s) are in MODE 1, 2 or 3 AND storm is projected to reach Category 3, 4, or 5 prior to landfall, THEN **ENSURE** all of the following conditions are satisfied at least two hours before projected onset of sustained hurricane force winds at site:

- Units shutdown
- RCS temperature between 343°F and 350°F Tave.
- Steam generator pressure greater than 85 psig.
- RHR in service.
- AFW is aligned and OPERABLE.

J. **PERFORM** a review of the EOOS Log for equipment out of service for maintenance or testing to identify those whose redundancy is desired to support reliable plant operation during storm and **ENSURE** work is prioritized to promptly restore such equipment to an operable status. [Section 5.2 Commitment 2]

K. **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 **PERFORM** all surveillances, if possible, that will come due during storm. [Section 5.2 Commitment 2]

L. **DETERMINE** if and when operator rounds on outside equipment are to be temporarily suspended during storm, and **DOCUMENT** instructions in Night Orders. [Section 5.2 Commitment 2]

M. **VERIFY** battery chargers and applicable station vital batteries are operational using 0-OP-003.1, 125V VITAL DC SYSTEM. [Section 5.2 Commitment 2]

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3. (continued)

N. **ENSURE** adequate inventories of nitrogen, and carbon dioxide are available to accommodate a unit shutdown and subsequent startup. [Section 5.2 Commitment 2]

O. **REVIEW** the following procedures within 72 hours of projected storm arrival, in preparation for a Station Blackout. [Section 5.2 Commitment 2]

- 3/4-ONOP-004, LOSS OF OFFSITE POWER
- 0-ONOP-013, LOSS OF INSTRUMENT AIR
- 3/4-ONOP-019, INTAKE COOLING WATER MALFUNCTION
- 3/4-ONOP-041.7, SHUTDOWN LOCA [MODE 3 (LESS THAN 100 PSIG) OR MODE 4]
- 3/4-ONOP-041.8, SHUTDOWN LOCA [MODE 5 OR 6]
- 3/4-ONOP-050, LOSS OF RHR

P. **NOTIFY** FPL System Operations of importance of expeditiously reestablishing power to site if a Loss of Offsite Power or Station Blackout occurs. [Section 5.2 Commitment 2]

Q. **DETERMINE** if Training should provide Just in Time Training to meet Operations needs depending on current storm projections.

R. **RELEASE** all permissible liquid and gaseous waste before hurricane is within two hours of plant to minimize waste water and waste gas inventories.

S. **OPEN** ALL outdoor 480V receptacle circuit breakers using Attachment 4, 480 Volt Receptacle and **ISSUE** a clearance to Shift Manager on all breakers opened.

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3. (continued)

NOTE

- 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.

T. **STOP** vent fans listed below so the OSC Electrical Coordinator may lock close dampers and install protective covers:

- Spent Fuel Pit ventilation fan
- New Fuel Storage Room vent fan
- Spent Fuel Pit Heat Exchanger Room vent fan
- Containment purge supply and exhaust fans
- Auxiliary Building supply vent fans
- Containment penetration cooling fans, if **NOT** required

U. **ENSURE** Diesel Generator Room **VENT** fans are in AUTOMATIC.

V. **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.

W. **ENSURE** Ecolochem chemical tanks are secured and 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.

X. IF personnel are relocated to areas containing Halon Systems, THEN:

(1) **COORDINATE** with OSC Electrical Coordinator and **ISSUE** a clearance and Fire Impairment to Shift Manager to disable applicable Halon Systems.

(2) **NOTIFY** Fire Protection Supervisor to issue required Fire Protection Impairments.

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3. (continued)

Y. **ENSURE** Unit 3 and Unit 4 cask washdown area drains are closed by having drain covers installed and bolted.

Z. **SHUTDOWN** Amertap Systems.

(1) **TAG** open power supply breakers to all pumps and valves and **ISSUE** a clearance to Shift Manager.

AA. IF applicable, THEN **SUSPEND** all fuel movement and **PLACE** all refueling equipment in a safe condition.

BB. WHEN the hurricane is less than 6 hours from plant, **ARRANGE** to have portable bedding brought to Control Room and other suitable locations.

CC. **START** all traveling screens at approach of storm.

DD. **ENSURE** Security Diesel is in standby using 0-OP-100, SECURITY DIESEL OPERATION, prior to evacuation of CAS/SAS.

EE. **ISSUE** a clearance to the Maintenance Manager on Intake Gantry Crane, Cask Crane, and Turbine Gantry Crane to require post hurricane testing.

FF. **ENSURE** nitrogen bottles for MSIVs, steam dump to atmosphere valves, and AFW flow control valves are filled and properly secured.

GG. **COORDINATE** with appropriate site organizations to **ENSURE** at least one of the following conditions is satisfied:

- Expected wind speeds are less than 120 mph.
- Temporary Boric Acid Tanker has been moved to a safe location.
- Temporary Boric Acid Tanker contains at least 16,500 pounds of water (approximately 1957 gallons)

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3. (continued)

NOTE

These guidelines may be considered for lesser category hurricanes.

HH. **CONSIDER** the following guidelines for a Category 5 *HURRICANE WARNING*:

(1) **ASSIST** Emergency Coordinator in establishing a shift schedule for response personnel and preposition reliefs to preclude need to move personnel during storm.

(2) **DETERMINE** if any of the guidelines from Attachment 2 and Attachment 3 should be implemented.

II. **PRINT** out hard copies of Mode Change Reports (MCRs) and Surveillance Tracking Program (STP) reports for applicable plant modes prior to storm impact.

ATTACHMENT 2
Operations Guidelines For Category 5 Hurricane With Significant Flooding
(Page 1 of 15)

1.0 DISCUSSION

1. This attachment provides guidelines for Plant Operations before, during, and after a Category 5 hurricane with significant flooding outside of design basis. The degree to which these guidelines are used is per Shift Manager discretion after consultation with the Emergency Coordinator.

2. The guidelines address plant damage - particularly from flooding - outside of plant design basis. The focus is on personnel safety and maintaining RCS below 350°F to minimize RCP seal degradation. The following core cooling contingencies are addressed for the units initially in MODE 5:

   - RHR Loops
   - AFW Train 2
   - AFW Train 1 (pre-throttled)
   - Bleed and Feed

3. In addition, measures are presented for maintaining essential equipment and instrumentation and safely deploying personnel at remote stations.

2.0 PREPARATION

2.1 MODEs 1 - 4

1. **SHUTDOWN/COOLDOWN** to approximately 300°F in accordance with 3/4-GOP-103, POWER OPERATION TO HOT STANDBY and 3/4-GOP-305, HOT STANDBY TO COLD SHUTDOWN:

   A. **MAINTAIN** main generator disconnects in switchyard closed.

   B. **OPEN** main generator links in case backfeed is required later.

   C. **PURGE** generator with carbon dioxide

   D. **SHUTDOWN** seal oil.

   E. **SHUTDOWN** lube oil systems.

ATTACHMENT 2
Operations Guidelines For Category 5 Hurricane With Significant Flooding
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2.1 MODEs 1 - 4 (continued)

1. (continued)

F. **ISOLATE** steam generator blowdown.

G. **MAINTAIN** steam generators at approximately 70 percent narrow range level.

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.

If both units were initially in MODEs 1-4, coordinate between units to perform this evolution simultaneously.

2. **THROTTLE** steam flow and AFW train 1 flow for natural circulation conditions with RCS at approximately 300°F:

A. **PLACE** AFW train 1 flow control valves in manual with zero demand.

B. **START** AFWP "A" in accordance with 3/4-OP-075, AUXILIARY FEEDWATER SYSTEM.

C. **OPEN** all MSIV Bypass MOVs.

D. **OPEN** 3/4-30-043, Hogging Jet Main Stm Upstrm Isol, and 3/4-30-044, Hogging Jet Main Stm Stop.

E. **STOP** all running NCC and CRDM fans.

F. **STOP** all running RHR pumps and RCPs for up to one hour per Technical Specificaton 3.4.1.3.

G. **CHECK** natural circulation:

- RCS subcooling based on core exit TCs - Greater than 30°F

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Operations Guidelines For Category 5 Hurricane With Significant Flooding
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2.1 MODEs 1 - 4 (continued)

2. G. (continued)

- S/G pressures - Stable or Decreasing
- RCS hot leg temperatures - Stable or Decreasing
- Core exit TCs - Stable or Decreasing
- RCS cold leg temperatures - Within 35°F of saturation temperature for S/G Pressure.

H. **PERFORM** the following adjustments until steam generator levels and RCS average temperature are as close as possible to equilibrium:

(1) **CLOSE** steam dump to atmosphere valves.

(2) **THROTTLE** open 3/4-10-072, Main Stm Sply to Hogging Ejector Isol.

(3) IF needed, THEN **ADD** other dummy steam loads (such as water box air ejectors or steam trap drains) to allow throttling of 3/4-10-072, Main Stm Sply to Hogging Ejector Isol.

(4) **TAKE** local control of CV-3/4-2816, Train 1 AFW Flow to 3/4 A S/G, CV-3/4-2817, Train 1 AFW Flow to 3/4 B S/G and CV-3/4-2818, Train 1 AFW Flow to 3/4 C S/G, and **THROTTLE** them open while closing FCV-3/4-479, 3/4 A FW Bypass, FCV-3/4-489, 3/4 B FW Bypass and FCV-3/4-499, 3/4 C FW Bypass.

(5) **CONTINUE** Attachment 2 Section 2.1 Step 2.H(2) and Attachment 2 Section 2.1 Step 2.H(3) 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.

(6) **LOCK** train 1 AFW flow control valves in throttled position.

I. **STOP** AFWP "A" in accordance with 3/4-OP-075, AUXILIARY FEEDWATER SYSTEM, and **MAINTAIN** steam generator levels with main feedwater bypass valves.

ATTACHMENT 2
Operations Guidelines For Category 5 Hurricane With Significant Flooding
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2.1 MODEs 1 - 4 (continued)

2. (continued)

J. **RETURN** AFW to standby in accordance with 3/4-OP-075, AUXILIARY FEEDWATER SYSTEM, leaving train 1 AFW flow control valves locked in throttled position.

K. **START** desired RHR pump.

L. **START** desired NCC and CRDM fans.

3. **CONTINUE** plant cooldown to MODE 5 in accordance with 3/4-GOP-305, HOT STANDBY TO COLD SHUTDOWN:

A. **FILL** pressurizer to 90 percent narrow range level.

CAUTION

- 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.

B. **COOLDOWN** on RHR until pressurizer level drops to 22 percent.

C. **MAINTAIN** plant on RHR in MODE 5 and do **NOT** heat up.

4. **REFER TO** Attachment 2 Section 2.4, Prepare Equipment and Station Personnel On Each Unit, for further preparatory guidelines.

2.2 MODE 5

1. IF RCS is **NOT** filled and vented, THEN:

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Operations Guidelines For Category 5 Hurricane With Significant Flooding
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2.2 MODE 5 (continued)

1. (continued)

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:

A. **COMMENCE** immediate action to restore steam generator operability (replace man ways, etc.).

B. Simultaneously **COMMENCE** action to restore RCS integrity (if breached)

C. WHEN RCS integrity is achieved, THEN **COMMENCE** fill and vent per 3/4-OP-041.8, FILLING AND VENTING THE REACTOR COOLANT SYSTEM.

2. IF RCS is filled and vented, THEN:

A. **ESTABLISH** containment integrity as soon as possible.

B. **MAINTAIN** RCS temperature as low as possible.

C. **DRAW** a pressurizer bubble per 3/4-OP-041.2, PRESSURIZER OPERATION.

D. **MAINTAIN** pressurizer temperature as high as possible above RCS temperature without challenging OMS set point or exceeding a 320°F differential.

E. **SECURE** steam generators from wet lay up, if applicable.

F. **MAINTAIN** steam generators at approximately 70 percent narrow range level.

G. **LINE UP** AFW and **PLACE** it in standby per 3/4-OP-075, AUXILIARY FEEDWATER SYSTEM.

H. **REFER TO** Attachment 2 Section 2.4, Prepare Equipment and Station Personnel On Each Unit, for further preparatory guidelines.

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Operations Guidelines For Category 5 Hurricane With Significant Flooding
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2.3 MODE 6

1. IF reactor is **NOT** defueled, THEN:
   - **A.** **TERMINATE** all fuel transfer operations and **SECURE** fuel transfer equipment.
   - **B.** **TRANSFER** conveyor cart to spent fuel pit.
   - **C.** **CLOSE** tube gate valve.
   - **D.** **ESTABLISH** containment integrity.
   - **E.** **MAINTAIN** RCS temperature as low as possible.
   - **F.** **FILL** cavity to normal band.
   - **G.** **SELECT** further preparatory actions as applicable from Attachment 2 Section 2.4, Prepare Equipment and Station Personnel On Each Unit.
2. IF reactor is defueled, THEN:
   - **A.** **MAINTAIN** spent fuel pit temperature as low as possible.
   - **B.** **ENSURE** spent fuel pit level is in normal band.
   - **C.** **ENSURE** transfer canal is filled (at least on the spent fuel pit side) with transfer tube gate valve closed.
   - **D.** **SELECT** further preparatory actions as applicable from Attachment 2 Section 2.4, Prepare Equipment and Station Personnel On Each Unit.

2.4 Prepare Equipment and Station Personnel On Each Unit

1. **DETERMINE** whether splitting CCW headers is necessary to minimize missile vulnerability of exposed piping or splitting CCW to Safety Injection Pumps so that each unit supplies its own Safety Injection Pumps.
2. Observing precautions of 3/4-NOP-30, COMPONENT COOLING WATER SYSTEM, **ISOLATE** CCW to selected non-essential deenergized equipment.
3. **ISOLATE** containment to extent practical.

ATTACHMENT 2
Operations Guidelines For Category 5 Hurricane With Significant Flooding
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2.4 Prepare Equipment and Station Personnel On Each Unit (continued)

4. **ENSURE** spent fuel pit level and temperature are satisfactory.

5. At discretion of Shift Manager, **PRE-STAGE** Emergency Cooling Water hoses to one charging pump on each unit using 3/4-ONOP-030, COMPONENT COOLING WATER MALFUNCTION, Attachment 1.

6. To allow pressurizer backup heater operation, **PLACE** keylock switch on back of 3D/4D load center in bypass and **RESET** lockout relay in appropriate electrical penetration room.

7. **POSITION** personnel at the following remote stations to perform local actions:

   - Auxiliary Building (if tenable) - 1 SRCO/SRO, 4 SNPO/NO
   - Each unit's 480V Vital Load Center Room (also includes 4kv rooms) - 1 SRCO/SRO, 2 SNPO/NPO/TO's
   - Unit 3 EDG Building - 2 SNPO/NPO/TO's
   - Unit 4 EDG Building - 4 SNPO/NPO/TO's
   - Cable Spreading Room- 1 SRCO/SRO, 4 SNPO/NPO/TO's
   - Inverter Room - 2 Field Supervisor/SRCO/RO's **NOT** involved in Control Room duties.

8. **DETERMINE** whether assigning experienced supervisory operators to remote stations is necessary.

9. **ENSURE** these personnel are in position prior to arrival of storm and have appropriate safety equipment, materials to stop flooding or make minor repairs, and needed keys (such as ICCS, vital area).

10. **ENSURE** remote station personnel responsible for ground isolation have a copy of breaker list and relevant ONOPs.

ATTACHMENT 2
Operations Guidelines For Category 5 Hurricane With Significant Flooding
(Page 8 of 15)

2.4 Prepare Equipment and Station Personnel On Each Unit (continued)

NOTE

- Attachment 3 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.
- Attachment 3 is to be used if (and only if) all communication between the control room and remote stations is lost.

11. **NOTIFY** remote station personnel to continuously monitor local conditions and equipment status.

12. **TURN OFF** selected non-essential loads to minimize potential for bus grounding in accordance with Technical Specification requirements.

ATTACHMENT 2
Operations Guidelines For Category 5 Hurricane With Significant Flooding
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3.0 MITIGATION

NOTE

- 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.
- These Guidelines are **NOT** intended to supersede procedural instructions.

CAUTION

As the hurricane passes, no personnel should be allowed to leave stations. Exceptions should be conducted using applicable guidance contained in 0-EPIP-20111, RE-ENTRY

1. IF Offsite Power is lost, THEN **REFER TO** 3/4-ONOP-004, LOSS OF OFFSITE POWER.

2. IF all AC is lost, THEN:

   A. **REFER TO** 3/4-ONOP-004, LOSS OF OFFSITE POWER, and 3/4-ONOP-050, LOSS OF RHR.

   B. IF RHR was is service, THEN **REFER TO** Attachment 2 Section 3.0 Step 4 for loss of RHR guidance.

   C. **DETERMINE** need to save sufficient capacity to start an EDG prior to using spare battery for DC loads.

3. IF all DC power is lost in addition to loss of all AC, THEN:

   A. **CONSULT** TSC about possibility of having I&C obtain instrumentation readings from Hagan racks and other locations.

   B. **CONSULT** TSC about possibility of having Electrical operate MOV's from dead breakers using portable generators/transformers.

ATTACHMENT 2
Operations Guidelines For Category 5 Hurricane With Significant Flooding
(Page 10 of 15)

3.0 MITIGATION (continued)

4. IF RHR is lost, THEN:

> **NOTE**
> If RCS temperature rises above the value initially established in Attachment 2 Section 2.0, PREPARATION, pressurizer level should be allowed to rise. The plant should stabilize at approximately the conditions established during the natural circulation evolution performed in Attachment 2 Section 2.0.

A. **REFER TO** 3/4-ONOP-050, LOSS OF RHR.

B. IF use of AFW becomes necessary, THEN **USE** train 2 as long as possible.

C. IF steam dump to atmosphere valves cannot be used to throttle steam, THEN **DETERMINE** whether using other available control valves or manual isolation valves to hogger jet ejector are necessary.

D. **MAINTAIN** steam generators between 40 percent and 70 percent narrow range level and RCS average temperature less than 350°F.

E. IF AFW train 2 is lost, THEN:

(1) **REFER TO** 3/4-ONOP-075, AUXILIARY FEEDWATER SYSTEM MALFUNCTION.

(2) **OPEN** MOV-3/4-1405, 3/4C Steam Supply to Aux Feedwater Pumps.

(3) **CLOSE** MOV-3/4-1403, 3/4A Steam Supply to Aux Feedwater Pumps.

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

(1) IF necessary, THEN **CYCLE** MOV-3/4-1403, 3/4A Steam Supply to Aux Feedwater Pumps, for steam generator level control.

(2) IF local actions appear necessary, THEN **CONSULT** Emergency Coordinator.

(3) **REQUEST** TSC to begin researching bleed and feed contingencies.

ATTACHMENT 2
Operations Guidelines For Category 5 Hurricane With Significant Flooding
(Page 11 of 15)

3.0 MITIGATION (continued)

5. IF CCW is lost, THEN:

A. **STOP** any running RHR pump.

B. **REFER TO** 3/4-ONOP-030, COMPONENT COOLING WATER MALFUNCTION.

C. IF CCW is lost on one unit, THEN **DETERMINE** whether cross-tying CCW system is necessary.

D. IF CCW is lost on both units, THEN **CONNECT** service water to charging pumps.

E. IF service water is **NOT** available and charging pump operation is required, THEN **ALTERNATE** charging pumps to minimize pump heat up.

F. **REVIEW** loss of RHR and loss of spent fuel pit cooling guidance.

6. IF ICW is lost, THEN:

A. **STOP** any running RHR pump

B. **REFER TO** 3/4-ONOP-019, INTAKE COOLING WATER MALFUNCTION.

C. **REVIEW** loss of CCW guidance.

7. IF Instrument Air is lost, THEN:

A. **REFER TO** 0-ONOP-013, LOSS OF INSTRUMENT AIR.

B. **ENSURE** letdown isolation and any running charging pump go to maximum speed, and **PERFORM** the following:

(1) **STOP** any running charging pump.

(2) **OPEN** 3/4-358, Manual Bypass around LCV-3/4-115B

(3) **CLOSE** LCV-3/4-115C, VCT Outlet Isolation Valve.

C. **ENSURE** HCV-3/4-758 failed open resulting in RCS cooldown and pressurizer level drop, and **PERFORM** the following:

ATTACHMENT 2
Operations Guidelines For Category 5 Hurricane With Significant Flooding
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3.0 MITIGATION (continued)

7. C. (continued)

(1) **THROTTLE** CCW to RHR heat exchanger to return RCS temperature and pressurizer level to values initially established in Attachment 2 Section 2.0, PREPARATION.

D. **CYCLE** charging pumps as needed to maintain 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.

E. **PLACE** AFW Train 2 flow controllers in MANUAL to conserve nitrogen.

8. IF Spent Fuel Pit Cooling is lost and boiling occurs, THEN makeup using any of the available sources:

- RWST Purification Pumps
- Primary Water Pumps
- CVCS Holdup Tank Pumps
- Water Treatment Plant
- Service Water
- Fire Water
- Portable Pumps

ATTACHMENT 2
Operations Guidelines For Category 5 Hurricane With Significant Flooding
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3.0 MITIGATION (continued)

> **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.

9. IF plant flooding is imminent, THEN:

A. For Auxiliary building flooding:

(1) **DE-ENERGIZE** remaining MCCs

(2) **OPEN** 3/4-358, RWST Emer Makeup to Chrg Pumps LCV-3/4-115B **BYPASS**, and close LCV-3/4-115C, VCT Outlet Isolation Valve, on both units

(3) **EVACUATE** through New Electrical Equipment Room to Cable Spreading Room.

B. For Turbine Building Flooding, **START** 3A EDG and **RUN** it in idle in case 3A MCC floods.

C. For Computer Room flooding, **DE-ENERGIZE** ERDADS.

10. IF all onsite communications are lost, THEN **REFER TO** Attachment 3, Loss Of Communications - Remote Station Guidelines.

ATTACHMENT 2
Operations Guidelines For Category 5 Hurricane With Significant Flooding
(Page 14 of 15)

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.

1. **DISPATCH**, as necessary, teams to search for missing personnel, assess damage, and perform repairs on critical systems once tropical storm force winds recede.

2. **DETERMINE** which of the following guidelines are applicable before energizing plant equipment:

CAUTION

Electrical equipment should be re-energized before a full operability assessment has been completed only if needed for plant or public safety

- No electrical equipment should be re-energized until it is checked by an electrician.
- IF reactor safety is challenged AND time does **NOT** permit equipment recovery actions (such as rinse and dry, megger), THEN **ENERGIZE** minimum equipment necessary to meet the challenge and, if possible, **STATION** a watch at a safe distance from equipment.
- 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.
- For electrical components wetted by storm surge or wave action, **REQUEST** Electrical perform a fresh water rinse, dry, and megger, as necessary, and after successful meggering, **ENERGIZE** any installed heaters.
- For electrical components wetted by rain, **REQUEST** Electrical dry and megger equipment, as necessary, and after successful meggering, **ENERGIZE** any installed heaters.

ATTACHMENT 2
Operations Guidelines For Category 5 Hurricane With Significant Flooding
(Page 15 of 15)

4.0 RECOVERY (continued)

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. **INITIATE** 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).

5. **RESTORE** plant to a normal configuration upon discontinuation of the emergency, using applicable plant procedures.

ATTACHMENT 3
Loss Of Communications - Remote Station Guidelines
(Page 1 of 8)

1.0 480V LOAD CENTER 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 judgment.

1. **MONITOR** 4KV Bus Rooms for flooding and 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.

2. IF flooding of a bus is imminent, THEN **TRIP** feeder breaker for that bus and **REMAIN OUT** of that bus's room.

3. Continually **CHECK** the 4KV buses for grounds in accordance with 3/4-ONOP-005.4, 4KV BUS 3/4A, 3/4B, OR 3/4D GROUND, and if a ground is detected, **PERFORM** ground isolation:

   A. IF 4KV ground is isolated to a non-load center load, THEN **MAINTAIN** breaker open.

ATTACHMENT 3
Loss Of Communications - Remote Station Guidelines
(Page 2 of 8)

1.0 480V LOAD CENTER ROOM OPERATOR (continued)

3. (continued)

NOTE

- If a remote station operator observes that a load center or MCC is deenergized, 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, the other feeder breaker may be closed.

B. IF the 4KV ground is isolated to a load center, THEN:

(1) IF the 480V ground is isolated to a non-MCC load, THEN **MAINTAIN** breaker open.

(2) IF the ground is isolated to an MCC, THEN:

a. **OPEN** MCC's feeder breaker(s) for ten minutes.

b. **ATTEMPT** to reclose the feeder breaker(s) after ten minutes.

c. IF ground is **NOT** present, THEN **MAINTAIN** breaker closed.

d. IF H MCC ground is still clear after 5 minutes, THEN **CLOSE** other feeder breaker.

e. IF ground is still present, THEN **RE-OPEN** breaker for another ten minutes.

f. **REPEAT** until ground disappears or until communications are re-established.

ATTACHMENT 3
Loss Of Communications - Remote Station Guidelines
(Page 3 of 8)

2.0 AUXILIARY BUILDING 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 judgment.

1. **MONITOR** Auxiliary Building for flooding and **ATTEMPT** to contain or divert minor flooding away from MCCs and charging pumps.

CAUTION

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

2. IF flooding of an MCC is imminent, THEN **SHED** all loads on MCC and **OPEN** local feeder breaker for that MCC.

3. IF water level throughout the Auxiliary Building is rising AND all MCCs and charging pumps are threatened, THEN:

   A. **SHED** all loads on MCCs.

   B. **OPEN** MCCs' local feeder breakers.

   C. **OPEN** 3/4-358 and close LCV-3/4-115C on both units.

   D. **EVACUATE** to Cable Spreading Room via New Electrical Equipment Room.

NOTE

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.

4. Coordinate any ground isolation efforts on 3D MCC with Cable Spreading Room Operator.

ATTACHMENT 3
Loss Of Communications - Remote Station Guidelines
(Page 4 of 8)

2.0 AUXILIARY BUILDING OPERATOR (continued)

CAUTION

- The MCC local feeder breaker (disconnect) shall be 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.

5. IF an MCC voltage suddenly goes to zero, THEN:

A. **OPEN** local feeder breaker for that MCC.

B. **REQUEST** electrician check whether MCC is grounded.

C. IF MCC is grounded, THEN **REQUEST** electrician determine which load is grounded.

D. **OPEN** grounded load breaker.

E. IF voltage to MCC is still zero, THEN **CLOSE** MCC local feeder breaker, or **PERFORM** the following:

(1) **SHED** all loads on MCC and **RECORD** all changes made.

(2) **CLOSE** MCC's local feeder breaker.

(3) Except for the grounded load, **RESTORE** MCC loads.

F. IF ground is **NOT** isolable, THEN **MAINTAIN** local feeder breaker open.

6. IF no ground is found on a de-energized MCC, THEN **CLOSE** local feeder breaker.

7. IF MCC remains de-energized for ten minutes, THEN **REPEAT** Attachment 3 Section 2.0 Step 5 every 30 minutes until MCC is re-energized or communications are re-established.

ATTACHMENT 3
Loss Of Communications - Remote Station Guidelines
(Page 5 of 8)

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 judgment.

1. **MONITOR** Cable Spreading Room for water intrusion and periodically **OPEN** all DC bus and MCC enclosures in Cable Spreading and Electrical Equipment Rooms to check for water.

NOTE

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

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

4. Continuously **MONITOR** voltage in 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 communications are reestablished.

A. IF voltage is lost to an H load center, THEN **OPEN** both local feeder breakers and **REQUEST** electrician determine grounded load(s):

(1) IF 480V ground is isolated to a non-MCC load, THEN **MAINTAIN** load's breaker open.

ATTACHMENT 3
Loss Of Communications - Remote Station Guidelines
(Page 6 of 8)

3.0 CABLE SPREADING ROOM OPERATOR (continued)

4. A. (continued)

(2) If ground is isolated to 3D vital MCC, THEN **COORDINATE** ground isolation efforts with Auxiliary Building operator.

(3) IF ground is isolated to a D vital MCC, THEN **OPEN** MCC's feeder breaker.

(4) WHEN ground is isolated, THEN **RECLOSE** H Load Center feeder breakers

a. **ENSURE** grounded load breaker is open.

b. IF ground is isolated, THEN **RECLOSE** MCC feeder breaker and **RESTORE** loads as necessary.

c. IF ground is **NOT** isolable, THEN **MAINTAIN** MCC feeder breaker open.

B. Frequently **CHECK** 120V AC panels to be energized.

C. IF 120V AC panel is de-energized or grounded, THEN:

(1) **OPEN** local feeder breaker.

(2) **REQUEST** electrician determine grounded load(s).

(3) **OPEN** grounded load breaker(s)

(4) WHEN grounded loads are clear, THEN **CLOSE** feeder breaker.

ATTACHMENT 3
Loss Of Communications - Remote Station Guidelines
(Page 7 of 8)

4.0 UNIT 3 EDG 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 judgment.

CAUTION

Stand clear of the EDGs since they may start at any time.

1. **MONITOR** rooms for water intrusion and **ATTEMPT** to contain or divert minor flooding that threatens safe operation of an EDG.

2. IF flooding in a room threatens energized electrical equipment, THEN **OPEN** appropriate local breakers.

3. IF electrical equipment can **NOT** be isolated locally due to flooding, THEN **ATTEMPT** to isolate equipment from a remote power source (i.e., Load Breaker at MCC, LC for MCC, 4KV Bus for LC, EDG for 4KV Bus).

   A. **STOP** EDG and **REMAIN** on elevated platforms above flooding.

4. IF room becomes untenable, THEN **EVACUATE** to Cable Spreading Room or Load Center Room.

5. Continuously **MONITOR** running EDGs.

   A. IF trouble is noted, THEN **REFER TO** 3-ONOP-023.2, EMERGENCY DIESEL GENERATOR FAILURE for guidance and **ATTEMPT** to rectify problem.

NOTE

If EDG output breaker is open, bus is probably grounded.

6. IF EDG load suddenly drops to zero, THEN **CHECK** EDG output breaker.

7. IF an EDG runs unloaded for four hours AND no communications from Control Room or Load Center Room are received, THEN **STOP** EDG and **PLACE** it in standby.

ATTACHMENT 3
Loss Of Communications - Remote Station Guidelines
(Page 8 of 8)

5.0 UNIT 4 EDG 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 judgment.

CAUTION

Stand clear of EDGs since they may start at any time.

1. **MONITOR** rooms for water intrusion and **ATTEMPT** to contain or divert minor flooding that threatens safe operation of an EDG.

2. IF flooding in a room threatens energized electrical equipment, THEN **OPEN** appropriate local breakers.

3. IF electrical equipment can **NOT** be isolated locally due to flooding, THEN **ATTEMPT** to isolate equipment from a remote power source (i.e. Load Breaker at MCC, LC for MCC, 4KV Bus for LC, EDG for 4KV Bus).

   A. **STOP** EDG and **REMAIN** out of room.

4. Continuously **MONITOR** running EDGs.

   A. IF trouble is noted, THEN **REFER TO** 4-ONOP-023.2, EMERGENCY DIESEL GENERATOR FAILURE, for guidance and **ATTEMPT** to rectify problem.

NOTE

If EDG output breaker is open, bus is probably grounded.

5. IF EDG load suddenly drops to zero, THEN check EDG output breaker.

6. IF an EDG runs unloaded for four hours AND no communications from Control Room or load center room are received, THEN **STOP** EDG and **PLACE** it in standby.

7. Continually **CHECK** D 4KV buses for signs of grounds.

   A. IF any grounded equipment is discovered, THEN **SECURE** that load immediately.

ATTACHMENT 4
480 Volt Receptacle
(Page 1 of 2)

NOTE

The following breakers are to be verified tagged and opened. The Shift Manager has responsibility to ensure this is completed.

BREAKER NO.	RECEPTACLE NO./LOCATION
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 Note 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 Note 1)
1023	13, Water Treatment Plant Area
B1605	01, 02 and PWR Panel RB1 Radwaste Control Area, West Wall
B1704	03, Radwaste North-South Passageway, North End
B2028	Radwaste North-South Passageway, South End and Outside Receptacles
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 MSRH
	One Receptacle at Southwest Corner of Condensate Retubing Pit, Ground Level

ATTACHMENT 4
480 Volt Receptacle
(Page 2 of 2)

BREAKER NO.	RECEPTACLE NO./LOCATION
Panel 3P14, Bkr 4	One Receptacle in Auxiliary Feedwater Pump Area
	One Receptacle East of 3D MSRH
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
See Note 2	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 MSRH
Panel 4P14, Bkr 4	One Receptacle East of 4D MSRH
	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
Note 1:	Power Supply to Emergency Spent Fuel Pit Cooling Water Pumps
Note 2:	Receptable powered from Fossil Side Station Service MCC Breaker SS-7.

FPL

TURKEY POINT PLANT

ADMINISTRATIVE PROCEDURE

NON-SAFETY RELATED
REFERENCE USE

Procedure No.	Revision No.	Effective Date
0-ADM-116	**1**	**07/22/10**

Title:

HURRICANE SEASON READINESS

Responsible Department: **EMERGENCY PREPAREDNESS**

Special Considerations:

FOR INFORMATION ONLY
Before use, verify revision and change documentation (if applicable) with a controlled index or document.
DATE VERIFIED_____ INITIAL_____

Revision	Approved By	Approval Date
0	Larry Hardin	03/25/10
1	Mitch Epstein	07/19/10

UNIT #	
DATE	
DOCT	PROCEDURE
DOCN	0-ADM-116
SYS	
STATUS	COMPLETED
REV	1
# OF PGS	

REVISION SUMMARY	
Rev. No.	**Description**
1	**PCR 10-1946, 07/19/10, Mitch Epstein** Remove Compensatory requirement due to PCM completion this change was initially made in 0-EPIP-20106, although this step was moved to 0-ADM-116, during a revision.
0	**PCR 09-1683, 03/25/10, Roger N Powers** In accordance with PCR 09-1683 and attached markup, revised procedure to add information from 0-EPIP-20106 and 0-ONOP-103.3 as requested by EP. Placed into new format and latest template. Revised wording to reflect change in definition of 'verify' and 'ensure' in accordance with Writers Guide. Changed title as requested by EP. In accordance with PCR **08-1539**, removed the note that had referenced TPCW supplemental cooling from Attachment 21.

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ATTACHMENTS (continued)

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SECTION PAGE

ATTACHMENTS (continued)

1.0 PURPOSE

This procedure outlines the actions to be reviewed prior to the start of hurricane season (June through November) and 72 hours prior to the projected arrival of tropical storm force winds (39 mph).

2.0 TERMS AND DEFINITIONS

None

3.0 RESPONSIBILITIES

3.1 Plant Manager

- The Plant Manager is responsible for ensuring that the site is prepared for the arrival of tropical storm force winds or the start of hurricane season.

3.2 Emergency Preparedness (EP) Manager

- The EP Manager is responsible for completing Attachment 1, Hurricane Season Preparation Checklist Emergency Preparedness.
- The EP Manager is responsible for reviewing and approving any exceptions to the preparation checklists.
- The EP Manager is responsible for approving any extension of hurricane season preparation due dates.

3.3 Mechanical Maintenance Department Head

The Mechanical Maintenance Manager is responsible for completing Attachment 2, Hurricane Season Preparations Checklist Mechanical Maintenance and Attachment 21, Severe Weather Preparations Checklist Mechanical Maintenance Department Head

3.4 Electrical Maintenance Department Head

The Electrical Maintenance Manager is responsible for completing Attachment 3, Hurricane Season Preparations Checklist Electrical Maintenance and Attachment 23, Severe Weather Preparations Checklist OSC Electrical Coordinator

3.5 Land Utilization Supervisor

The Land Utilization Supervisor is responsible for completing Attachment 4, Hurricane Season Preparations Checklist Land Utilization and Attachment 18, Severe Weather Preparations Checklist Land Utilization Supervisor

3.6 Radiation Protection Manager

The Radiation Protection Manager is responsible for completing Attachment 5, Hurricane Season Preparations Checklist Radiation Protection and Attachment 17, Severe Weather Preparations Checklist Radiation Protection Manager as applicable.

3.7 Instrumentation and Control Department Head

The Instrumentation and Control Manager is responsible for completing Attachment 6, Hurricane Season Preparations Checklist Instrumentation & Control and Attachment 22, Severe Weather Preparations Checklist OSC I&C Coordinator

3.8 Materials Management Manager

The Materials Management Manager is responsible for completing Attachment 7, Hurricane Season Preparations Checklist Materials Management and Attachment 19, Severe Weather Preparations Checklist Materials Management Manager as applicable.

3.9 Work Controls Manager

The Work Controls Manager is responsible for completing Attachment 8, Hurricane Season Preparations Checklist Work Controls.

3.10 Emergency Preparedness

Emergency Preparedness is responsible for completing Attachment 1, Hurricane Season Preparation Checklist Emergency Preparedness, Attachment 13, Severe Weather Preparations Checklist Emergency Preparedness and Attachment 14, Severe Weather Preparations Checklist Emergency Coordinator

3.11 Maintenance Manager

The Maintenance Manager is responsible for completing Attachment 15, Severe Weather Preparations Checklist Maintenance Manager.

3.12 Security Manager

The Security Manager is responsible for completing Attachment 16, Severe Weather Preparations Checklist Security Manager and Attachment 25, Severe Weather Preparations Checklist Security Manager

3.13 Supervisor - Contract Management

The Supervisor - Contract Management is responsible for completing Attachment 20, Severe Weather Preparations Checklist Supervisor - Contract Management.

3.14 Fire Protection Supervisor

The Fire Protection Supervisor is responsible for completing Attachment 26, Severe Weather Preparations Checklist Fire Protection Supervisor

3.15 Chemistry Manager

The Chemistry Manager is responsible for completing Attachment 24, Severe Weather Preparations Checklist TSC Chemistry Supervisor

3.16 Extended Power Uprate (EPU) Construction Manager

The Extended Power Uprate (EPU) Construction Manager is responsible for completing attachment, Severe Weather Preparations Checklist EPU Construction Manager.

4.0 INSTRUCTIONS

INITIAL

4.1 Hurricane Season Preparation

NOTE

- It is acceptable for items listed in this procedure to remain incomplete during hurricane season provided that a justification is included on the Exceptions List. Incomplete items will be addressed at the issuance of a *HURRICANE WARNING* in accordance with 0-EPIP-20106, Natural Emergencies.
- Signoffs for completion of an attachment should **NOT** be initiated unless the item is complete.
- All steps throughout this procedure may be performed in any sequence.

1. Ninety days prior to the start of hurricane season, schedule hurricane season preparations with the Work Controls Group for Mechanical Maintenance, Electrical Maintenance, Materials Management, Radiation Protection, and Land Utilization. _____

2. Ninety days prior to the start of hurricane season, ensure Electronic Corrective Actions (SITRIS) have been issued to the appropriate departments with the applicable sections of this procedure attached, to be due the first workday of May. _____

3. Using Attachment 1, Hurricane Season Preparation Checklist Emergency Preparedness, coordinate completion of hurricane season preparations. _____

4. Two weeks prior to the start of hurricane season, perform a management walkdown of the site to identify pre-hurricane items that need to be addressed. _____

5. Any exceptions to the hurricane season preparation checklists or walkdown list shall be reviewed for acceptability by the Emergency Preparedness Manager and documented in sufficient detail on Attachment 11, Preparations Exceptions List. During certain activities such as refueling outages, the Exception List could be larger than normal. This is due to the activities being performed and the larger amount of equipment that is mobilized and staged for these activities. _____

6. The EP Manager should provide updates of the progress of hurricane preparedness items to the plant management staff once a week during the four weeks preceding the start of hurricane season. _____

4.1 Hurricane Season Preparation (continued) **INITIAL**

7. Ensure the completion of the hurricane season preparations is updated using this procedure. _____

4.2 Severe Weather Preparation

1. 72 hours prior to the projected arrival of tropical storm force winds (39 mph), coordinate completion of severe weather preparations using Attachment 13, Severe Weather Preparations Checklist Emergency Preparedness.

2. Ensure the completion of the severe weather preparations is updated using this procedure.

5.0 RECORDS

None

6.0 REFERENCES AND COMMITMENTS

6.1 References

1. Procedures

   A. 0-EPIP-20106, Natural Emergencies

   B. 0-ONOP-103.3, Severe Weather Preparations

   C. 0-SMM-102.1, Flood Protection Stoplog and Penetration Seal Inspection

   D. SFI-3002, Hurricane Preparations

2. Miscellaneous Documents

   A. PC/M 90-390, Plant Perimeter Floodwall Repair

   B. PC/M 94-137, Rev 0, Rolling Turbine Covers

   C. P102E001, Annual Hurricane Prep. Phase B Hurricane/Natural Emergency Prep, Part 2 of 2

   D. PM102010E, Annual Hurricane Prep. Phase A, Hurricane/Natural Emergency Prep, Part 1 of 2

6.1 References (continued)

2. (continued)

E. PM102018M, Stop Log and Hurricane Preps MM

F. PTN-ENG-SENS-07-021, Temporary Sealing Of Plant Equipment

3. Regulatory Guidelines

A. Station Blackout Guidelines:

(1) NRC Regulatory Guide 1.155, Station Blackout

(2) NUMARC 87-00, Guidelines and Technical Bases for NUMARC Initiatives Addressing Station Blackout at Light Water Reactors

6.2 Commitments

None

ATTACHMENT 1
Hurricane Season Preparation Checklist
Emergency Preparedness
(Page 1 of 3)

INITIAL

NOTE

Any exceptions to the hurricane checklist or walkdown list shall be documented on Attachment 11, Preparations Exceptions List. Exceptions List shall include the Condition Report(s) written for addressing the exception prior to hurricane season and be reviewed for acceptability by the Emergency Preparedness Manager.

1. **CHECK** the availability of alternate TSC and OSC locations:
   - Auxiliary Building Facilities _____
   - Cable Spreading Room _____
   - New Electrical Equipment Room _____
   - Unit 4 EDG Building _____
   - Other facilities as deemed necessary _____
2. **PERFORM** walk-down to identify areas that are vulnerable to storm damage. _____
3. After notification, **CONDUCT** a walk-down of the Fossil Plant to ensure that items, which could become airborne, have been tied down or moved indoors. Notify the Fossil Plant with any issues. _____
4. **REVIEW** storm preparation procedures:
   - 0-EPIP-20106, Natural Emergencies _____
   - 0-ONOP-103.3, Severe Weather Preparations _____
   - P3 Schedule _____
   - Recovery Plan _____
   - SFI-3002, Hurricane Preparations _____

ATTACHMENT 1
Hurricane Season Preparation Checklist
Emergency Preparedness
(Page 2 of 3)

INITIAL

5. **REVIEW** provisions for relocating Fire Watch Stations, Security Alarm Stations, and Security Command Post in the event of a storm. Also, Check adequate provisions are available for weathering a storm. _____

   - Fire Watch Stations - CCTV, etc.
   - Security Facilities - CAS, SAS, Final Access Control (FAC), Command Post, etc.

6. **ENSURE** routine communications tests have been performed (EP-AD-007, Emergency Response Facilities and Equipment Surveillance).

   - Satellite Telephone _____
   - Onsite Radio Systems _____
   - Off-site Radio Systems - VHF _____

7. **ENSURE** spare VHF antennas are in place (CR roof, south end of "A" CSR Chiller Platform). _____

8. **ENSURE** operability of Alternate TSC phone lines in the Cable Spreading Room:

Extension	Yes	No
6461	☐	☐
6470	☐	☐
6463	☐	☐
6465	☐	☐
6469	☐	☐
6467	☐	☐
6462	☐	☐
4528	☐	☐

9. **PREPARE** and **DISTRIBUTE** a memo similar to Attachment 10, Hurricane Season Memo. _____

10. **ENSURE** Attachment 2, Hurricane Season Preparations Checklist Mechanical Maintenance, is complete. _____

ATTACHMENT 1
Hurricane Season Preparation Checklist
Emergency Preparedness
(Page 3 of 3)

INITIAL

11. **ENSURE** Attachment 3, Hurricane Season Preparations Checklist Electrical Maintenance, is complete. _____

12. **ENSURE** Attachment 4, Hurricane Season Preparations Checklist Land Utilization, is complete. _____

13. **ENSURE** Attachment 5, Hurricane Season Preparations Checklist Radiation Protection, is complete. _____

14. **ENSURE** Attachment 6, Hurricane Season Preparations Checklist Instrumentation & Control, is complete. _____

15. **ENSURE** Attachment 7, Hurricane Season Preparations Checklist Materials Management, is complete. _____

16. **ENSURE** Attachment 8, Hurricane Season Preparations Checklist Work Controls, is complete. _____

17. **ENSURE** Condition Reports have been written to document any exceptions to the requirements of this directive shown on Attachment 11, Preparations Exceptions List. _____

18. **REPORT** the status of outstanding items to the plant management staff once a week for the four weeks preceding the start of hurricane season. _____

19. **SCHEDULE** walkdowns by department managers every two weeks during hurricane season. Any discrepancies should be documented in the Correction Action Program and actions assigned as necessary. _____

ATTACHMENT 2
Hurricane Season Preparations Checklist
Mechanical Maintenance
(Page 1 of 2)

INITIAL

NOTE

Any exceptions to the hurricane checklist or walkdown list shall be documented on Attachment 11, Preparations Exceptions List. Exceptions List shall include the Condition Report(s) written for addressing the exception prior to hurricane season and be reviewed for acceptability by the Emergency Preparedness Manager.

1. **ENSURE** the following:

   A. Engine driven de-watering pumps are serviced, operable, and staged to be dispatched with hoses and other accessories. _____

   B. Stop logs have been inspected per 0-SMM-102.1, Flood Protection Stoplog and Penetration Seal Inspection. If PWOs are initiated as a result of this surveillance, closeout of the SMM may occur if none of the open PWOs are for repairs of stoplog operability. _____

2. **WALKDOWN** the floodwalls to determine if the floodwall is breached or needs repair. _____

NOTE

Sandbag barriers should have a minimum height of two feet and a minimum width of 18 inches.

   A. **INSTALL** sandbags or repair the damaged or breached area, as directed by site engineering. _____

3. **CHECK** latches for roof covers on the following roof hatches to ensure they are secured (welded, bolted, or latched).

   - Auxiliary Building - Stairwell to 10 ft. Elevation _____
   - Auxiliary Building - RHR Pump and Hx Rooms _____
   - Auxiliary Building - Monitor Tank Room _____
   - Auxiliary Building - Demineralizer Cubicles _____

ATTACHMENT 2
Hurricane Season Preparations Checklist
Mechanical Maintenance
(Page 2 of 2)

INITIAL

3. **(continued)**

   - Auxiliary Building - BA Evaporator Rooms _____
   - Rad Waste Building _____

4. **ENSURE** that the containment chiller units on the Aux Building roof are securely tied down. _____

5. **ENSURE** areas around the plant have been surveyed for material or objects that may become missile hazards during the storm. **ISSUE** a walk-down list to Maintenance Manager and Work Controls Manager. _____

6. **INITIATE** Condition Reports for any exceptions shown on Attachment 11, Preparations Exceptions List and **DOCUMENT** below: _____

CR Number

_____ _____
Signature Date

ATTACHMENT 3
Hurricane Season Preparations Checklist
Electrical Maintenance
(Page 1 of 2)

INITIAL

NOTE

Any exceptions to the hurricane checklist or walkdown list shall be documented on Attachment 11, Preparations Exceptions List. Exceptions List shall include the Condition Report(s) written for addressing the exception prior to hurricane season and be reviewed for acceptability by the Emergency Preparedness Manager.

1. **ENSURE** the following:

   A. A minimum of five of the portable generators listed in Attachment 9, Storm Stock are operable. _____

   B. 400 KW Portable Generator (The Big Green Machine) is serviced and operable. _____

   C. Electric submersible dewatering pumps are serviced, operable, and staged to be dispatched with hoses and extension cords. _____

   D. Engine Driven Dewatering pumps are serviced, operable and staged to be dispatched with hoses. _____

   E. Power block sump pumps checked and operable. _____

   F. RHR Room sumps are operational. _____

ATTACHMENT 3
Hurricane Season Preparations Checklist
Electrical Maintenance
(Page 2 of 2)

INITIAL

2. **INITIATE** Condition Reports for any exceptions shown on Attachment 11, Preparations Exceptions List and **DOCUMENT** below: _____

CR Number

_____ _____
Signature Date

ATTACHMENT 4
Hurricane Season Preparations Checklist
Land Utilization
(Page 1 of 2)

INITIAL

NOTE

Any exceptions to the hurricane checklist or walkdown list shall be documented on Attachment 11, Preparations Exceptions List. Exceptions List shall include the Condition Report(s) written for addressing the exception prior to hurricane season and be reviewed for acceptability by the Emergency Preparedness Manager.

1. **ENSURE** the following:

   A. Areas around the plant have been surveyed for material or objects that may become missile hazards during a storm. _____

   B. Resources are available to minimize and control grass and other debris in the cooling canals. _____

   C. Equipment is available to clear roadways following a storm:

   - All-terrain forklift _____
   - Tractor _____
   - Torch _____
   - Cable cutters _____
   - Chainsaws _____

   D. Vegetation along the roadways has been trimmed and debris that may limit plant accessibility following a storm has been removed. _____

   E. Sea survival area is cleaned to prevent blocking up the intake. _____

ATTACHMENT 4
Hurricane Season Preparations Checklist
Land Utilization
(Page 2 of 2)

INITIAL

2. **INITIATE** Condition Reports for any exceptions shown on Attachment 11, Preparations Exceptions List and **DOCUMENT** below: _____

CR Number

_____ _____
Signature Date

ATTACHMENT 5
Hurricane Season Preparations Checklist
Radiation Protection
(Page 1 of 1)

INITIAL

NOTE

Any exceptions to the hurricane checklist or walkdown list shall be documented on Attachment 11, Preparations Exceptions List. Exceptions List shall include the Condition Report(s) written for addressing the exception prior to hurricane season and be reviewed for acceptability by the Emergency Preparedness Manager.

1. **CHECK** dry active waste identified/packaged for shipment to a waste processor maintained less than 5000 cubic feet. _____

2. **SHIP** any sea land containers containing rad waste offsite, as practicable. _____

3. **REMOVE** and properly store all equipment from the RCA **NOT** related to ongoing work. _____

4. **INITIATE** Condition Reports for any exceptions shown on Attachment 11, Preparations Exceptions List and **DOCUMENT** below: _____

CR Number
_____
_____
_____
_____
_____

_____ _____
Signature Date

ATTACHMENT 6 **INITIAL**

Hurricane Season Preparations Checklist
Instrumentation & Control
(Page 1 of 1)

NOTE

Any exceptions to the hurricane checklist or walkdown list shall be documented on Attachment 11, Preparations Exceptions List. Exceptions List shall include the Condition Report(s) written for addressing the exception prior to hurricane season and be reviewed for acceptability by the Emergency Preparedness Manager.

1. **ENSURE** that the Meteorological Towers are in optimum condition to weather a storm. _____

2. **ENSURE** purchase request for sand, enough for 3500 sandbags, is available (approximately two loads of sand). _____

3. **INITIATE** Condition Reports for any exceptions shown on Attachment 11, Preparations Exceptions List and **DOCUMENT** below: _____

CR Number

_____ _____
Signature Date

ATTACHMENT 7
Hurricane Season Preparations Checklist
Materials Management
(Page 1 of 1)

INITIAL

NOTE

- Water should be changed out every one to two years.
- Credit for Storm Stock can be taken for entire inventory at PTN.
- Any exceptions to the hurricane checklist or walkdown list shall be documented on Attachment 11, Preparations Exceptions List. Exceptions List shall include the Condition Report(s) written for addressing the exception prior to hurricane season and be reviewed for acceptability by the Emergency Preparedness Manager.

1. Using Attachment 9, Storm Stock, **ENSURE** that sufficient storm supplies for approximately 200 people, for three days, are on hand, and that any shelf lives are valid until the beginning of the next storm season. _____

2. **ENSURE** that any contract services in place for items such as supplies (consumables such as diesel fuel and gasoline), food services, and personnel support are pre-arranged. _____

3. **CHECK** shelf life of batteries and other storm stock items. _____

4. **INITIATE** Condition Reports for any exceptions shown on Attachment 11, Preparations Exceptions List and **DOCUMENT** below: _____

CR Number

_____ _____
Signature Date

ATTACHMENT 8 **INITIAL**

Hurricane Season Preparations Checklist

Work Controls

(Page 1 of 1)

NOTE

Any exceptions to the hurricane checklist or walkdown list shall be documented on Attachment 11, Preparations Exceptions List. Exceptions List shall include the Condition Report(s) written for addressing the exception prior to hurricane season and be reviewed for acceptability by the Emergency Preparedness Manager.

1. **PERFORM** a line-by-line review and reconciliation of any work orders associated with items related to Hurricane Preparedness. This should include all work types and non-reoccurring PM Type 7 work. _____

2. **INITIATE** Condition Reports for any exceptions shown on Attachment 11, Preparations Exceptions List and **DOCUMENT** below: _____

CR Number

_____ _____

Signature Date

ATTACHMENT 9
Storm Stock
(Page 1 of 6)

Description	Stock Code	Quantity Required	Unit of Issue	Location CRF
PIPE PLUG 2"	0016171-4	12	EA	3-A06-068-A
PIPE PLUG 3"	0016172-4	45	EA	3-A06-068-A
PIPE PLUG 4"	0016175-4	45	EA	3-A06-068-A
PIPE PLUG 6"	0016176-4	5	EA	3-A06-068-A
PIPE PLUG 8"		3	EA	3-A06-068-A
PIPE PLUG 12"		2	EA	3-A06-068-A
PIPE PLUG 2" (inflatable)		5	EA	3-A06-068-A
PIPE PLUG 3" (inflatable)		3	EA	3-A06-068-A
PIPE PLUG 4" (inflatable)		4	EA	3-A06-068-A
PUMP, SUMP, 120VOLT, GLDS EP411AC				
S/N G9516842		1	EA	3-A06-124-A
S/N 2654123		1	EA	3-A06-124-A
S/N 2654124		1	EA	3-A06-124-A
S/N 2654126		1	EA	3-A06-124-A
S/N 2654127		1	EA	3-A06-124-A
S/N 2654194		1	EA	3-A06-124-A
S/N 2654854		1	EA	3-A06-124-A
S/N 2654855		1	EA	3-A06-124-A
S/N D0036056		1	EA	3-A06-124-A
S/N 2654872		1	EA	3-A06-124-A
S/N 2654985		1	EA	3-A06-124-A
S/N 2654986		1	EA	3-A06-124-A
HOSE 1-1/2" DIA. W/KAM-LOC ENDS		12	EA	3-A06-124-A
HOSE 1-1/2" DIA.SUCTION 100' ROLLS, 6 ROLLS PER PALLET = 1800"	0037531-4	1 1 1	PL PL PL	3-A06-124-A 3-A06-180-A 3-A06-180-B
DISCHARGE HOSE 1-1/2" WITH FITTINGS FOR SUMP PUMPS		11	EA	3-A06-124-A

ATTACHMENT 9
Storm Stock
(Page 2 of 6)

Description	Stock Code	Quantity Required	Unit of Issue	Location CRF
PUMP DEWATERING M/N #6LD-325 ENGINE LOMBARDINI, 300 GPM CAP				
S/N 3S-635		1	EA	3-A02-068-A
S/N 3S-636		1	EA	3-A02-124-A
S/N 3S-637		1	EA	3-A04-235-A
S/N 3S-638		1	EA	3-A04-068-A
S/N 3S-639		1	EA	3-A04-180-A
S/N 3S-640		1	EA	3-A02-180-A
S/N 3S-641		1	EA	3-A02-235-A
S/N 3S-642		1	EA	3-A04-124-A
PUMP KITS		8	KIT	3-A02-068-B
4 EACH HOSE 3" X 25' W/C&E-CON				3-A02-124-B
1 EACH HOSE 3" X 25' W/C&KC-CON				3-A02-180-B
1 EACH NIPPLE 3"X3"				3-A02-235-B
1 EACH VALVE CHECK				3-A04-068-B
1 EACH STRAINER				3-A04-124-B
				3-A04-180-B
				3-A04-235-B
PUMP 4" THOMPSON MN 5LD9303, ENGINE LAMBARDINI, 1500 GPM CAP				
SKID # 3J-16 S/N 3152734		1	EA	3-A04-235-B
SKID # 3J-17 S/N 3152733		1	EA	3-A02-012-A
PUMP HOSE KITS		2	KIT	3-A06-012-A
30' HOSE 4" SUCTION WITH CON				3-A06-012-B
30' HOSE 4" DISCHARGE WITH CON				
1 EACH VALVE CHECK				
1 EACH NIPPLE 3" X 3"				
1 EACH STRAINER				
WATER COOLER 5 GAL		3	EA	3-A16-012-B

ATTACHMENT 9
Storm Stock
(Page 3 of 6)

Description	Stock Code	Quantity Required	Unit of Issue	Location CRF
WATER BOTTLED 12L PER CASE TOTAL = 288		28	CS	3-A12-012-A
		28		3-A12-012-B
		28		3-A12-068-A
		28		3-A12-068-B
		28		3-A12-124-A
		28		3-A12-124-B
		28		3-A12-180-A
		28		3-A12-180-B
		32		3-A12-235-A
		32		3-A12-235-B
BLANKETS		162	EA	3-A20/18-012-A/B
DISPOSABLE TOWELS	0041470-4	6	CS	3-A14-064-B
RAIN SUITS S/M/L/XL 200 OF EA SIZE		800	EA	3-A14-012-A
DUCT TAPE 2" GRAY		144	RL	3-A14-068-B
TARPS 20' X 20'	0012261-4	3	EA	3-A14-124-A
TARPS 24' X 100'	0012255-4	2	EA	3-A14-124-A
TARPS 9' X 50'	0012253-4	2	EA	3-A14-124-A
BAG ASBESTOS GREEN 36" X 60"	0025915-4	3	RL	3-A14-124-A
BAG GLOVE SIZE 12"	0041431-4	1	RL	3-A14-124-A
WIRE ROPE 3/8"		500	FT	3-A14-124-B
WIRE ROPE CLAMPS 5/16"	0041400-4	200	EA	3-A14-124-B
WIRE ROPE 5/16"	0041373-4	2060	FT	3-A14-124-B
ROPE 1/2" MANILA	0041355-4	4800	FT	3-A14-235-B
ROPE 3/8' MANILA		600	FT	3-A14-235-B
ROPE 5/8"MANILA		5400	FT	3-A14-235-A
ROPE 1/2" POLYPRO YELLOW & BLUE		2400	FT	3-A14-235-B
ROPE 3/8" POLYPRO YELLOW & BLUE		1800	FT	3-A14-235-B
LANTERN (6VOLT)	0038426-4	156	EA	3-A16-012-A

ATTACHMENT 9
Storm Stock
(Page 4 of 6)

Description	Stock Code	Quantity Required	Unit of Issue	Location CRF
FLASHLIGHT	0037906-4	144	EA	3-A16-012-A
BATTERY (6 VOLT LANTERN) REC DATE 2001	0024023-4	144	EA	3-A16-012-B
BATTERY "D" REC DATE 2001	0023994-4	144	EA	3-A16-012-B
SAW 33" McCULLOCH PRO-MAC 8200		2	EA	3-A14-068-A
SAW 24" McCULLOCH PRO-MAC 700		1	EA	3-A14-068-A
CAN GAS 5 GAL		15	EA	3-A14-068-A
SAND BAG EMPTY		5600	EA	3-A14-012-B
HOT STICK 30 FT COLLAPSIBLE		2	EA	3-A16-068-A
CORD, EXTENSION,100 FT, 10-3 20AMP		8	EA	3-A16-068-A
CORD, EXTENSION, 50 FT, 10-3 15AMP		4	EA	3-A16-068-A
CORD, EXTENSION, 100 FT, 12-3		38	EA	3-A16-124-B
CORD, EXTENSION, 50 FT, 12-3		87	EA	3-A16-124-A
CORD, SO TYPE #10-3	0000311-4	1000	FT	3-A16-068-A
Y SPLITTER 120 VOLT		43	EA	3-A16-068-B
ADAPTOR 15-20-P TO 5-2O-R		96	EA	3-A16-068-B
PLUG, MALE, 30AMP, 120VOLT 15-30		50	EA	3-A16-068-B
PLUG, MALE, U-BLADE	0040645-4	160	EA	3-A16-068-B

ATTACHMENT 9
Storm Stock
(Page 5 of 6)

Description	Stock Code	Quantity Required	Unit of Issue	Location CRF
COTS 12 EACH PER PALLET TOTAL=216		24	EA	3-A20-068-A/B
		24	EA	3-A20-068-A/B
		24	EA	3-A20-124-A/B
		24	EA	3-A20-180-A/B
		24	EA	3-A20-235-A/B
		24	EA	3-A22-068-A/B
		24	EA	3-A22-124-A/B
		24	EA	3-A22-180-A/B
		24	EA	3-A22-235-A/B
GENERATORS-HOMELIGHT 4000 WATT				
GEN #2-HNO250017		1	EA	3-A08-068-A
GEN #3-HNO720047		1	EA	3-A08-068-A
GEN #4-HNO470062		1	EA	3-A08-068-B
GEN #5-HNO470082		1	EA	3-A08-068-B
GEN #6-HNO470080		1	EA	3-A08-124-A
GEN #7-HNO470064		1	EA	3-A08-124-A
GEN #9-HNO470104		1	EA	3-A08-124-B
GEN #10-HN0470068		1	EA	3-A08-124-B
GEN #11-HNO470067		1	EA	3-A08-180-A
GEN #12-HN0130110		1	EA	3-A08-180-A
GEN #13-HNO130101		1	EA	3-A08-180-B
GEN #14-HNO130030		1	EA	3-A08-180-B
GEN #15-HNO470073		1	EA	3-A08-235-A
GEN #16-HNO250139		1	EA	3-A08-235-A
GEN #17-HNO250105		1	EA	3-A08-235-B
GEN #18-HM2560265		1	EA	3-A08-235-B
GEN #19-HNO250140		1	EA	3-A10-012-A
GEN #20-HN0470069		1	EA	3-A10-012-A
GEN #21-HNO250107		1	EA	3-A10-012-B
GEN #22-HM2560256		1	EA	3-A10-012-B
GEN #25-HNO130106		1	EA	3-A10-068-A
GEN #26-DAYTON 4000 WATT-998599		1	EA	3-A10-068-B
GEN #28-DAYTON 4000 WATT-975264		1	EA	3-A10-068-B

ATTACHMENT 9
Storm Stock
(Page 6 of 6)

Description	Stock Code	Quantity Required	Unit of Issue	Location CRF
GEN #29-GENERAC 4000 WATT-1163404		1	EA	3-A10-068-B
GEN #30- 4000 WATT-HN0470081		1	EA	3-A10-124-A
GEN #31-DAYTON 4000 WATT-975183		1	EA	3-A10-124-A
GEN #32-DAYTON 4000 WATT-962753		1	EA	3-A10-124-B
GEN #34-DAYTON 4000 WATT-987185		1	EA	3-A10-124-B
GEN #36-DAYTON WATT-986090		1	EA	3-A10-180-B
GEN #37-DAYTON WATT-986065		1	EA	3-A10-180-B
GEN #41-DAYTON 4000 WATT-975055		1	EA	3-A10-180-B
GEN #42-HOMELIGHT 4000 WATT-HNO470045		1	EA	3-A10-180-B
GEN #43-HERCULES DIESEL 27 KW		1	EA	3-A08-012-A

* Note: **NOT** all items classified as hurricane storm stock require a stock code. All items are replenished prior to the start of hurricane season each year.

ATTACHMENT 10
Hurricane Season Memo
(Page 1 of 2)

To: All Plant Employees Date:

From: Department: PTN-VPO

Subject: HURRICANE SEASON

Hurricane season begins on June 1. Plant personnel should begin making plans to prepare their homes and family for possible severe weather. Site preparations have been initiated. The following information is provided to inform employees of issues regarding hurricane preparedness:

1. Plant personnel should make plans to minimize time needed for personal severe weather preparation (i.e., shutters, trees trimmed, water and food supplies, relocation plans for family members, etc.).

2. Plant personnel may be called upon to assist in preparing the plant for a hurricane. Department heads will be asking for volunteers to fill specific positions, and some personnel may be required to remain onsite through the hurricane. Notify your department head, if you have special circumstances that may affect your ability to assist in storm preparations (i.e., family member in hospital, care-person for elderly or handicapped).

3. As a hurricane approaches, plant personnel will be kept informed of the hurricane through plant wide written updates and TV updates, if on site, and recorded messages on the Hurricane Information Number, if offsite (305-246-6445).

4. Employees who live in an evacuation zone should ensure that their family members evacuate, and then are required to report to work.

5. **All site personnel are essential in preparing the plant for a hurricane. Accordingly, no time off will be permitted unless the absence is a result of previously scheduled days off, vacation, or as approved by your manager.**

ATTACHMENT 10
Hurricane Season Memo
(Page 2 of 2)

6. The following applies for those employees required to remain onsite through the hurricane:

   - Exempt personnel will be paid in accordance with NP-410, Exempt Employee Overtime Compensation.
   - Non-exempt personnel will be paid in accordance with the compensation manual.
   - Bargaining unit personnel will be compensated in accordance with the MOA.
   - If an adequate meal is provided to employees, no overtime meal payment will be made.

7. **FOLLOWING A HURRICANE**, all plant personnel are expected to report to work as scheduled, or when it is safe to do so. At a minimum, plant personnel will contact their supervisor or the Employee Emergency Information Number, **305-246-6445**.

8. For specific employee needs following a hurricane, assistance is available from FPL's Human Resources and Corporate Services. Employees should call the Employee Services Help Line number, 1-800-610-8999.

_____

Site Vice President

Turkey Point Nuclear Plant

ATTACHMENT 11
Preparations Exceptions List
(Page 1 of 1)

Prepared by: _____

Preparations approved by:

_____ _____
Emergency Preparedness Manager Date

_____ _____
Plant General Manager Date

ATTACHMENT 12
Disposition of PTN Hurricane Preparedness Storm Stock
(Page 1 of 1)

Emergency Preparedness, Nuclear Material Management, and the department requesting the material should retain a copy of this request until the material has been returned.

Warehouse Location:	Date:

Department Requesting Material:

Quantity	Description (Include S/N#, P/N#, Model Number, and a detailed description of the material)

Description of job that the material is to used for (include W/O number if applicable):

EP Approval: _____ Date: _____

Material Received By: _____ Date: _____

Material Returned By: _____ Date: _____

ATTACHMENT 13
Severe Weather Preparations Checklist
Emergency Preparedness
(Page 1 of 8)

INITIAL

1. IF notified that a *TROPICAL STORM WARNING* has been issued, THEN Emergency Preparedness shall **ENSURE** the following actions are completed:

A. **ENSURE** Shift Manager has been notified that a *TROPICAL STORM WARNING* is in effect. _____

B. **NOTIFY** Shift Manager that the Emergency Preparedness Coordinator will maintain a record of the meteorological forecasts. _____

C. **DISTRIBUTE** all severe weather checklists, Attachment 14 through Attachment 27. _____

NOTE

- Storm information from any reliable meteorological source (i.e., National Hurricane Center, NOAA, Commercial Weather Service, System Operations Forecaster, local radio or television stations, etc.) should be documented or acquired once every 6 hours or less as appropriate.
- The following information should be updated as available:
  - Present location of the tropical storm
  - Intensity (i.e., wind speeds, tides, etc.)
  - Direction of travel
  - Estimated time and the area expected to reach land
  - Upgrade or downgrade of the status

D. **OBTAIN** and **RECORD** meteorological forecasts as issued by the National Hurricane Center or the National Oceanic and Atmospheric Administration (NOAA) approximately every 6 hours. _____

E. **INFORM** Shift Manager of each advisory. _____

F. **RECORD** date and time of the initial notification of a Tropical Storm. _____

ATTACHMENT 13
Severe Weather Preparations Checklist
Emergency Preparedness
(Page 2 of 8)

INITIAL

1. (continued)

G. **CONTINUE** to record data every 6 hours or less as appropriate until the severe weather is no longer in effect for the facility. _____

H. WHEN the *TROPICAL STORM WARNING* has been lifted for the facility, THEN **DOCUMENT** or acquire documentation displaying the time and dates the *TROPICAL STORM WARNING* was lifted. _____

I. **NOTIFY** Shift Manager that the *TROPICAL STORM WARNING* is no longer in effect. _____

J. **CHECK** all log entries to be correct. _____

K. **MAINTAIN** plant personnel informed of the storm. _____

ATTACHMENT 13
Severe Weather Preparations Checklist
Emergency Preparedness
(Page 3 of 8)

INITIAL

2. IF the arrival of tropical storm force winds (39 mph) has been projected within 72 hours, THEN Emergency Preparedness shall **ENSURE** the following actions are completed:

NOTE

Emergency Preparedness has overall responsibility for storm preparedness.

A. **ENSURE** the Emergency Coordinator is kept informed of the preparation status. _____

NOTE

Steps may be only partially implemented based on management judgment.

B. **CONSULT** with the Plant General Manager for establishing Shift Directors to coordinate storm preparations and to determine what activities of this procedure are to be completed to ensure timely preparation for the severe weather, based on judgment of the potential size and direction of the storm. _____

C. **COORDINATE** the following with the Human Resources Manager:

(1) Plans to evacuate the families of emergency crews, so that those remaining can devote their full efforts to the plant. _____

(2) **ENSURE** camera system for Vice President updates has been set up. _____

(3) Provide information to plant personnel of all relevant personnel issues such as expectations for reporting to work, rumor control, etc. _____

ATTACHMENT 13
Severe Weather Preparations Checklist
Emergency Preparedness
(Page 4 of 8)

INITIAL

2. (continued)

NOTE

When establishing severe weather staff assignments, consideration should be given to the duration of the storm and its intensity. (i.e., forward speed, wind speed, projected path, etc.)

CAUTION

Restrictions on work hours will be suspended when the station officially enters hurricane/severe weather preparation activities for a storm projected to impact the station. Once work hours restrictions are suspended, supervisors must still maintain the observation program for fatigue and provide personnel an opportunity to get adequate rest. Work hour controls will be resumed following the storm when sufficient resources are in place to do so as determined by senior plant management.

D. **COLLECT** staffing requirements from responsible departments to ensure completion of Attachment 31, Recommended Minimum Hurricane Staffing Levels. _____

E. **CONSIDER** any necessary actions involving the AD-AA-101-1004, Work Hour Controls. _____

F. **PERFORM** frequent walkdowns of the plant site and exterior with various key mangers inspecting for and reducing potential missiles. [Reference Section 6.1 Reference 3] _____

G. **COORDINATE** activities of the various plant departments to resolve working level problems that may arise during storm preparations and any licensing issues. _____

H. **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. _____

I. **TRANSMIT** to all department heads copies of Attachment 31, Recommended Minimum Hurricane Staffing Levels upon completion. _____

ATTACHMENT 13
Severe Weather Preparations Checklist
Emergency Preparedness
(Page 5 of 8)

INITIAL

2. (continued)

J. **COORDINATE** the following with the Safety Supervisor:

- **INSPECT** the site for potential safety hazards. _____
- **INSTALL** and **INSPECT** life lines for adequacy, when appropriate. _____
- **ENSURE** medical support and adequate medical supplies are available. _____

K. **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. _____

L. **PERFORM** communications checks of all emergency communication systems in accordance with EP AD-007, Emergency Response Facilities and Equipment Surveillance. _____

(1) **PRESTAGE** Emergency Communications Systems (satellite telephone system, etc.) as required for post-storm use in Control Room. _____

M. **ARRANGE** for televisions/radios, and required antenna systems to monitor media broadcasts of news and weather information. _____

N. **ESTABLISH** a means of communications with the fossil plants. _____

O. **ASSIST** the Emergency Coordinator in determining the need for additional staffing. _____

P. **ASSIST** the Emergency Coordinator in investigating the need for relocation of the TSC and OSC. _____

Q. IF it is necessary to relocate the TSC and OSC, THEN **DETERMINE** alternate locations for relocation and **ENSURE** that the location is available. _____

ATTACHMENT 13
Severe Weather Preparations Checklist
Emergency Preparedness
(Page 6 of 8)

INITIAL

2. (continued)

R. **ENSURE** the TSC and OSC are fully prepared with supplies and emergency equipment in accordance with EP-AD-007, Emergency Response Facilities and Equipment Surveillance, for possible activation. _____

S. **ESTABLISH** a point of contact with Miami-Dade County to obtain periodic status reports on the following:

(1) County storm preparations (evacuation plans, etc.) _____

(2) County water supply _____

a. **DETERMINE** the need to isolate the county water supply based upon declared contamination or possible contamination through communications with the county. _____

b. IF it is necessary to isolate the water supply, THEN **REQUEST** a clearance issued to the Shift Manager to close Raw Water Storage Tank Inlet Isolation Valves. _____

T. **ENSURE** a siren restoration/inspection crew is on standby at the EOF. _____

U. **DISCUSS** with the Emergency Coordinator/Recovery Manager the need to partially or fully staff the EOF/ENC. _____

V. **ENSURE** the EOF has established contact with the FPL storm center, located adjacent to the EOF. _____

W. Periodically **UPDATE** the Hurricane Information Line with updates from the National Hurricane Center. _____

X. **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. _____

ATTACHMENT 13
Severe Weather Preparations Checklist
Emergency Preparedness
(Page 7 of 8)

INITIAL

2. (continued)

Y. **ESTABLISH** phone numbers for personnel to call following the severe weather and ensure these numbers are provided to plant personnel. _____

Z. **CONTACT** St. Lucie management, Juno Beach Staff or elsewhere to arrange for relief workers following the severe weather. _____

AA. **PERFORM** the site facilities responsibilities of Attachment 27, Severe Weather Preparations Checklist Site Facilities. _____

BB. **CONSIDER** the following guidelines for a Category 5 *HURRICANE WARNING*, and may be considered for lesser category hurricanes:

(1) **START** preparations, as directed, to relocate the TSC and OSC:

a. **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. _____

b. **COORDINATE** with the TSC Maintenance Manager to move all portable emergency equipment and supplies to a location accessible from the new TSC/OSC location. _____

c. **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. _____

d. **COORDINATE** with the Nuclear Materials Management Manager to stage bedding, food, and water at a location accessible from the new TSC/OSC location. _____

ATTACHMENT 13
Severe Weather Preparations Checklist
Emergency Preparedness
(Page 8 of 8)

INITIAL

2. BB. (1) (continued)

e. **ESTABLISH** a berthing area and an area for eating and drinking in the Cable Spreading Room or other designated location. _____

f. **ENSURE** a continuous path of access is maintained from the Auxiliary Building to the New Electrical Equipment Room to the Cable Spreading Room. _____

3. WHEN all required actions have been completed OR a required action could **NOT** be completed, THEN **NOTIFY** EP Manager. _____

_____ _____
Signature Date

ATTACHMENT 14 **INITIAL**
Severe Weather Preparations Checklist
Emergency Coordinator
(Page 1 of 2)

1. IF notified that a *TROPICAL STORM WARNING* has been issued, THEN Emergency Coordinator shall **ENSURE** the following actions are completed:

NOTE

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

A. **DETERMINE** the need for additional staffing. _____

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.
- When deciding to release non-essential personnel, consideration should also be given to providing maintenance and hurricane preparation personnel enough time to properly tend to their homes and families, while still allowing plant preparations to continue.

B. **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. _____

C. **INVESTIGATE** the need for relocation of the TSC, OSC, or EOF. _____

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.

D. **ENSURE** that the following remote field stations are habitable and well equipped for local actions:

ATTACHMENT 14
Severe Weather Preparations Checklist
Emergency Coordinator
(Page 2 of 2)

INITIAL

1. D. (continued)

- 480V Load Center Rooms (i.e., hand tools, meter, fuses, herculite, tape, food, water) _____
- Auxiliary Building (i.e., hand tools, herculite, roll plastic, tape, meter) _____
- Cable Spreading Room (i.e., hand tools, meter, fuses, roll plastic, tape, meter, fuses, food, water) _____
- EDG Buildings (i.e., hand tools, meter, fuses, filters, food, water) _____

E. WHEN <u>all</u> required actions have been completed OR a required action could **NOT** be completed, THEN **NOTIFY** EP Manager. _____

_____ _____
Signature Date

ATTACHMENT 15
Severe Weather Preparations Checklist
Maintenance Manager
(Page 1 of 12)

INITIAL

1. IF notified that a *TROPIC STORM WARNING* has been issued, THEN Maintenance Manager shall **ENSURE** the following actions are completed:

A. **SURVEY** construction sites (if applicable) to ensure all light material is either tied down or placed indoors. _____

B. **SURVEY** site laydown areas to secure or remove loose objects. _____

C. **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. (Reference Attachment 30) _____

D. **ENSURE** H2 trailer at U 1 and 2 gashouse is tied down and isolated. _____

E. **ENSURE** that PTF hurricane preparations are satisfactory so as **NOT** to impact the nuclear units. _____

F. **COORDINATE** with the Emergency Coordinator the need to augment FPL manpower with craft personnel, if available. _____

NOTE

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

G. **SOLICIT** volunteers for emergency staffing and coordinate activity with Emergency Preparedness to resolve any personal considerations. _____

H. **CONTACT** additional Maintenance Department personnel that are necessary for hurricane preparations. _____

I. **ESTABLISH** emergency teams to meet the following criteria:

- Provide for emergency maintenance. _____
- Provide for around-the-clock coverage. _____

ATTACHMENT 15
Severe Weather Preparations Checklist
Maintenance Manager
(Page 2 of 12)

INITIAL

1. **(continued)**

J. **ESTABLISH** backup crews for contingency support. _____

K. **CONSIDER** the following guidelines for a Category 5 *HURRICANE WARNING*, and may be considered for lesser category hurricanes:

(1) **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. _____

(2) **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. _____

(3) **DISCUSS** with the Emergency Coordinator what additional protection may be required for the following areas listed in priority order:

a. Component Cooling Water Pump Rooms:

- **PROTECT** components from water and wave action as much as possible (e.g., via sandbagging). _____
- **CHECK** that area deckplates are bolted down and hurricane clips installed. _____

b. Auxiliary Building:

- **BAG** alternate shutdown headset and handset connections. _____
- **PROVIDE** a means for measuring water level in the building. _____
- **CONSIDER** sandbags around MCCs so as to allow access but prevent flooding at low levels. _____

ATTACHMENT 15
Severe Weather Preparations Checklist
Maintenance Manager
(Page 3 of 12)

INITIAL

1. K. (3) b. (continued)

- **SANDBAG** pipe trenches under the outer walls of the CCW rooms and the SI pump room as required. _____
- **SEAL** outer doors (consider sandbags where appropriate). _____
- **CONSIDER** covering the MCCs under areas where water leakage has been known to occur (under ceiling joints). _____

c. Spent Fuel Pit Pumps:

- **BAG** the non-running motors to protect against water intrusion. _____
- **SANDBAG** and **HERCULITE** the entrance to the heat exchanger rooms. _____

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.

d. Turbine Building:

- **WALKDOWN** and **BAG** appropriate equipment (including alternate shutdown headset and handset connections) to protect against water intrusion. _____
- **ENSURE** deckplates are securely bolted down and hurricane clips installed. _____
- **ENSURE** any 18 foot elevation outer wall penetrations are securely plugged. _____

ATTACHMENT 15
Severe Weather Preparations Checklist
Maintenance Manager
(Page 4 of 12)

INITIAL

1. K. (3) (continued)

e. Unit 4 EDG Building:

- **REMOVE** decking and **INSTALL** a ladder so access between the upper and lower levels is possible without travel outside. _____
- **SEAL** and **SANDBAG** the ground floor doors. _____

f. Electrical Equipment Room:

- **PROVIDE** a means for measuring water level in the room. _____
- **SANDBAG** at the door to the Auxiliary Building so as to allow access but prevent flooding at low levels. _____

g. Unit 3 EDG Building:

- **PROVIDE** as much flood protection as possible without impeding the ability of personnel to evacuate toward the turbine building. _____
- **CREATE** a sandbag and herculite floodwall to protect from flooding of the radiator compartment. _____

h. AFW Cage:

- **EXTEND** or **PLUG** the lube oil reservoir vents to prevent water intrusion. _____
- **BAG** the pump governors to protect against water intrusion. _____
- **BAG** the alternate shutdown communications headset and handset connections. _____

ATTACHMENT 15
Severe Weather Preparations Checklist
Maintenance Manager
(Page 5 of 12)

INITIAL

1. K. (3) (continued)

i. 4KV Bus Rooms:

- **SEAL** all doors and penetrations on the 18 foot elevation. **CONSIDER** at least sandbagging, possibly welding the doors. _____
- **PROVIDE** a means for measuring water level in the rooms. _____

j. B MCC Rooms:

- **SEAL** the doors when Operations no longer requires access. _____

k. Computer Room:

- **SEAL** the doors when Operations no longer requires access. _____

l. A MCCs:

- WHEN Operations no longer requires access, THEN **SHIELD** or **WRAP** the MCCs in protective material to minimize water intrusion. _____
- **SANDBAG** to allow access but prevent flooding at low levels. _____

m. Auxiliary Building 10 Foot Elevation:

- **BAG** alternate shutdown headset and handset connections. _____

n. Non-Vital DC Battery and Bus Rooms:

- **SEAL** the doors when Operations no longer requires access. _____

ATTACHMENT 15 **INITIAL**
Severe Weather Preparations Checklist
Maintenance Manager
(Page 6 of 12)

1. K. (continued)

(4) **PROVIDE** support for the remote stations referenced in 0-ONOP-103.3:

CAUTION

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

a. **STATION** Maintenance personnel and equipment (tools, fuses oil, filters) at remote stations that may require dewatering. _____

b. IF possible, THEN **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.

- Control Room _____
- Cable Spreading Room _____
- 480V Load Centers A-D rooms _____
- Auxiliary Building _____

c. **DEPLOY** portable generators where needed. _____

d. **PROVIDE** materials at remote stations to allow sealing of leaking penetrations (such as door thresholds), water collection and water removal. _____

e. **ENSURE** adequate food and water is provided at remote stations for the duration of tropical storm force winds. _____

ATTACHMENT 15
Severe Weather Preparations Checklist
Maintenance Manager
(Page 7 of 12)

INITIAL

1. K. (continued)

(5) **PROVIDE** facilities for the collection of human waste at remote stations, TSC/OSC and the Control Room, since the sewage system may be out of service.(Normally on the 18' elevation tied to the south side of the U4 SGFP room, and in the auxiliary building 18' elevation) _____

(6) IF relocation of the OSC/TSC is necessary, AND space permits, THEN **COORDINATE** with Emergency Preparedness the relocation of desks and chairs as required to the new OSC/TSC. _____

ATTACHMENT 15 **INITIAL**
Severe Weather Preparations Checklist
Maintenance Manager
(Page 8 of 12)

2. IF the arrival of tropical storm force winds (39 mph) has been projected within 72 hours, THEN Maintenance Manager shall **ENSURE** the following actions are completed:

NOTE

- The following requirements are applicable when the Turbine Rolling Covers are located on the Turbine deck:
  - In the event that sustained winds in excess of 45 mph or a *TROPICAL STORM WARNING* are forecast, the canvas membranes should either be retracted or removed and the space frame structure tied down, and the wheels chocked.

A. IF Turbine Rolling Covers are on the turbine deck, THEN either **REMOVE** or **TIE-DOWN** the Turbine Rolling Covers based on storm severity and management discretion. _____

B. **PROVIDE** a truck and driver to obtain foodstuffs and other required items. _____

C. IF temporary sandbag dikes are required, THEN **BEGIN** preparation to fill bags and have available at affected area for installation. _____

D. **SURVEY** the plant site for loose objects and **ENSURE** all weather barriers, such as doors and stoplogs are in operable condition. _____

E. **INSPECT** all trailer and portable building tie downs and **REPAIR** as necessary. _____

F. **PROVIDE** support to other departments in making severe weather preparations. _____

G. **INSPECT** outdoor instrumentation and controls for weather proof conditions and **PROTECT** equipment as necessary in accordance with PTN-ENG-SENS-07-021, TEMPORARY SEALING OF PLANT EQUIPMENT. _____

H. **DETERMINE** whether crane use should be continued. _____

ATTACHMENT 15
Severe Weather Preparations Checklist
Maintenance Manager
(Page 9 of 12)

INITIAL

2. (continued)

I. **LOCATE** the portable diesel fuel tank and associated forklift. _____

(1) **ENSURE** both are stored safely for use after a severe weather event. _____

(2) **LOCATE** any required fuel transfer hoses and **PRE-STAGE** with the portable tank. _____

J. **ENSURE** all temporarily removed tornado missile barriers are reinstalled. _____

K. **REMOVE** all carbon dioxide cylinder storage racks from the 18-foot elevation near the U3 and U4 condenser pit areas. _____

L. WHEN directed by the Shift Manager, THEN **REMOVE** any TSA that has been installed to provide defense in depth backup power to the SFP cooling water pumps from the opposite unit. _____

NOTE

Battery powered lighting is available near the Unit 4 SFP cooling system equipment in portable light storage locker PL-9 (Unit 4 CCW area).

(1) IF lighting is required to remove the TSA, THEN **OBTAIN** battery powered lighting. _____

ATTACHMENT 15
Severe Weather Preparations Checklist
Maintenance Manager
(Page 10 of 12)

INITIAL

3. IF notified that a *HURRICANE WATCH* has been issued, THEN Maintenance Manager shall **ENSURE** the following actions are completed:

   A. **CLEAN** sumps and sump pump suction strainers in the auxiliary building, electrical cable manholes, tendon gallery, condensate pits, and 4160 volt switchgear rooms and **TEST RUN** all sump pumps as follows: _____

      (1) **CHECK** water is in the sump. _____

      (2) Manually **START** pump. _____

      (3) **ENSURE** pump is removing water. _____

NOTE

- When it is necessary to locate a wheeled piece of equipment or cabinet near a safety related component, the wheels should be locked to prevent a seismic event from causing the piece of equipment to become a missile hazard.
- Whenever relocating equipment into an area with seismic mounted equipment, the Shift Manager should be consulted to determine an appropriate resolution. The solution may be simple relocation or the need for a Condition Report to determine qualifications.

ATTACHMENT 15 **INITIAL**
Severe Weather Preparations Checklist
Maintenance Manager
(Page 11 of 12)

3. (continued)

CAUTION

- The following are examples of how Seismic Qualification could be adversely affected:
  - chaining a ladder to safety related piping
  - locating a piece of equipment (storage cabinet, toolbox, Xerox machine) near a safety related component such that it could fall against the safety related component, damaging the component.
- Missile hazards can be created by tools/cabinets rolling or falling onto equipment or electrical cables.
- Equipment damage could be caused by resting a tool box on top of a flow transmitter or electrical conduit.

B. **CHECK** all instruments located outdoors to be in weather proof condition, inspect cases, gaskets, etc. and **WEATHERPROOF** those that are **NOT** with plastic film and tape. _____

C. **PERFORM** 0-SMM-102.1, Flood Protection Stoplog and Penetration Seal Inspection, to verify operability and adequate inventory of flood protection equipment. _____

D. **LOCATE** the portable diesel fuel tank and associated forklift. _____

(1) **ENSURE** both are stored safely for use after a severe weather event. _____

(2) **LOCATE** any required fuel transfer hoses and **PRE-STAGE** with the portable tank. _____

ATTACHMENT 15 **INITIAL**
Severe Weather Preparations Checklist
Maintenance Manager
(Page 12 of 12)

3. (continued)

NOTE

- If lowering high mast lights, the fixture must be lowered prior to winds exceeding 40 mph on-site.
- Each fixture requires approximately 30 minutes to lower.
- Increased safety precautions may be necessary due to the possibility of having to plug the lowering winch into a hot circuit while raining.

E. **CONSIDER** the following guidelines if winds are expected to exceed 120 mph, and may be considered for storms with lesser winds: _____

(1) **LOWER** the four high-mast security lights in the vicinity of critical equipment (#8, #9, #12, and #13). _____

(2) **SECURE** lowered high-mast light fixtures using an approved tie down method. _____

4. WHEN all required actions have been completed OR a required action could **NOT** be completed, THEN **NOTIFY** EP Manager. _____

_____ _____
Signature Date

ATTACHMENT 16
Severe Weather Preparations Checklist
Security Manager

(Page 1 of 1)

INITIAL

1. IF notified that a *TROPICAL STORM WARNING* has been issued, THEN Security Manager shall **INSPECT** areas surrounding plant security barriers for any loose objects or other conditions that may reduce security barrier effectiveness under severe weather conditions. _____

2. IF notified that a *HURRICANE WATCH* has been issued, THEN Security Manager shall **CONSULT** with the Emergency Coordinator to determine the need to ensure that all visitors leave the Owner Controlled Area, and are informed of the *HURRICANE WATCH*. _____

3. WHEN all required actions have been completed OR a required action could **NOT** be completed, THEN **NOTIFY** EP Manager. _____

_____ _____
Signature Date

ATTACHMENT 17
Severe Weather Preparations Checklist
Radiation Protection Manager
(Page 1 of 2)

INITIAL

1. IF notified that a *TROPICAL STORM WARNING* has been issued, THEN Radiation Protection Manager shall **ENSURE** all radioactive material containers are properly stored and secured. _____

2. IF notified that a *HURRICANE WATCH* has been issued, THEN Radiation Protection Manager shall **ENSURE** the following actions are completed:

   A. **NOTIFY** Radiation Protection personnel to inspect outside areas for radioactive materials that need to be stored inside or protected from severe weather. _____

   B. **NOTIFY** Radiation Protection 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. _____

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

   D. Temporarily **STORE** the G5 Tanker inside the Dry Storage Warehouse. _____

   E. **CONSIDER** the following guidelines for a Category 5 *HURRICANE WARNING*, and may be considered for lesser category hurricanes:

      (1) **PERFORM** detailed surveys of the main passageways and establish suitable work areas if the TSC/OSC is relocated to the Auxiliary Building. _____

      (2) **LOCATE** sufficient RP supplies and equipment (including monitoring instrumentation) in the Auxiliary Building to support the emergency teams. _____

      (3) 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. _____

ATTACHMENT 17
Severe Weather Preparations Checklist
Radiation Protection Manager
(Page 2 of 2)

INITIAL

2. **(continued)**

F. **DETERMINE** the need for batteries to support air sampling and acquire from Issues Warehouse as necessary. _____

G. **OBTAIN** the Radiation Protection instrumentation list for inventory tracking purposes. _____

H. **ENSURE** radioactive waste processing and ventilation is terminated prior to and during the hurricane. _____

I. **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). _____

J. **DISTRIBUTE** assigned dosimetry to personnel assigned to stay onsite during the hurricane. _____

K. **ENSURE** survey instruments are staged in the sheltering locations. _____

L. **ENSURE** Staffing Plans are in place to meet the positions specified in Attachment 31, Recommended Minimum Hurricane Staffing Levels. _____

M. **ENSURE** radiation posting signs outside are removed. _____

N. **CONSIDER** relocating TLDs to a more secure location. _____

O. **PERFORM** the site facilities duties of Attachment 27, Severe Weather Preparations Checklist Site Facilities. _____

3. WHEN <u>all</u> required actions have been completed OR a required action could **NOT** be completed, THEN **NOTIFY** EP Manager. _____

_____ _____
Signature Date

ATTACHMENT 18
Severe Weather Preparations Checklist
Land Utilization Supervisor
(Page 1 of 1)

INITIAL

1. IF notified that a *TROPICAL STORM WARNING* has been issued, THEN Land Utilization and Facilities Supervisor shall:

A. **ARRANGE** with each outside contractor within LU responsibility to remove, tie down, or otherwise secure his 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. (All terrain forklift, tractor, torch, cable cutters, chainsaws and support equipment) _____

C. **STAGE** water trailer in a secure location. _____

D. **SURVEY** the Sea Survival area and secure or remove loose material. _____

E. **ENSURE** canal pumps are tied down or otherwise secured. _____

F. **ENSURE** dumpsters are emptied prior to the closure of the county landfills. _____

G. Once dumpsters are emptied, **COORDINATE** with Mechanical Maintenance to remove/relocate the dumpsters. _____

2. WHEN all required actions have been completed OR a required action could **NOT** be completed, THEN **NOTIFY** EP Manager. _____

_____ _____
Signature Date

ATTACHMENT 19
Severe Weather Preparations Checklist
Materials Management Manager
(Page 1 of 2)

INITIAL

1. IF notified that a *TROPICAL STROM WARNING* has been issued, THEN Materials Management Manager shall **ENSURE** the following actions are completed:

NOTE

- The following are examples of the types of emergency items and materials that may be utilized during severe weather.
  - Wire
  - Lumber
  - Rope
  - Nails
  - Tape
  - Wooden wedges
  - Buckets
  - Caulking
  - Plastic Film
  - Rain Gear
  - Flashlights and Batteries
  - Portable bedding equipment
  - Portable Fans, Air Movers
  - Cloth Sandbags
  - Portable Radios

A. **CHECK** supply of emergency items and materials to ensure adequate inventory exists for personnel remaining at the plant. _____

B. **INVENTORY** all food storage facilities. _____

C. **ENSURE** a three day supply of the following for personnel staying on site during the storm:

- Food items _____
- Water, beverages _____
- Paper plates, cups _____
- Plastic utensils _____
- Paper towels _____
- Soap _____

D. **ARRANGE** for purchase of portable bedding for on site emergency responders, as required, by the Emergency Coordinator. _____

E. **ENSURE** all on site vehicles have been fueled, and gas storage tanks/diesel fuel storage tanks are full. _____

ATTACHMENT 19
Severe Weather Preparations Checklist
Materials Management Manager
(Page 2 of 2)

INITIAL

1. **(continued)**

   F. **WRAP, ELEVATE, RELOCATE**, or otherwise **PROTECT** spare motors and other parts or tools that may be required for recovery. _____

   G. **ENSURE** the gas cylinders are properly secured in the gas house outside the protected area (southwest of main truck gate and south of the Hazardous Waste Building).

2. WHEN all required actions have been completed OR a required action could **NOT** be completed, THEN **NOTIFY** EP Manager. _____

_____ _____
Signature Date

ATTACHMENT 20
Severe Weather Preparations Checklist
Supervisor - Contract Management

(Page 1 of 1)

INITIAL

1. IF notified that a *HURRICANE WATCH* has been issued, THEN Supervisor - Contract Management shall **ARRANGE** with each outside contractor working within the plant property to remove, tie down, or otherwise secure equipment and material associated with the contract work to keep it from blowing away. _____

2. WHEN all required actions have been completed OR a required action could **NOT** be completed, THEN **NOTIFY** EP Manager. _____

_____ _____
Signature Date

ATTACHMENT 21 **INITIAL**
Severe Weather Preparations Checklist
Mechanical Maintenance Department Head
(Page 1 of 11)

1. IF notified that a *HURRICANE WATCH* has been issued, THEN Mechanical Coordinator shall **ENSURE** the following actions are completed:

NOTE

- The combined capacity of pumps (1) through (6) below should equal or exceed 4900 GPM with pumps (1) and (2) making up the bulk of this capacity. The capacity of pumps (7) and (8) 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.

A. **INSTALL** portable dewatering pumps, portable electric generators with fuel supplies, and associated suction and discharge hoses in the following areas:

(1) 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'). _____

(2) 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'.

(3) On the floor, just east of Unit 3 HDP. _____

(4) On the floor, just east of Unit 4 HDP. _____

(5) By Unit 3 Blowdown Flash Tank. _____

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

ATTACHMENT 21
Severe Weather Preparations Checklist
Mechanical Maintenance Department Head
(Page 2 of 11)

INITIAL

1. A. **(continued)**

(7) Unit 3 CCW Pump Room north end. _____

(8) Unit 4 CCW Pump Room south end. _____

(9) Unit 3 RHR Room Sump. _____

(10) Unit 4 RHR Room Sump. _____

(11) Auxiliary Building Sump. _____

(12) Unit 3 EDG Floor Drains. _____

CAUTION

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

(13) Unit 3 4KV A and B Bus Switchgear Room. _____

(14) Unit 4 4KV A and B Bus Switchgear Room. _____

(15) Radwaste Building Truck Bay with discharge to Radwaste Building Floor Drain to #2 WHT. _____

NOTE

Drain plug installation should **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.

B. **INSTALL** drain plugs per Attachment 29, Drain Plugs Locations and Installation after or during installation of portable dewatering pumps as necessary based on the potential for flooding (normally Category 4 or 5). _____

ATTACHMENT 21 **INITIAL**
Severe Weather Preparations Checklist
Mechanical Maintenance Department Head
(Page 3 of 11)

1. (continued)

NOTE

- Stoplog installation should **NOT** be initiated unless the approaching hurricane is judged to present imminent potential of external flooding.
- Sandbags should be placed at the bottom of the stoplogs, as necessary, to prevent water intrusion through gaps between stoplog and floor.
- Sandbag dikes may be used to fortify either side of a stoplog.
- 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.

C. **INSTALL** stoplogs on plant flood protection walls as follows listed in priority order:

(1) Stoplog 19 - Entrance to Unit 3 Component Cooling Water Pump Area. _____

(2) Stoplog 20 - Entrance to Unit 4 Component Cooling Water Pump Area. _____

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

(4) Stoplog 18 - Entrance to Auxiliary Building Chemical Storage Area (East door to BAST Room). _____

(5) Stoplog 22 - Entrance to Unit 4 Spent Fuel Pit Heat Exchanger Room. _____

ATTACHMENT 21
Severe Weather Preparations Checklist
Mechanical Maintenance Department Head
(Page 4 of 11)

INITIAL

1. C. (continued)

(6) Radwaste Building Stoplogs.

a. Stoplog SL-1 - Northeast door to Radwaste Building. _____

b. Stoplog SL-2 - Southeast door to Radwaste Building. _____

c. Stoplog SL-4 - Top and Bottom - Overhead doorway Truck Ramp to Radwaste Building. _____

(7) Stoplog 21 - Entrance to Unit 4 New Fuel Storage Area. _____

(8) Stoplog 17 - Entrance to Unit 3 New Fuel Storage Area. _____

(9) Stoplogs 14 and 15 - Between Unit 3 4160 Volt Switchgear Room and EDG Building. _____

(10) Stoplogs 1 and 2 - South of Unit 4 Steam Generator Feed Pump Room. _____

(11) Stoplog 3 - Southeast of Unit 4 Lube Oil Reservoir. _____

(12) Stoplog 8 - Southeast of Unit 3 Lube Oil Reservoir. _____

(13) Stoplogs 12 and 13 - East of Unit 3 Main Transformer. _____

(14) Stoplogs 6 and 7 - East of Unit 4 Main Transformer. _____

(15) Stoplogs 9 and 10 - South Wall of Unit 3 Condenser Pit. _____

(16) Stoplog 5 - Entrance to Unit 4 Condenser Pit. _____

(17) Stoplog 11 - Entrance to Unit 3 Condenser Pit. _____

ATTACHMENT 21 **INITIAL**
Severe Weather Preparations Checklist
Mechanical Maintenance Department Head
(Page 5 of 11)

1. (continued)

CAUTION

When sandbagging manhole covers, no personnel are allowed in the tendon galleries.

D. **ENSURE** east tendon gallery manhole covers (one per unit) are installed and covered with sandbags. _____

E. **REMOVE** sandblast booth. _____

F. **CLOSE** the following outside doors; and **INSTALL** latch pins where applicable:

(1) Cable Spreading Room (Doors 132-1, 132-2 and 104-3 to roof) _____

(2) Unit 3 New Fuel Storage Room (rollup door) _____

(3) Unit 4 New Fuel Storage Room (rollup door) _____

(4) Unit 3 Spent Fuel Pit/Install Latch Pins _____

(5) Unit 4 Spent Fuel Pit/Install Latch Pins _____

(6) Unit 3 CCW Surge Tank Room _____

(7) Unit 4 CCW Surge Tank Room _____

(8) West Auxiliary Building Main Passageway to Turbine Building (Door 58-2) _____

(9) Unit 3 480 V Load Center Room (Door 96-1) _____

(10) Unit 4 480 V Load Center Room (Door 94-1) _____

(11) Unit 3 4160V Switchgear Room (Doors 70-1, 70-2, 71-1) _____

(12) Unit 4 4160 V Switchgear Room (Doors 67-1, 67-2, 68-1) _____

ATTACHMENT 21
Severe Weather Preparations Checklist
Mechanical Maintenance Department Head
(Page 6 of 11)

INITIAL

1. F. **(continued)**

(13)	CVCS Holdup Tank Enclosure (2)	_____
(14)	3A EDG Room (Doors 73-1, 75-1)	_____
(15)	3B EDG Room (Doors 72-1, 74-1)	_____
(16)	East Auxiliary Building Main Passageway to Unit 4 CCW Room (Door 58-1)	_____
(17)	Control Building Elevator Vestibule (4)	_____
(18)	Containment Purge Supply Fan Room	_____
(19)	Auxiliary Building Laundry Room (Door 46-2)	_____
(20)	Intake Storage Room (1)	_____
(21)	Unit 3, B MCC Room (Doors 63-1, 63-2)	_____
(22)	Unit 4, B MCC Room (Doors 61-1, 61-2)	_____
(23)	Unit 3 Electrical Penetration Rooms (Doors 20-1 South, 19 1 West)	_____
(24)	Unit 4 Electrical Penetration Rooms (Doors 26-1 North, 27 1 West)	_____
(25)	Generator Exciter Switchgear Enclosures (2)	_____
(26)	Radwaste Building Doors (East, North, Loading Ramp, Elevator)	_____
(27)	Condensate Polisher/E Load Center/B43 MCC Building	_____
(28)	Computer Room (Doors 62-1, 62-2)	_____
(29)	DC Enclosure Building	_____
(30)	Boric Acid Storage Room (Door 41-1)	_____
(31)	Safety Injection Pump Rooms (2)	_____

ATTACHMENT 21
Severe Weather Preparations Checklist
Mechanical Maintenance Department Head
(Page 7 of 11)

INITIAL

1. F. (continued)

(32) Amertap Control Center/4G MCC Enclosure (2) _____

(33) C Bus - 4160 Volt Switchgear Enclosure (2) _____

(34) Nuclear Gas House (1) _____

(35) Control Room to Auxiliary Building Roof (Door 108 A-2) _____

(36) Control Room to Fan Room (Doors 108 A-3, 108 A-4) _____

(37) Load Center F & G Enclosures (2) _____

(38) Unit 4 EDG Building (Doors 133-1, 133-3, 138-1, 138-2, 136 1, 141-1) _____

(39) Dry Storage Warehouse _____

G. **ENSURE** the following roof hatches are installed and bolted in place.

- Auxiliary Building - Stairwell to 10 ft. elevation _____
- Auxiliary Building - RHR Pump and Hx Rooms _____
- Auxiliary Building - Monitor Tank Room _____
- Auxiliary Building - Demin Cubicles _____
- Auxiliary Building - BA Evaporator Rooms _____
- Radwaste Building _____

H. **ENSURE** main passageways are cleared. _____

ATTACHMENT 21 **INITIAL**
Severe Weather Preparations Checklist
Mechanical Maintenance Department Head
(Page 8 of 11)

1. (continued)

NOTE

If unable to secure any of the items in Attachment 21 Step 1.I and Attachment 21 Step 1.J below, they should be stored in the Machine Shop, Maintenance Shop or Dry Storage Building.

I. **REMOVE** items from areas subject to high winds, for example:

- Loose trash and debris _____
- Tools _____
- Sheet metal _____
- Empty containers, trash cans, drums _____
- Unnecessary hoses, electrical cords, welding cable _____
- Temporary power panels _____
- Lumber, pallets, platforms, work stations _____
- Cleaning equipment _____
- Portable resin funnels on Auxiliary Building roof _____

J. **TIE DOWN** or **SECURE** the following loose equipment:

- Gas trailers (N2 Trailer in RCA, etc.) _____
- Portable dewars _____
- Ladders _____
- Needed hoses, electrical cords _____
- Gang boxes _____
- Signs _____

ATTACHMENT 21 **INITIAL**
Severe Weather Preparations Checklist
Mechanical Maintenance Department Head
(Page 9 of 11)

1. (continued)

NOTE

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

K. **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. _____

L. **FUEL** and **CHOCK** the wheels of the diesel instrument air compressors and stage additional secured fuel drums/tanks adjacent to the compressors. _____

M. **ENSURE** that the portable diesel fuel tank is topped off and operational for use after the storm and that any required fuel transfer hoses are stored with the tank. _____

N. **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. _____

O. **CHECK** and if necessary, **CLEAN** fuel oil tank roof vents to assure adequate pressure relief. _____

P. **BOLT** or otherwise **SECURE** the hatches on the chemical feed tanks. _____

Q. **CLEAN** the intake trash pit. _____

R. **TIE DOWN** intake trash rakes and hoists in such a manner that they are secure, yet readily available if needed. _____

S. **DOG** the intake area gantry crane, the cask crane and the turbine deck gantry crane and **ENSURE** the hooks are fully raised. _____

ATTACHMENT 21 **INITIAL**
Severe Weather Preparations Checklist
Mechanical Maintenance Department Head
(Page 10 of 11)

1. **(continued)**

T. **DESIGNATE** storm duty vehicles and **PERFORM** the following:

(1) **ESTABLISH** a designated location for storm duty vehicles inside the Protected Area and RCA. _____

(2) **ENSURE** these vehicles are serviced and fueled. _____

(3) **MOVE** unnecessary vehicles outside the Protected Area. _____

U. **REMOVE** or adequately **SECURE** scaffolding that would be exposed to high winds. _____

V. **TIE DOWN** or **REMOVE** portable toilets, air compressors, and gangboxes; wire the gangboxes shut. _____

W. **DISASSEMBLE** and **REMOVE** temporary buildings **NOT** having tie-downs (i.e., the wooden buildings at the containment equipment hatches). _____

X. **MOVE** valuable equipment to high ground. _____

Y. IF winds greater that 120 mph are expected, THEN **ENSURE** the Water Treatment Plant ECOLOCHEM trailers are tied down. _____

Z. **MOVE** Hydrazine Tank into small Chemical Storage Building east of Unit 4 EDGs. _____

AA. **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. _____

ATTACHMENT 21
Severe Weather Preparations Checklist
Mechanical Maintenance Department Head
(Page 11 of 11)

INITIAL

1. **(continued)**

BB. **ENSURE** security ballistic shields located on the Turbine Deck (location 4 in Attachment 32), the Auxiliary Building roof (location 5 in Attachment 32), the Radwaste Building roof (locations 1, 2, 6 and 7 in Attachment 32) and the Spent Fuel Pit entrance landing (locations 3, 8, 9 in Attachment 32) are tied down, removed, or placed in a safe configuration. _____

CC. **SECURE** any plywood doors on the Issues Warehouse. _____

DD. **TAKE** portable bedding to Control Room 6 hours before hurricane is projected to hit. _____

EE. **ESTABLISH** emergency staffing to meet the staffing plans outlined in Attachment 31, Recommended Minimum Hurricane Staffing Levels. _____

NOTE

Security shall be notified prior to performing the following step.

FF. **ENSURE** the temporary delay barrier fencing located on the Northwest side of the Radiation Protection building is tied down, removed, or placed in a safe configuration. _____

GG. **PERFORM** the site facilities duties of Attachment 27, Severe Weather Preparations Checklist Site Facilities. _____

HH. WHEN all required actions have been completed OR a required action could **NOT** be completed, THEN **NOTIFY** EP Manager. _____

_____ _____
Signature Date

ATTACHMENT 22
Severe Weather Preparations Checklist
OSC I&C Coordinator
(Page 1 of 2)

INITIAL

A. **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 Attachment 28, Details for Flood Protection Dike for guidance.

(1) 4KV A and B Bus Switchgear Rooms (50 each door) _____

(2) Turbine Area 18 ft Elevation - North and South Ends (500 each) _____

(3) Computer Room (60) _____

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

(5) BAST Room Door (30) _____

(6) Radwaste Building Doors (50 each door) _____

(7) RP Building, Maintenance Building, Nuclear Administration Building, Nuclear Entrance Building, Training Building doors (30 each) _____

(8) CCW Rooms (200 each) _____

(9) Dry Storage Warehouse (100) _____

(10) TSC (100) _____

(11) IF resources permit, THEN the following areas may also be done:

a. Machine Shop _____

b. Nuclear Materials Issue Warehouse _____

c. Central Receiving Facility _____

ATTACHMENT 22
Severe Weather Preparations Checklist
OSC I&C Coordinator
(Page 2 of 2)

INITIAL

A. (11)

d. Main Truck Gate Entry Building _____

e. Water Treatment Gate Entry Building _____

f. Security Emergency Diesel Generator Enclosure. _____

B. **ENSURE** the gas cylinders are properly secured in the Gas House inside the RCA (East of Unit 4 Dearator). _____

C. **ESTABLISH** emergency staffing to meet the staffing plans. _____

D. WHEN all required actions have been completed OR a required action could **NOT** be completed, THEN **NOTIFY** EP Manager. _____

_____ _____
Signature Date

ATTACHMENT 23
Severe Weather Preparations Checklist
OSC Electrical Coordinator

(Page 1 of 2)

INITIAL

A. **ENSURE** all doors to plant transformer control panels, outdoor electrical cabinets, etc. are closed and secured. _____

B. **COORDINATE** with System Protection to ensure the switchyard is prepared for severe weather. _____

C. **DETERMINE** if prestaging of portable generators is necessary (OSC, etc.). _____

D. **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. _____

E. **ENSURE** that the hatch cover/grating above each Heater Drain Pump, Condensate Pump, Steam Generator Feed Pump, and Auxiliary Transformer is secured. _____

NOTE

- Before locking dampers closed or installing protective covers, ensure Operations will **NOT** require use of the blocked fans.
- When the vent fans listed in 0-ONOP-103.3 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.

F. **ENSURE** that the dampers of those openings equipped with dampers are locked in the closed position.

- Spent Fuel Pit Inlet Air Vents _____
- New Fuel Storage Room Fan Inlet Vent _____
- Spent Fuel Pit Heat Exchanger Room Fan Inlet Vent _____
- Spent Fuel Pit Heat Exchanger Room Exhaust Vent _____
- Containment Purge Supply Fan Air Intake _____

G. **SECURE** electrical service to temporary facilities. _____

ATTACHMENT 23
Severe Weather Preparations Checklist
OSC Electrical Coordinator
(Page 2 of 2)

INITIAL

H. **PROTECT** the phone equipment rooms located in the support buildings (i.e., sandbags, visqueen, caulking). _____

NOTE

- Removal of the microwave dish antenna may require crane support.
- The microwave dish antenna on the NAB should be removed if winds are projected to exceed 140 mph.
- The ESATCOM dish antenna on the NAB should be removed if winds are projected to exceed 125 mph.

I. **COORDINATE** removal of the microwave dish on the NAB. _____

J. **COORDINATE** removal of the ESATCOM dish on the NAB. _____

K. **PROVIDE** weather protection for Lighting Panels, Fire Protection Panels, and Distribution Panels as appropriate. _____

L. **CONSIDER** strapping the doors of the F&G load centers closed, as time allows. _____

M. **ESTABLISH** emergency staffing to meet the staffing plans. _____

N. **PERFORM** site facilities duties. _____

O. IF personnel are relocated to areas containing Halon systems, THEN **COORDINATE** with the TSC Operations Manager and **DISABLE** Halon in accordance with 0-OP-016.5, Halon Suppression System. _____

ATTACHMENT 24
Severe Weather Preparations Checklist
TSC Chemistry Supervisor
(Page 1 of 1)

INITIAL

A. **ARRANGE** to have the fuel oil storage tanks and day tanks for the Emergency Diesel Generators topped off. _____

NOTE

If the Unit 3 Diesel Oil Storage System is rendered inoperable by the storm, and operation of the emergency diesel generators is required for safe shutdown, an emergency supply of diesel fuel oil will be needed within 24 hours to refill the day tanks. The supply truck must contain a pump and a sufficient amount of hose to make the necessary connections to the remote fill lines.

(1) **ARRANGE** with the diesel oil suppliers for possible emergency deliveries. _____

B. IF required, THEN **ISOLATE** acid and caustic sources when adequate inventories of acid and caustic are available. (Water Treatment Plant, Condensate Polishing Buildings) _____

C. WHEN the hurricane is less than 2 hours from the plant, THEN **ENSURE** the Shift Manager has terminated all radioactive release permits. _____

D. **ENSURE** Staffing Plans are in place. _____

E. **PERFORM** site facilities duties. _____

F. WHEN all required actions have been completed OR a required action could **NOT** be completed, THEN **NOTIFY** EP Manager. _____

_____ _____
Signature Date

ATTACHMENT 25
Severe Weather Preparations Checklist
Security Manager
(Page 1 of 2)

INITIAL

1. IF notified that a *HURRICANE WATCH* has been issued, THEN Security Supervisor shall **ENSURE** the following actions are completed:

A. **ASSIGN** security personnel to observe filling sandbags so as **NOT** to delay their entering the plant. _____

B. **ENSURE** that all visitors have been evacuated in an orderly manner from the Owner Controlled Area in accordance with 0-EPIP-20110, CRITERIA FOR AND CONDUCT OF OWNER CONTROLLED AREA EVACUATION. _____

C. **MAINTAIN** an accurate list of personnel who are to remain on site and **CHECK** this list against a Security printout of personnel on site. _____

D. **COORDINATE** the deployment of Security personnel during the severe weather. _____

E. **ENSURE** that the Security Diesel is in standby. _____

F. **PREPARE** for the Suspension of Safeguards, as necessary. _____

G. **PERFORM** the site facilities duties of Attachment 27, Severe Weather Preparations Checklist Site Facilities. _____

H. IF safe to do so, THEN **ASSIGN** outside patrol to make frequent checks of Palm Drive between the plant and SW 117th Avenue to ensure that roadway is open. **ADVISE** the Shift Manager if the road is closed. WHEN patrol must be suspended, THEN **PARK** the patrol vehicle inside the protected area. _____

I. **OPEN** FPL parking lot to all employees and make announcement over Plant Page encouraging employees to move their vehicles to the highest available parking area. _____

ATTACHMENT 25
Severe Weather Preparations Checklist
Security Manager
(Page 2 of 2)

INITIAL

1. (continued)

J. WHEN all required actions have been completed OR a required action could **NOT** be completed, THEN **NOTIFY** EP Manager. _____

_____ _____
Signature Date

ATTACHMENT 26
Severe Weather Preparations Checklist
Fire Protection Supervisor
(Page 1 of 2)

INITIAL

1. IF notified that a *HURRICANE WATCH* has been issued, THEN Fire Protection Supervisor shall **ENSURE** the following actions are completed:

A. **FUEL** all fire protection equipment. _____

B. **RELIEVE** personnel as directed. _____

C. **CONDUCT** a tour of Fire Watch Posts and the Plant to ensure the following are performed:

- Fire protection equipment storage areas are secured. _____
- All fire hose cabinet doors are shut and secured. _____
- All fire hose reels are secured from moving. _____
- All local alarm panel doors are closed. _____
- All compensatory hoses are tied down. _____
- All portable fire extinguishers are properly secured or tied down. _____

D. **ENSURE** adequate maintenance personnel are available onsite to support fire watch activities immediately following the hurricane. _____

E. **DOCUMENT** a review of the transient combustibles placed in the power block per 0-ADM-016.1, Transient Combustible and Flammable Substances Program. _____

F. **ENSURE** equipment for firefighting is gathered and in a secure location prior to onset of storm. _____

ATTACHMENT 26
Severe Weather Preparations Checklist
Fire Protection Supervisor
(Page 2 of 2)

INITIAL

1. (continued)

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

(1) **NOTIFY** and **CALL IN** needed personnel. _____

(2) **CONDUCT** a tour of all posts. _____

(3) **RETURN** to normal shift schedule and staffing. _____

H. WHEN all required actions have been completed OR a required action could **NOT** be completed, THEN **NOTIFY** EP Manager. _____

_____ _____
Signature Date

ATTACHMENT 27
Severe Weather Preparations Checklist
Site Facilities
(Page 1 of 3)

1. Responsibility for the site facilities are as follows:

A. Emergency Preparedness:

- Central Receiving Facility
- Overflow Building
- Nuclear Processing Building
- TSC Building (with the exception of the TSC)
- Fab Shops/Trailers (as assigned)

B. OSC Mechanical Coordinator:

- Nuclear Administration Building
- Machine Shop Building
- Nuclear Professional Building

C. OSC Electrical Coordinator:

- Nuclear Maintenance Building

D. TSC Chemistry Supervisor:

- WTP Nuclear Chemistry/Chemical Storage
- Cold Chemistry Lab

E. TSC Radiation Protection Supervisor:

- RCA Control Point Building
- Dry Storage Warehouse
- Radwaste Building
- RCA Dressout Building

ATTACHMENT 27
Severe Weather Preparations Checklist
Site Facilities
(Page 2 of 3)

INITIAL

1. **(continued)**

   F. TSC Security Supervisor:

   - Nuclear Entrance Building
   - Main Truck Gate Entry Building
   - Water Treatment Gate Entry Building
   - Security Emergency Diesel Generator Enclosure

   G. TSC Supervisor:

   - Technical Support Center

   H. TSC Technical Assistant to the Emergency Coordinator:

   - Nuclear Training Building

   I. PTN Information Management (IM) Nuclear Supervisor:

   - Critical Computer Applications and Data

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 Attachment 27 Step 1.

   A. **ENSURE** high value items are stored off the ground floor and away from windows:

   - Computers and peripherals _____
   - Laboratory equipment _____
   - Instruments _____
   - Photocopying equipment _____

ATTACHMENT 27
Severe Weather Preparations Checklist
Site Facilities
(Page 3 of 3)

INITIAL

2. **A.** **(continued)**

- Communications equipment _____

B. **ENSURE** that plant documents are stored off of the ground floor and away from windows:

- Plant procedures _____
- Engineering drawings _____
- Quality Assurance records _____
- Personnel records _____
- Procurement documentation _____
- Contracts, invoices, budget information _____
- Maintenance documents _____
- FSAR, Tech Specs, Vendor Manuals _____

C. **ENSURE** that sandbags required per 0-EPIP-20106 have been or are being installed satisfactory. _____

D. **ENSURE** critical computer applications and data are backed up, replicated, or duplicated in a secure location. _____

E. **ENSURE** nonessential equipment is deenergized. _____

F. **ENSURE** windows and glass doors are boarded over, as time permits. _____

G. **ENSURE** window blinds are closed. _____

H. **ENSURE** doors to rooms having windows are closed. _____

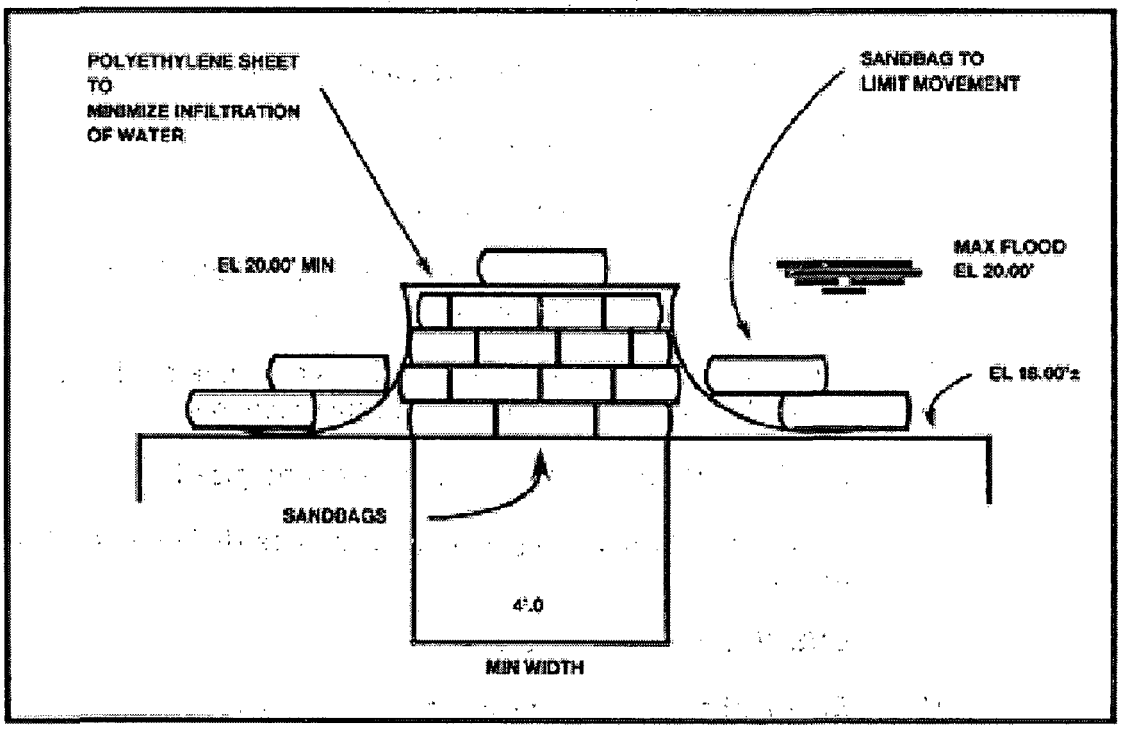
I. **ENSURE** outside doors are shut securely. _____

J. **ENSURE** grounds around the facility are free of potential hazards. _____

ATTACHMENT 28
Details for Flood Protection Dike
(Page 1 of 1)

NOTE

- 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.
- Polyethylene sheets should have a minimum thickness of 4 mils.
- Sandbag size and placement should be determined by field personnel based on availability and positioned to provide dike dimensions similar to those shown below.
- Position sandbags used to protect doors on the side of the door that will allow opening the door and maintaining access.



Side View of Typical Sandbag Dike

ATTACHMENT 29
Drain Plugs Locations and Installation
(Page 1 of 10)

UNIT 4				
DRAIN ID	**SIZE**	**DESCRIPTION**	**LOCATION**	**NOTES**
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)	
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	
14	4"	Floor Drain	By CV-4-1504	
16	4"	Floor Drain	West of Unit 4 Silica Analyzer cabinet	
18	4"	Floor Drain	By column J-35 in the walkway outside of the Unit 4 SGFW Pump Room	
19	4"	Hub Drain	Under valve 4-60-212 (CV-4-2203 bypass valve)	
20	4"	Floor Drain	South of Unit 4 Generator Hydrogen Gas Dryer	
21	4"	Hub Drain	South of 4A MCC by the corner of the wall	
22	4"	Floor Drain	North of 4A Isophase Bus Fan	
77	3"	Floor Drain	Unit 4 Bowser Lube Oil Conditioner under Valve 4-40-020 in the southeast corner	

ATTACHMENT 29
Drain Plugs Locations and Installation
(Page 2 of 10)

DRAIN ID	SIZE	DESCRIPTION	LOCATION	NOTES
78	3"	Floor Drain	Unit 4 Bowser Lube Oil Conditioner on the north side of the conditioner under FG-4-3401	
79	3"	Hub Drain	Unit 4 Bowser Lube Oil Conditioner to the east of the Unit 4 Lube Oil Transfer Pump	
80	3"	Hub Drain	Outside the northeast corner of the Unit 4 Bowser Lube Oil Conditioner pit	Cut drain line
83	3"	Floor Drain	In the Unit 4 SGFW Pump Room on the south end between the motors	
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	
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	
89	3"	Floor Drain	Just north of the Unit 4 Auxiliary Transformer Pit	
114	2"	Equipment Drain	Between the 4A and 4B Heater Drain Pumps on the west side of the foundation	
115	4"	Floor Drain	To the northeast of the Unit 4 Generator Hydrogen Alarm Panel	
116	4"	Floor Drain	East of the Unit 4 Generator Seal Oil enclosure	
117	4"	Floor Drain	East of the Unit 4 Auxiliary Transformer Pit	

ATTACHMENT 29
Drain Plugs Locations and Installation
(Page 3 of 10)

UNIT 3				
DRAIN ID	**SIZE**	**DESCRIPTION**	**LOCATION**	**NOTES**
23	4"	Equipment Drain	Below Instrument Air Alarm Panel	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)	
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	
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	
32	2"	Hub Drain	East of Chemical Addition Tanks	
33	2"	Hub Drain	East of Chemical Addition Tanks	
34	4"	Hub Drain	South of 3B RHDT	
35	4"	Floor Drain	By CV-3-1504	
38	4"	Floor Drain	Outside the entrance to 4B 4160 Volt Switchgear Room	
40	4"	Floor Drain	In the Walkway by Fire Locker Number 1	
41	4"	Floor Drain	West of C AFW Pump in the Walkway	
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	

ATTACHMENT 29
Drain Plugs Locations and Installation
(Page 4 of 10)

DRAIN ID	SIZE	DESCRIPTION	LOCATION	NOTES
46	4"	Hub Drain	Behind Valve 3-60-212 (CV-3-2203 Bypass Valve)	
47	4"	Floor Drain	South of the Unit 3 Generator Hydrogen Gas Dryer	
118	4"	Floor Drain	East of the Unit 3 Generator Seal Oil enclosure	
119	4"	Floor Drain	East of the Unit 3 Auxiliary Transformer pit	
48	4"	Floor Drain	North of the 3A Isophase Bus Fan	
49	4"	Hub Drain	South of the 3A MCC Non-vital side	
52	4"	Floor Drain	Outside the entrance to 3A 4160 Volt Switchgear Room	
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	
92	3"	Hub Drain	In the Unit 3 Bowser Lube Oil Conditioner Pit just east of the Unit 3 Lube Oil Transfer Pump	
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	
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	

ATTACHMENT 29
Drain Plugs Locations and Installation
(Page 5 of 10)

DRAIN ID	SIZE	DESCRIPTION	LOCATION	NOTES
99	2"	Equipment Drain	Just north of 3B SGFW Pump	Loosen unions to move drain pipe out of the way.
101	3"	Floor Drain	In the northwest corner of the Unit 3 Auxiliary Transformer Pit	
102	3"	Floor Drain	Just north of the Unit 4 Auxiliary Transformer Pit	
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	
108	4"	Floor Drain	In the 3A EDG Room just east of the Electrical Control Panel	
110	2"	Hub Drain	In the 3B EDG Radiator Room on the southeast side of the radiator	
111	4"	Floor Drain	In the 3B EDG Room under the air dryer skid	
112	4"	Floor Drain	In the 3A EDG Room under the air dryer skid	

ATTACHMENT 29
Drain Plugs Locations and Installation
(Page 6 of 10)

RCA				
DRAIN ID	**SIZE**	**DESCRIPTION**	**LOCATION**	**NOTES**
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 Radiation Protection 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.
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

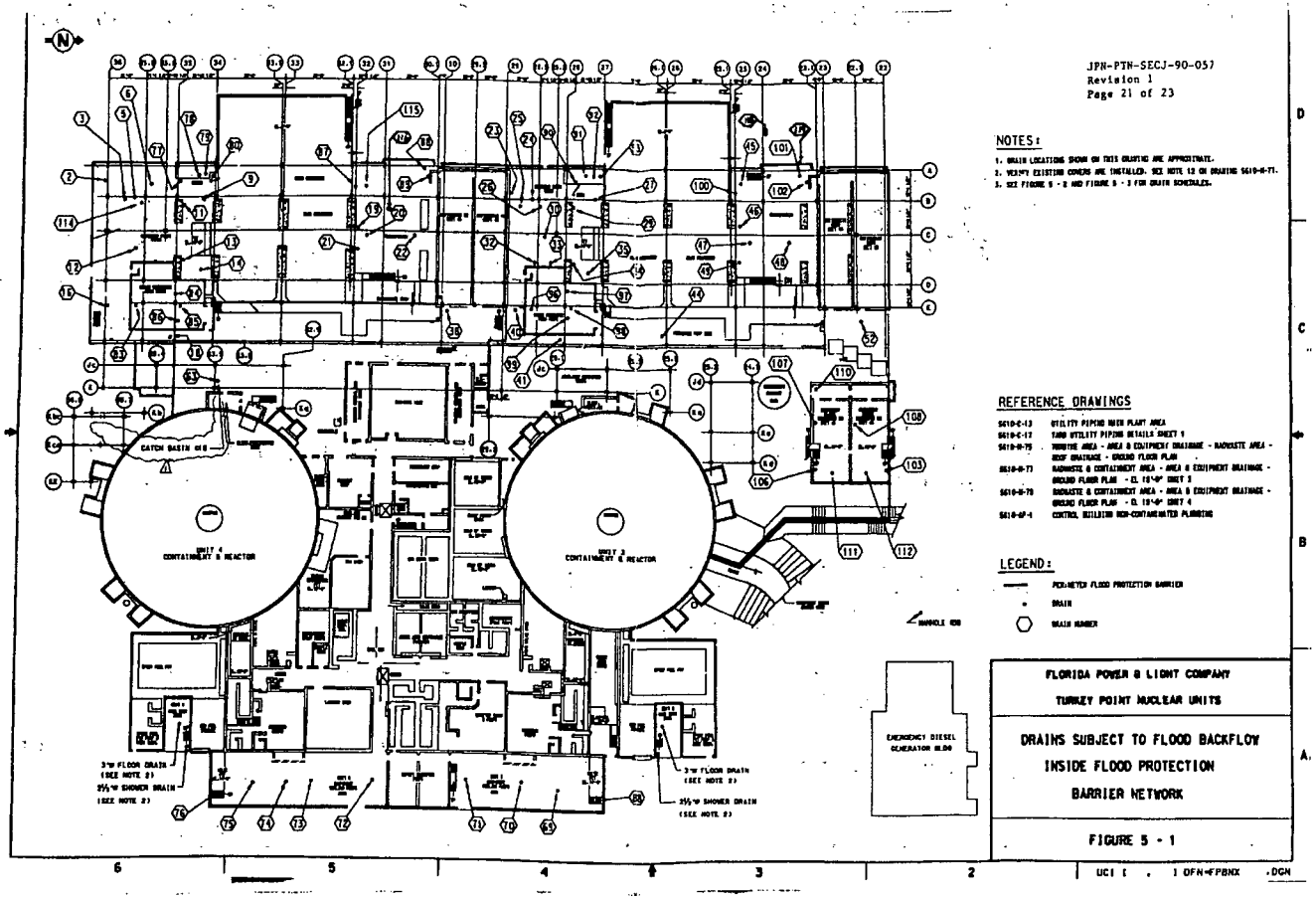
ATTACHMENT 29
Drain Plugs Locations and Installation
(Page 7 of 10)

DRAIN ID	SIZE	DESCRIPTION	LOCATION	NOTES
68	4"	Floor Drain	North end of Unit 3 CCW Room in the Valve Pit	
69	4"	Floor Drain	By the North Pedestal of 3B CCW Heat Exchanger	
70	4"	Floor Drain	Just south of 3B CCW Heat Exchanger	
71	4"	Floor Drain	Unit 3 CCW Room by 3B CCW Pump	
72	4"	Floor Drain	Unit 4 CCW Room just east of the Aux Building Doors	
73	4"	Floor Drain	Unit 4 CCW Room in the Pump Area	
74	4"	Floor Drain	Unit 4 CCW Room just North of 4B CCW Heat Exchanger	
75	4"	Floor Drain	By the South Pedestal of 4B CCW Heat Exchanger	
76	4"	Floor Drain	South end of Unit 4 CCW Room in the valve pit	

ATTACHMENT 29
Drain Plugs Locations and Installation
(Page 8 of 10)

UNIT-4 EDG AREA				
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.
N/A	4"	4A EDG Radiator berm drain	Horizontal drain south wall outside 4A EDG radiator	
N/A	4"	4A EDG Radiator berm drain	Horizontal drain south wall outside 4A EDG radiator	
N/A	4"	4B EDG Radiator berm drain	Horizontal drain south wall outside 4B EDG radiator	
N/A	4"	4B EDG Radiator berm drain	Horizontal drain south wall outside 4B EDG radiator	

ATTACHMENT 29
Drain Plugs Locations and Installation
(Page 9 of 10)



ATTACHMENT 29
Drain Plugs Locations and Installation
(Page 10 of 10)

FIGURE 1
DETAIL FOR PLUGGING FLOOR DRAINS

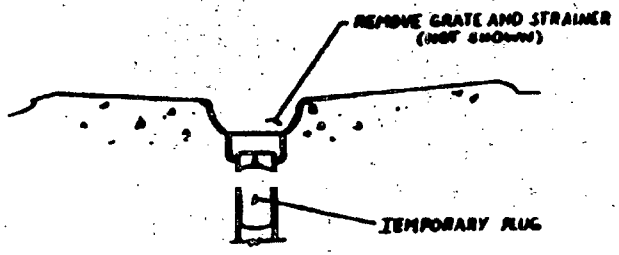


FIGURE 2
DETAIL FOR PLUGGING HUB DRAINS
AND EQUIPMENT DRAINS

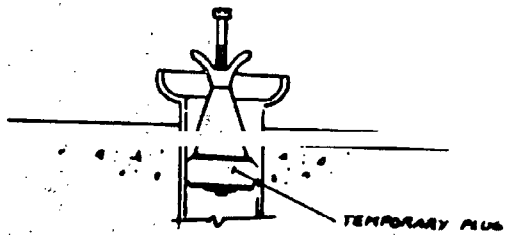


FIGURE 3
DETAIL FOR PLUGGING CATCH
BASIN

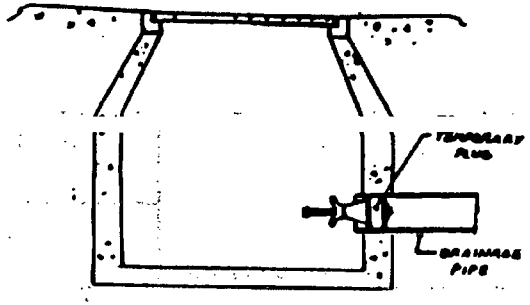
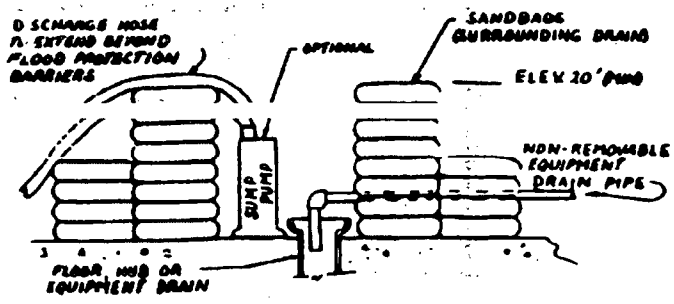


FIGURE 4
DETAILS FOR FLOOD PROTECTION
IN WHICH
DRAIN CANNOT BE PLUGGED



ATTACHMENT 30
Hurricane Tie Down Requirements
(Page 1 of 3)

Feature/Structures	Instructions	Supporting Documents
Portable buildings/temporary structures: Structures along south perimeter RCA fence or similar temporary structures enveloped by the referenced documents. Note: Engineering walkdown confirmed that temporary structures/buildings **NOT** covered specifically by the referenced documents are enveloped by the engineering calculations specified in this table.	1. Restrain by adding dead weight. The specified dead weigh shall be distributed on both sides of the structure's width, and shall be provided along the length of the structure. The specified dead weight shall consist of concrete blocks. Weight of a single concrete block is calculated as volume of block times density (150-lb/cu.ft.). 2. The specified additional weight shall be securely attached using 5/16" diameter steel cables that run across the top of the structure/trailer and secured to the dead weights. 3. No attachment to any permanent plant structures or equipment without prior engineering approval. 4. Contact engineering for any conditions that cannot be met or for additional instructions. **Total Additional Weight Required:** • Unanchored Metal buildings (typ) – Kelly Type Enclosures: 28'x 26'x 20' high - 55,000 lbs 21'x 13'x 9' high – 22,000 lbs • Trailer Temp Office 24'x 60'x 9' high – 85,000 lbs. • Unanchored Small sheds (typ) 8'x 5'x 9 high – 10,000 lbs	PC/M 89-298, Calculations: PTN-4-JPES-C-88-01006, PTN-0-JPNS-C-89-01005, PTN-0-JPNS-C-89-01007
Sea Van Trailers/Trailers: Single small – 20' Single large – 40' Stacked – 20' and 40'	1. Restrained by adding dead weight. The specified dead weight shall be distributed on both sides of the structure's width, and shall be provided along the length of the structure. The specified dead weight shall consist of concrete blocks. Weight of a single concrete block is calculated as volume of block times density (150-lb/cu.ft.). The specified additional weight shall be securely attached using 5/16" diameter steel cables that run across the top of the structure/trailer and secured to the dead weights.	PC/M 89-298 Calculations: PTN-4-JPES-C-88-01006, PTN-0-JPNS-C-89-01005, PTN-0-JPNS-C-89-01007 MRA 30007869-01

ATTACHMENT 30
Hurricane Tie Down Requirements
(Page 2 of 3)

Feature/Structures	Instructions	Supporting Documents
	2. Multiple containers can be stacked or placed side by side and shall be attached to each other by means of a wire rope. The specified weight shall be placed on the sides and connected by running a wire rope across the width of all containers. The total weight shall be the same as a single container regardless of number of containers involved 3. No attachment to any permanent plant structures or equipment without prior engineering approval. 4. Contact engineering for any conditions that cannot be met or for additional instructions. 5. For several Sea Vans next to each other, one set of weights should be used as described below. **Total Additional Weight Required:** • 20' Sea Vans - Provide a total of 10 kips of dead weight (5 kips each side) installed in accordance with the guidelines above. • 40' Sea Vans - Provide a total of 20 kips of dead weight (10 kips each side) installed in accordance with the guidelines above. • 20' Sea Van stacked on 40' C Van - Provide a total of 46 kips of dead weight (23 kips each side with 7 kips minimum in the middle) installed in accordance MRA 30007869. • 20' Sea Van stacked on 20' C Van - Provide a total of 36 kips of dead weight (18 kips each side).	
H_2 trailer at U1 and U2 gashouse	1. Generic guidance provided in Spec SPEC-C-013 or QI-2-PTN-4 or 2. Initiate MRA if standard securing cannot be accomplished or 3. Consult engineering for additional requirements 4. Remove equipment and material if arrangements cannot be made to secure	SPEC-C-013 QI-2-PTN-4

ATTACHMENT 30
Hurricane Tie Down Requirements
(Page 3 of 3)

Feature/Structures	Instructions	Supporting Documents
Gas trailers (N_2 Trailer in RCA, etc)	1. Generic guidance provided in Spec SPEC-C-013 or QI-2-PTN-4 or 2. Initiate MRA if standard securing cannot be accomplished or 3. Consult engineering for additional requirements 4. Remove equipment and material if arrangements cannot be made to secure	SPEC-C-013 QI-2-PTN-4
Miscellaneous equipment such as: • Ladders • Gangboxes • Signs • Portable toilets • Air compressors • Personnel equipment ramps • Gas bottles	1. Generic guidance provided in Spec SPEC-C-013 or QI-2-PTN-4 or 2. Initiate MRA if standard securing cannot be accomplished or 3. Consult engineering for additional requirements or 4. Remove equipment and material if arrangements cannot be made to secure	SPEC-C-013 QI-2-PTN-4
Security ballistic shields Delay barrier	Attachment 21 Attachment 32	PC/M 01-022, PC/M 04-025 Calculation PTN-BFSC-01-2003
Other Miscellaneous equipment **NOT** specifically covered	1. Generic guidance provided in Spec SPEC-C-013 or QI-2-PTN-4 or 2. Initiate MRA if standard securing cannot be accomplished or 3. Consult engineering for additional requirements 4. Remove equipment and material if arrangements cannot be made to secure	SPEC-C-013 QI-2-PTN-4

References:
- PC/M 89-298, Revision 0 and supplement CRN(s)
- Calculation PTN-4-JPES-C-88-01006, latest revision
- Calculation PTN-0-JPNS-C-89-01005, latest revision
- Calculation PTN-0-JPNS-C-89-01007, latest revision
- Calculation PTN-BFSC-01-2003, latest revision
- MRA 30007869-01 (SPEC-C-013), dated 6/5/00
- SPEC-C-013, latest revision

ATTACHMENT 31
Recommended Minimum Hurricane Staffing Levels
(Page 1 of 3)

TSC	CR
*EC Primary_____ Alternate_____	(1) SM Primary_____ Alternate_____
*TSC Tech Asst. to EC Primary_____ Alternate_____	(2) US Primary_____ Alternate_____ Primary_____ Alternate_____
*TSC RP Supervisor Primary_____ Alternate_____	(3) ROs Primary _____ Alternate_____ Primary_____ Alternate_____ Primary_____ Alternate_____
*TSC Maint Mgr or TSC Mech Engineer Primary_____ Alternate_____	
*TSC Chem Supv Primary_____ Alternate_____	
*TSC ENS Comm Primary_____ Alternate_____	(6) NLOs Primary_____ Alternate_____ Primary_____ Alternate _____ Primary_____ Alternate_____ Primary_____ Alternate_____ Primary_____ Alternate_____ Primary_____ Alternate_____
*TSC Dose Assess Tech Primary_____ Alternate_____	
*TSC Reactor Engineer Primary_____ Alternate_____	
*TSC Elec/I&C Engineer Primary_____ Alternate_____	
(4) Damage Assessment Engineers Primary_____ Alternate_____ Primary_____ Alternate_____ Primary_____ Alternate_____ Primary_____ Alternate_____	**EOF** *RM Primary_____ Alternate_____ *RM Ops Advisor Primary_____ Alternate_____

ATTACHMENT 31
Recommended Minimum Hurricane Staffing Levels
(Page 2 of 3)

Other Protection & Control Communications Rep.	*ERDAD's Operator or TSC Communicator Primary_____ Alternate_____
*Minimum Staffing Required for Facility Activation • Category 1, 2 or 3 Storms: Assign 1 Shift of staffing • Category 4 or 5 Storms: Assign 2 Shifts of staffing	*(2) Dose Assessment Coord Primary_____ Alternate_____ Primary_____ Alternate_____
	*HRD Communicator Primary_____ Alternate_____
*** OSC**	
*OSC Manager Primary_____ Alternate	(12) RP Techs *Primary_____ *Alternate_____ *Primary_____ *Alternate_____ *Primary_____ *Alternate_____ *Primary_____ *Alternate_____ *Primary_____ *Alternate_____ *Primary_____ *Alternate_____ Primary_____ Alternate_____ Primary_____ Alternate
(5) Mechanics *Primary_____ *Alternate_____ *Primary_____ *Alternate_____ Primary_____ Alternate_____ Primary_____ Alternate_____ Primary_____ Alternate	
(1) GML - M Primary_____ Alternate	
(2) Utility Workers Primary_____ Alternate_____ Primary_____ Alternate	(2) I&C Supervisors Primary_____ Alternate_____ Primary_____ Alternate

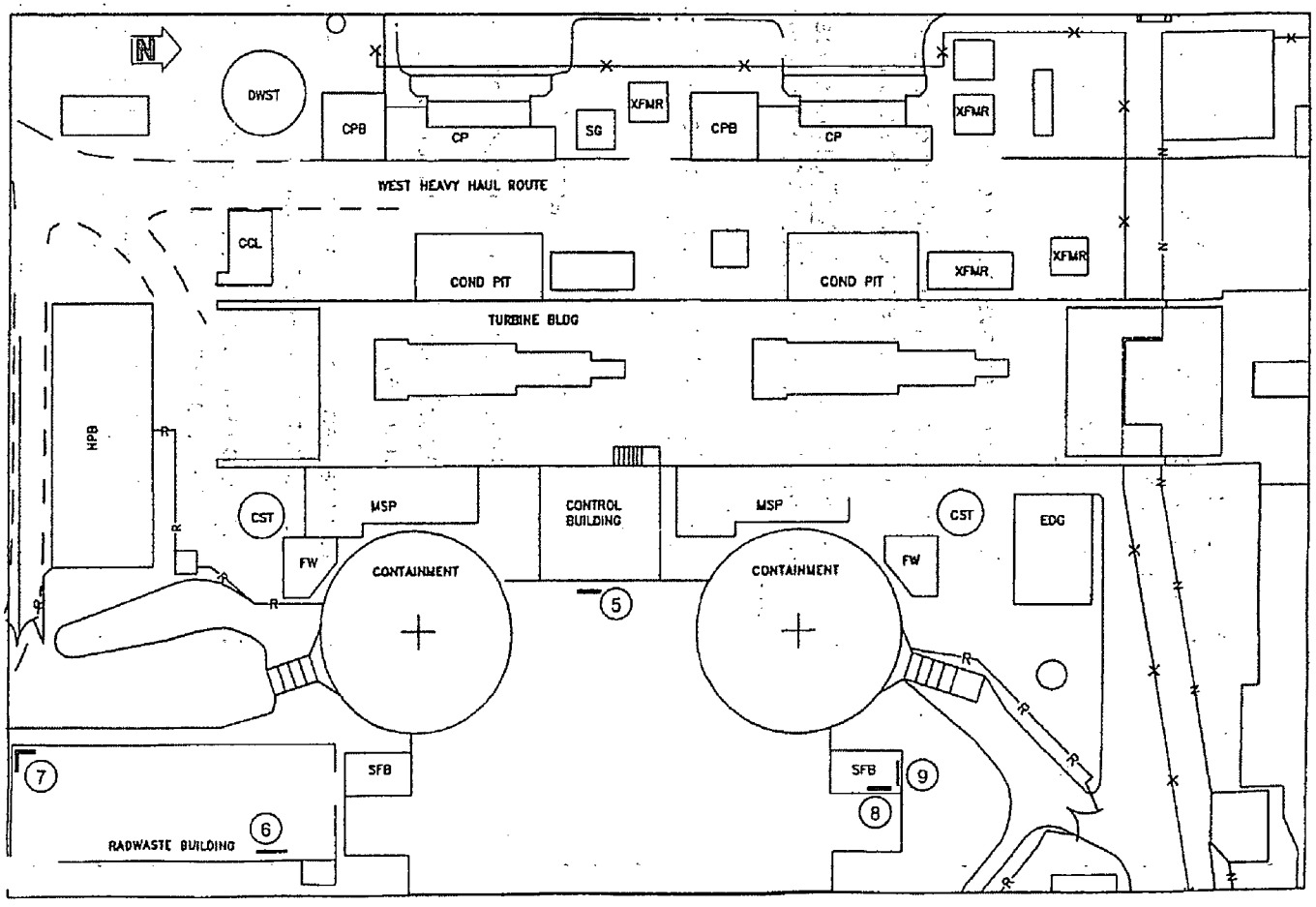
ATTACHMENT 31
Recommended Minimum Hurricane Staffing Levels
(Page 3 of 3)

(1) GML - E Primary_____ Alternate_____	(4) I&C Specialist *Primary_____ *Alternate_____ Primary_____ Alternate_____ Primary_____ Alternate_____ Primary_____ Alternate_____
(3) Electricians *Primary_____ *Alternate_____ *Primary_____ *Alternate_____ *Primary_____ *Alternate_____	(2) Chem Techs *Primary_____ *Alternate_____ *Primary_____ *Alternate_____
Materials Management Primary_____ Alternate_____ Primary_____ Alternate_____	
*Minimum Staffing Required for Facility Activation	

_____ Completed By

_____ Date

ATTACHMENT 32
Security Ballistic Shield Locations
(Page 1 of 1)



ATTACHMENT 33
Severe Weather Prepreparations Checklist Extended Power Uprate (EPU) Construction Manager
(Page 1 of 1)

1. IF notified that a TROPICAL STORM WARNING has been issued, THEN EPU Construction Manager shall **ENSURE** the following actions are completed:

   A. Tie down or remove Sea-Land containers (not stacked and secured).

   B. Tie down or remove gang boxes.

   C. Obtain contact phone numbers of department personnel who will not remain on-site during the storm.

2. IF notified that a HURRICANE WATCH has been issued, THEN EPU Construction Manager shall **ENSURE** the following actions are completed:

   A. Complete checklists in accordance with EPU Instruction EPPI-910, Turkey Point EPU Project Severe Weather Preparations.

   - Attachment 1, Preparation Checklist - Office Facilities
   - Attachment 2, Preparation Checklist - Administration
   - Attachment 3, Preparation Checklist - Construction and Field

   B. Ensure department personnel are aware of how to contact the plant and the expectation for return to work.

   C. Create a list of activities to perform during recovery phase to return equipment or other items back to normal configuration.

3. WHEN all required actions have been completed OR a required action could **NOT** be completed, THEN **NOTIFY** the EP Manager.

_____ _____
Signature Date

FPL	**NUCLEAR FLEET** **GUIDELINE** NON-SAFETY RELATED **INFORMATION USE**	Guideline No. **EP-SR-1001** Revision No. **1** Effective Date **JB 06/23/10** **PSL 06/23/10** **PTN 06/23/10**

Title:

NUCLEAR DIVISION STORM COORDINATOR GUIDELINE

Responsible Department: **EMERGENCY PREPAREDNESS**

Special Considerations:

This procedure is applicable to PSL and PTN only.

FOR INFORMATION ONLY
Before use, verify revision and change documentation (if applicable) with a controlled index or document.
DATE VERIFIED_____ INITIAL_____

Revision	Approved By	Approval Date
0	R. D. Mothena	03/27/09
1	R. D. Mothena	06/21/10

UNIT #	
DATE	
DOCT	GUIDELINE
DOCN	EP-SR-1001
SYS	
STATUS	COMPLETED
REV	1
# OF PGS	

REVISION SUMMARY	
Rev. No.	**Description**
1	Addition of St. Lucie EOC Floor Plan for Storm. Added Illustration and Attachment 5.
0	A new guideline for Nuclear Division Storm Coordinator

TABLE OF CONTENTS

1.0 PURPOSE

This guideline provides guidance on the duties and responsibilities of the Nuclear Division Storm Coordinator for his role in the General Office Operations Center and the periods leading up to and following hurricane landfall. This guideline does not override the Recovery Plans for each of the nuclear plants but supplements the detail included in those documents.

1.1 Discussion

1. Hurricane preparedness and response are essential for nuclear plants on the coast of Florida. While the nuclear safety systems and class structures are sufficiently robust to handle hurricane force winds consistent with those described in the FSAR for each plants, the impact on the station, the employees and community may be significant and proper planning and preparation is prudent to effectively respond to and deal with the consequences on the station and community.

1.2 Scope

1. This guideline provides guidance for the Nuclear Division Storm Coordinator and the performance of preparing for, response during and after a hurricane affecting the Florida Nuclear Power Plants. This guideline is not meant to be prescriptive but informative in the general duties necessary to effectively respond to a hurricane.

2. The Nuclear Division Storm Coordinator is the Corporate Functional Area Manager or designee. Alternates are established as needed.

2.0 TERMS AND DEFINITIONS

2.1 Definitions

1. Alert and Notification System – The siren system for each of the nuclear plant along with the signs for notifying transients as to what to do in the unlikely event of an emergency.

2. Hurricane Force Winds – 74 mph or higher sustained winds.

3. Hurricane Warning: An announcement that hurricane conditions (sustained winds of 74 mph or higher) are expected somewhere within the specified coastal area. Because hurricane preparedness activities become difficult once winds reach tropical storm force, the hurricane warning is issued 36 hours in advance of the anticipated onset of tropical-storm-force winds.

4. Hurricane Watch: An announcement that hurricane conditions (sustained winds of 74 mph or higher) are possible within the specified coastal area. Because hurricane preparedness activities become difficult once winds reach tropical storm force, the hurricane watch is issued 48 hours in advance of the anticipated onset of tropical-storm-force winds.

5. Impact – Damaging the station or having a negative affect on the structures, buildings or site.

6. Post Disaster Review or Disaster Induced Review – The process by which the NRC and FEMA review the impact of the severe weather event on the nuclear plant and local community.

7. Reasonable Assurance – The official process used by FEMA under 44CFR350 for determining that there is a "reasonable assurance" that the health and welfare of the public can be maintained in response to a nuclear power plant emergency.

8. Tropical Storm Force Winds-Greater than 39 mph sustained winds.

2.2 Abbreviations

1. EOC, Emergency Operations Center
2. EP, Emergency Preparedness Department
3. EPZ, Emergency Planning Zone
4. FEMA, Federal Emergency Management Agency
5. NDDO, Nuclear Division Duty Officer
6. NRC, Nuclear Regulatory Commission
7. PSL, St. Lucie Plant
8. PTN, Turkey Point Plant
9. RAC, Regional Assistance Committee (FEMA)

3.0 RESPONSIBILITIES

3.1 Nuclear Division Storm Coordinator (no specific order)

1. Review the following documents for familiarization.
   - FEMA document "Turkey Point Nuclear Power Plant Offsite Emergency Preparedness Assessment Report in the Aftermath of Hurricane Andrew"
   - NRC / INPO Joint Report on Hurricane Andrew.
2. Interface with the Company Storm Organization in preparation for and recovery from hurricanes affecting St. Lucie and Turkey Point.
3. Obtain the latest version of Hurrtrack or similar hurricane projection software used by the Distribution Storm Organization.
4. Coordinate the response efforts of St. Lucie and/or Turkey Point in preparing for a hurricane projected to impact the station(s). This includes the appropriate resources in Juno Beach, Seabrook, Duane Arnold or Point Beach.
5. Monitor severe weather during hurricane season for potential impact on the stations; provide projections to the affected nuclear plant once the storm is projected to impact the station.
6. Participate in the Company Storm calls on behalf of the Nuclear Division, report the status of the nuclear plants as it relates to preparing for and assessing the impact of the hurricane on the station.
7. Interface with the station throughout the hurricane to ensure constant communications with the Nuclear Regulatory Commission Operations Center, the Emergency Operations Facility in the General Office and the impacted stations.
8. Coordinate with the Risk and Host Counties for each nuclear plant once the hurricane is projected to affect the station, provide them with the FEMA post disaster review checklist and advise them of the need to conduct an immediate review once the winds have subsided below 40 miles per hour.
9. Interface with the DHS-FEMA / NRC team designated to perform the Post Disaster Review, arrange meeting times, and provide assistance as needed.
10. Contact the NRC Regional Representative designated to report to the Emergency Operations Facility in the General Office, coordinate arrival times and arrange for entry into the facility.

3.1 Nuclear Division Storm Coordinator (no specific order) (continued)

11. Coordinate with the Power Systems Siren Restoration Team for performing a prompt assessment of the siren system associated with the affected nuclear plant.

12. Advise the Radiological Environmental Management Program Restoration Coordinator to prepare for the post storm assessment.

13. Ensure the station makes the appropriate assignment of personnel for riding out the storm onsite and dispatching personnel to the Emergency Operations Facility. Personnel should not be responding the plant in winds greater than 40 miles per hour.

14. Review and update this guideline as necessary.

4.0 INSTRUCTIONS

4.1 Pre-Storm Season

1. Coordinate the Nuclear Division storm activities as they relate to the Company Storm Organization.

2. Participate in the Company Dry Run:

   A. Preparation activities for dry run including determining if there will be any Nuclear Division participation.

   B. Participate in the Dry Run typically conducted in May.

3. Obtain the current revision of Hurrtrack RM / Pro made by PCWeather or the current version of the projection software used by Distribution.

   A. Ensure that the current FPL location database is obtained from Distribution.

   B. Familiarize yourself with the latest changes in the code and how to generate the appropriate forecast sheets for the stations.

4. Assess the familiarization of the Risk and Host Counties regarding the FEMA Post Disaster Review process, provide information sessions as appropriate.

4.2 During Storm Season

1. Monitor the tropics for activity that may have the potential to affect FPL Nuclear Plants.

2. If storm is projected to strike a FPL Nuclear Plant go to step 4.3.

4.3 120 hours prior to impacting a Nuclear Site

1. Activities Associated for landfall of a Hurricane Projected to Impact an FPL Nuclear Plant within the 120 hour NHC Forecast Period.

2. Inform the Station of the potential for a hurricane impacting the site within 120 hours.

   A. Advise them to stand by and monitor for changes in the forecast.

   B. If the storm is likely to be a Category 4 or 5, review ATTACHMENT 4 for consideration.

4.4 72 hours prior to impacting a Nuclear Site

1. Once the Corporate starts their 72 hour storm calls consider the following:

   A. Advise the affected Stations of the projected landfall and provide updates frequently, typically with each new advisory issued by the National Hurricane Center.

   B. Inform risk and host counties of the pending storm and the need to review the post disaster checklist for familiarization. You may consider sending them a copy via email.

   C. The phone numbers for the risk and host counties are in the site specific Emergency Response Directory.

   D. Contact FEMA Region IV Regional Assistance Committee Chair and the NRC Governmental Affairs representative and advise them of the pending storm and provide them an update.

   - Region IV RAC Chair Office770-220-5466 .
   - Region II NRC Governmental Affairs Office 404-562-4427

   E. Coordinate the staffing and arrival time for the Emergency Operations Facility in the GO with the station.

   F. Ensure that Engineering has arranged for Damage Assessment Teams.

   G. Contact the station to ensure that the station hurricane response telephone line is set up and functioning appropriately.

   H. Discuss with station management as to how the units will be maneuvered in response to the storm, inform the Corporate Storm Organization on the next conference call.

4.4 72 hours prior to impacting a Nuclear Site (continued)

2. Advise the station of the following:

A. Man and open line on the Emergency Notification System with the NRC and EOF once winds are above tropical storm force.

B. Maintain an open communications pathway with the EOF with any one of the following.

- Dial 8 on ITN
- Outside direct in line
- Hot Ringdown System with the state
- NRC ENS line.
- or any other available communications device available.

4.5 <u>High Winds Onsite</u>

1. Response during a Hurricane with High Winds Onsite (Greater than Tropical Storm Force Winds).

2. Discourage any travel or onsite work when winds are greater than tropical storm values (39 mph).

3. Station the EOF responders in the Emergency Operations Facility in Miami unless unsafe to do so.

4. Ensure the Emergency Operations Facility maintains an open link with the affected site throughout the storm (tropical storm force winds or above).

5. Keep Station informed regarding change in wind conditions.

6. Advise the Corporation regarding the status of the Nuclear units.

4.6 <u>Post Storm</u>

1. Determine the status of the plant and personnel, inform the Corporate Storm Organization.

2. Obtain any support needed for the station from the unaffected sites or the Corporate Storm Organization.

4.6 Post Storm (continued)

3. Contact the affected risk and host counties to determine the impact on the infrastructure and their initial assessment on the Post Disaster Review Checklist (Attachment 5).

   A. Set up schedule with FEMA and NRC for initiating the post disaster review interviews and drive the evacuation routes in the Emergency Planning Zone.

CAUTION

While assisting FEMA and the NRC on the post disaster review, be especially careful in dealing with the hardest hit counties. The initial response hard hit counties will provide will be highly emotional. When looking for compensatory measures for identified impediments, focus on using the communities least impacted to assist those most impacted.

   B. Have a FPL EP representative go with the NRC and FEMA while conducting their interviews if possible.

   C. Ensure that FEMA and the NRC are seeking the appropriate information and not just stopping with surface responses.

CAUTION

While assisting FEMA and the NRC on the post disaster review for a significantly impacted community, you will be expected to put compensatory measures in place for any impediment in the state or county emergency response plans prior to restarting the unit. FEMA must provide the NRC with the statement of reasonable assurance prior the unit(s) returning to service.

   D. For Category 3 or higher storms, expect significant impact on the local community and the post disaster review will likely take longer with the severity of the community impact taking the longest.

   E. Impediments identified in the FEMA post disaster checklist will require compensatory measures prior to gaining a favorable determination of reasonable assurance.

5.0 RECORDS

None

6.0 REFERENCES AND COMMITMENTS

6.1 References

6.1.1 Implementing References

None

6.1.2 Developmental References

1. 10 CFR 50 Appendix E, "Emergency Planning and Preparedness for Production and Utilization Facilities."
2. 44 CFR 350, "Review and Approval of State and Local Radiological Emergency Planning and Preparedness
3. NUREG-0654, FEMA REP-1, Rev. 1, "Criteria for the Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants," November 1980.
4. FEMA REP-10 (formerly called FEMA-43), "Standard Guide for the Evaluation of Alert and Notification Systems for Nuclear Power Plants," September 1983
5. "Alert & Notification System Report for Turkey Point Plant," December 1984.
6. "Alert & Notification System Report for St. Lucie Plant," February 1985.
7. FEMA Post Disaster Checklist
8. St Lucie Recovery Plan
9. Turkey Point Recovery Plan

6.1.3 Management Directives

None

6.2 Commitments and/or CAPRs

None

ATTACHMENT 1
TIMELINE OF ACTIVITIES DURING STORM SEASON
(Page 1 of 1)

Pre- Storm Season

- Renew Hurrtrack Subscription and upgrade software as appropriate
- Ensure Departments update Storm Plans in May.
- Review and revise procedure as needed.
- Participate in Company Dry Run typically in May of each year (preparation and drill)
- Ensure Florida plants initiate Severe Weather preps in a timeframe to support CNO letter.

June-August

- Monitor the Atlantic and Caribbean basin for storm activity.
- Increase focus on any storm that enters in the Hebert Box for the Atlantic or Caribbean.

August – November

- Monitor the Atlantic and Caribbean basin for storm activity.
- Increase focus on any storm that enters in the Hebert Box for the Atlantic or Caribbean.
- Restrict out of state travel to the extent practical. Designate alternate if you do.

ATTACHMENT 2
TIMELINE WITH STORM FORECASTED TO IMPACT FLORIDA NUCLEAR PLANTS
(Page 1 of 2)

Prior to 120 -72 hours before landfall

- Advise the stations of an impending storm of interest.
- Discuss need to implement site plan and forecast uncertainties.
- Brief senior management of storm of interest

72 hours prior to landfall

- Participate in company conference call for the following as needed.
  - Distribution Storm
  - Employee release
  - Business Continuity
  - Nuclear Division Storm Call
- Generate storm forecasts following each advisory and transmit to distribution list.

48 hours prior to landfall

- Participate in company conference call for the following as needed.
  - Distribution Storm
  - Employee release
  - Business Continuity
  - Nuclear Division Storm Call
- Generate storm forecasts following each advisory and transmit to distribution list.
- Coordinate an EOF crew as appropriate.

24 hours prior to landfall

- Participate in company conference call for the following as needed.
  - Distribution Storm
  - Employee release
  - Business Continuity
  - Nuclear Division Storm Call
- Generate storm forecasts following each advisory and transmit to distribution list.
- Coordinate shutdown schedule with stations consistent with pre-planned unit manipulation guidelines in ATTACHMENT 3.
- Touch base with the risk and host counties associated with the impacted site to arrange a post event call. Phone numbers are available in the site specific Emergency Response Directory.
- Touch base with the NRC and FEMA team that will be coming down for the post disaster review. Establish point of contact and anticipated course of action.
- Touch base with the NRC Regional responder that will report to the EOF to ensure he knows the time the EOF will be manned.

ATTACHMENT 2
TIMELINE WITH STORM FORECASTED TO IMPACT FLORIDA NUCLEAR PLANTS
(Page 2 of 2)

12 hours prior to landfall

- Participate in company conference call for the following as needed.
  - Distribution Storm
  - Employee release
  - Business Continuity
  - Nuclear Division Storm Call
- Generate storm forecasts following each advisory and transmit to distribution list.
- Report to EOF in Miami with the appropriate minimum staff EOF response team.

During Storm

- Maintain constant communication with the affected site and the NRCOC on the NRC Bridge
- To the extent practical, have the engineering or dose assessment representative in the EOF correlate the projected winds with the actual winds on known wind towers. This will aid in the decision to shut the unit down if the hurricane wind speeds are close on site. Note: the NHC wind radii are very conservatively set and are known to be extremely restrictive.
- Brief the EOF staff periodically.
- Coordinated information and needs with the GOCC Storm Center on an as needed basis.

Post Storm

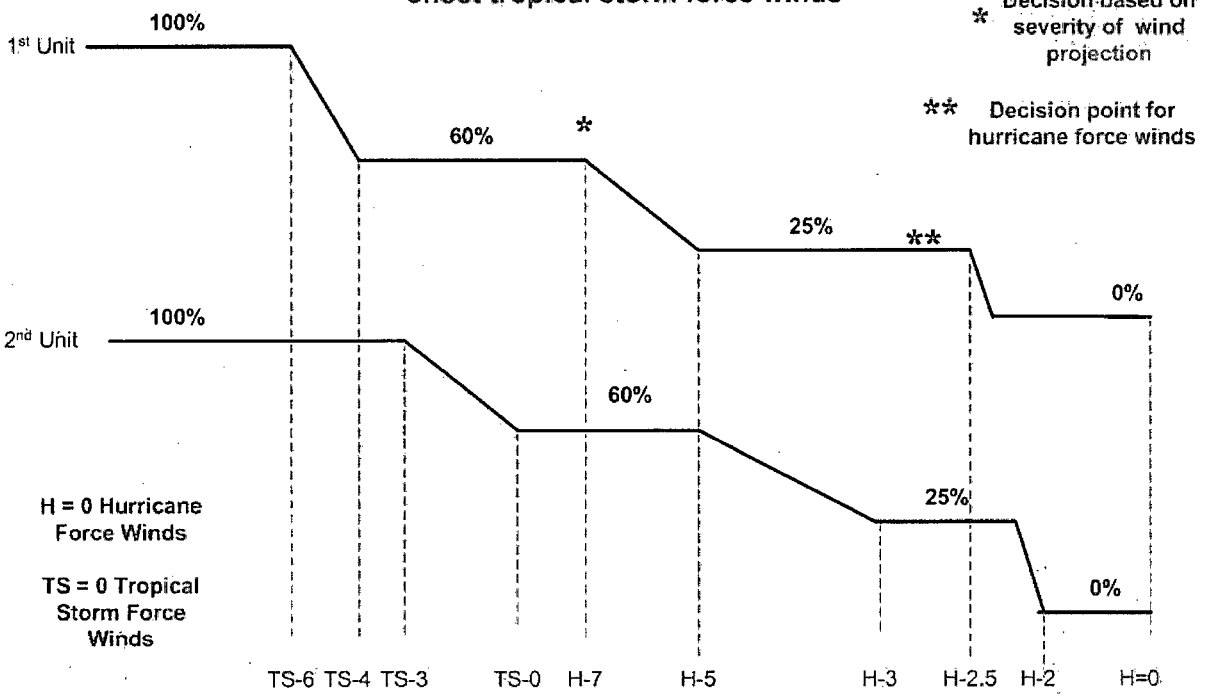
- Ensure the site is safe and there are no pressing medical or nuclear safety needs. If the need exists for medical support, coordinate through the GOCC for aviation support.
- Ensure the site is focused on any unaccounted plant personnel.
- Family support should be through the HR Storm 800 line on the back of the employee badge.
- Reestablish a reliable means of communication with the station.
- Ensure the station starts their post disaster review activities as delineated in the Recovery Plan. Focus on immediate needs, Emergency Plan and plant restart.
- Touch base with each of the impacted counties to see how they area doing and determine their needs and an appropriate timeframe for the FEMA / NRC Disaster Induced Review team to interview them on the checklist included in each sites recovery plan.
- Arrange for escorts for FEMA / NRC to do post disaster interviews.

Note, gas, food and lodging are at a premium, make your vehicle is full of gas and you have food prior to entering into the damaged area. ATM's, food stores and gas stations may not be available.

ATTACHMENT 3
HURRICANE MANEUVERING GUIDELINES
(Page 1 of 1)

Nuclear Division Hurricane Maneuvering Guidelines

1) Start Power Reduction 6 hours prior to onset tropical storm force winds



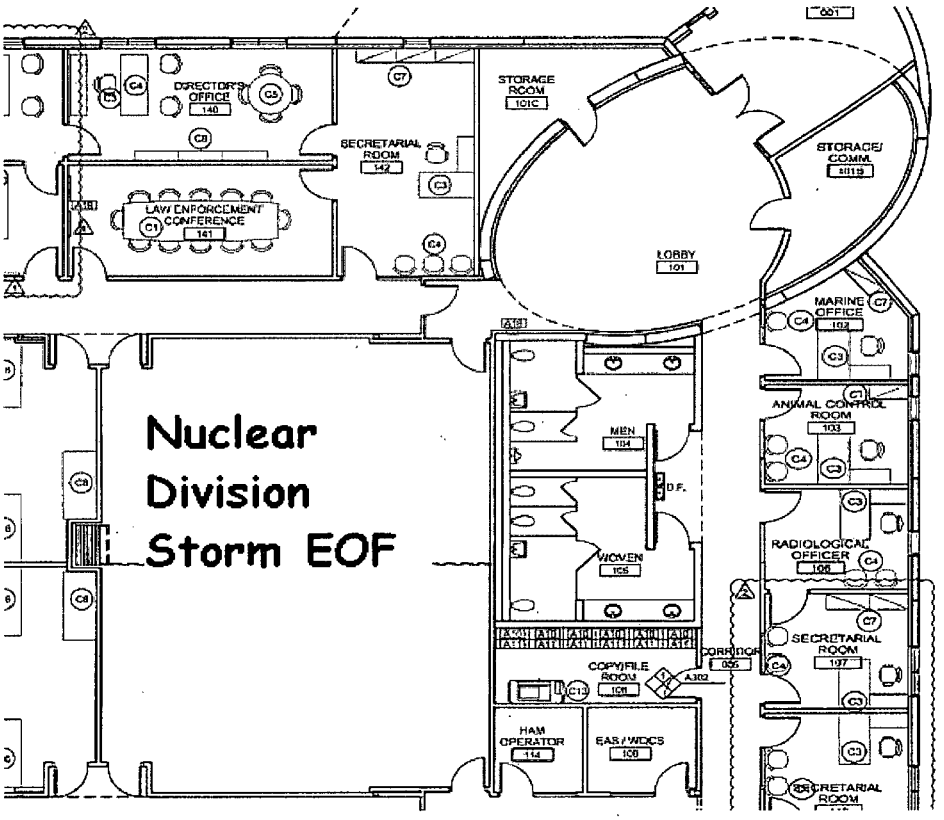
ATTACHMENT 4
CATEGORY 4 / 5 HURRICANE INFORMATION
(Page 1 of 1)

ASSUMPTIONS / INFORMATION

1. Site preparations must be started early due to the need to release employees early.
2. Evacuations in the surrounding area for a projected Category 5 storm will result in significant traffic concerns for both evacuees and storm riders returning to the plant for lock down. If you have not released employees prior to 60 hrs to the storm, do not assume they can evacuate safely.
3. The General Office Command Center and Turkey Point Emergency Operations Facility are in the General Office Building in Miami. That building is not rated beyond a category 3 storm.
4. For a projected Category 4 or 5 storm, the EOF minimum staff (one team for both PTN and PSL) should be staged at the St. Lucie Emergency Operations Centers on Midway Rd. in Ft. Pierce (State Fair Grounds) to interface with the plant, NRC and local PTN and PSL governments.
5. Storm riders should be given preference to put their homes in order and ensure their family is safe. Consult the Human Resources guidelines for the appropriate manner to deal with the circumstances.
6. The site and local community will be significantly impacted and restoration of the community and post disaster review will likely take longer than the plant repairs. FEMA and the NRC will conduct their post disaster review and provide reasonable assurance as to protecting the health and welfare of the public prior to the plant being allowed to restart.
7. Both landline and cellular service will be severely limited. Satellite phone service should be used to maintain contact with the NRC and FPL. Use of the NRC bridge is preferred. Handheld plant radios may be used to communicate with the local EOC if the tower onsite is intact.

ILLUSTRATION 1
ST. LUCIE COUNTY EMERGENCY OPERATIONS CENTER
(ALTERNATE STORM EOF FOR NUCLEAR DIVISION)

(Page 1 of 1)



Expected Staff and Duration:	Equipment needed:
Until storm passes and PSL EOF is deemed functional, maintain 24 hour operation from EOC with link to NRCOC, Plant(s) and GOCC.	PSL and PTN Emergency Response Directories (latest revision)
Recovery Manager Operations Advisor Dose Assessment Coordinator ENS/HPN Communicator HRD Communicator TSC Plant Data Communicator Engineering Coordinator (post disaster review) EP representative IT representative	Portable Drive with all of PSL and PTN procedures and drawings.
	Minimum Six (6) Laptops with wireless connectivity and chargers. PTN and PSL PI installed.
	Minimum Six (6) Cell phones and chargers
	Two (2) Satellite phones Two (2) plant radios (spare batteries and chargers)
Note: If facility will be used as an EOF for both PTN and PSL, determine staff based on potential impact and minimizing the number of people in the EOC.	Change of clothes, toiletries and sleeping bags and pillows for responders (assume 24 to 48 hours of EOC operation)

ATTACHMENT 5
FEMA POST DISASTER REVIEW CHECKLIST
(Page 1 of 6)

FEMA

1.1 Disaster:	1.2 Date of Assessment:

1.3

Site:	Location:

Estimated EPZ Population Evacuated:

Estimated Time for allowing evacuees to return:

Did this disaster cause catastrophic damage in the 10-mile EPZ? YES ☐ NO ☐

[Note: Catastrophic damage would include the destruction of roads, bridges, buildings, communication systems, transportation resources and/or other infrastructure]

If yes, please refer to the attached Special Addendum for a Catastrophic Event to review population shifts and evacuation routes. Obtain schedules for the repair of the infrastructure and analyze the schedule for its impact on State and/or local government's ability to protect the health and safety of the population in the 10-mile EPZ. Identify compensatory measures planned and implement.

EMERGENCY RESPONSE FACILITY:

Primary Activity – Facility	Yes	No	N/A
Is the Facility:	☐	☐	☐
Operational	☐	☐	☐
Structurally Safe	☐	☐	☐
Operating on Primary Power	☐	☐	☐
If operating on backup power			
Estimated schedule for restoration of primary power:			
Number of days of fuel on site:			

Primary Activity – Communication	Yes	No	N/A

ATTACHMENT 5
FEMA POST DISASTER REVIEW CHECKLIST
(Page 2 of 6)

Are the following systems available:			
Dedicated Lines Hot Ring Down from the Plant Decision/Administrative Line (If applicable)	☐ ☐	☐ ☐	☐ ☐
Commercial Telephone	☐	☐	☐
Cellular Telephone	☐	☐	☐
Satellite Communications (If applicable)	☐	☐	☐
State/Local Government Radios	☐	☐	☐
Amateur Radio	☐	☐	☐
Internet Access	☐	☐	☐
Other Communication Systems:	☐	☐	☐
If any of these systems are inoperative, please obtain a schedule for repair and also discuss the contingency plans for communication			
Comments			

Primary Activity – Emergency Response Organization	**Yes**	**No**	**N/A**
As Specified in the Plans are the following groups/individuals available:			
Elected Officials or other decision-makers	☐	☐	
Emergency Response Organization			
Emergency Management	☐	☐	
Public Information Officers	☐	☐	
Law enforcement personnel	☐	☐	
Fire/Rescue personnel	☐	☐	
EMS/Medical personnel	☐	☐	
Public Works	☐	☐	
Education officials - Are Schools in EPZ – Open ☐ or Closed ☐	☐	☐	
Social Services	☐	☐	
Health	☐	☐	
Agriculture	☐	☐	
Other departments and/or agencies			

ATTACHMENT 5
FEMA POST DISASTER REVIEW CHECKLIST
(Page 3 of 6)

American Red Cross	☐	☐	☐
Amateur radio	☐	☐	☐
Other non-governmental volunteer organizations:			
Private organizations:			
Primary Activity – Public Alert and Notification	**Yes**	**No**	**N/A**
Alert System – Siren System			
Total # of Sirens ; # of Sirens Operational:			
Percentage of sirens available: %			
Sirens on battery backup power	☐	☐	☐
Siren Restoration and Testing Plan (attach) Expected completion date			
EAS stations available –[Primary Power ☐][Backup power ☐]	☐	☐	☐
Availability of NOAA and/or other tone alert radios	☐	☐	☐
Availability of other local TV and Radio stations List Stations:	☐	☐	☐
Cable Interrupt capability ; % of service in EPZ	☐	☐	☐
Status of local telephone service	☐	☐	☐
TDD and other devices for special needs populations	☐	☐	☐
Power Outages:			
Percentage of EPZ population without power %?			
Estimated restoration schedule			
Back-up route alerting			
Number of Routes for EPZ:			
Equipment available	☐	☐	☐
Personnel Available – organizations responsible according to plan	☐	☐	☐
Signs (Both Information and Evacuation Route Markers) Are Signs permanently placed? – number missing?	☐	☐	☐
Replacement Signs available	☐	☐	☐
If no, number days to get replacements:			
Joint Information Center – available - Primary ☐ or Backup ☐ power	☐	☐	

ATTACHMENT 5
FEMA POST DISASTER REVIEW CHECKLIST
(Page 4 of 6)

Primary Activity – Special Needs and Transportation Resources	**Yes**	**No**	**N/A**
Are Special Needs Facilities in the EPZ, excluding schools, open	☐	☐	☐
Have Schools, including licensed daycare centers, reopened	☐	☐	☐
Has the disaster impacted the ability to provide transportation resources	☐	☐	☐
If yes			
Has the government instituted compensatory measures [attach plan]	☐	☐	
Primary Activity – Evacuation Routes	**Yes**	**No**	**N/A**
Evacuation Routes			
Open – unrestricted access	☐	☐	
If No:			
Were any roads or bridges destroyed or otherwise inaccessible [If yes see catastrophic appendix]	☐	☐	
Estimate of population impacted by evacuation route problem:			
Any lanes passable, if so number of lanes:			
Capacity reduced: %; Evacuation time increase:			
Rerouting of traffic: Evacuation time increase:			
Public information on changes to evacuation routes	☐	☐	☐
Estimated time for restoration of planned evacuation routes:			

Primary Activity – Accident Assessment	**Yes**	**No**	**N/A**
Personnel available to perform dose assessment calculations	☐	☐	
Personnel available for field monitoring teams	☐	☐	
Personnel available for laboratory operations	☐	☐	
Personnel available for sample transport, and other support functions	☐	☐	☐
Equipment			
Equipment for field monitoring	☐	☐	
Equipment for mobile laboratory	☐	☐	
Power for mobile laboratory	☐	☐	☐
Communications to all field elements	☐	☐	
Access to monitoring locations			
Field teams have unrestricted access to monitoring and sampling locations	☐	☐	☐
Identify alternate means to reaching monitoring/sampling locations	☐	☐	

Primary Activity – Support Services	**Yes**	**No**	**N/A**
Reception Center (Evacuee Monitoring			
Planned facility available	☐	☐	
Staff available to operate facility	☐	☐	
Equipment available	☐	☐	
Emergency Worker Decontamination			

ATTACHMENT 5
FEMA POST DISASTER REVIEW CHECKLIST
(Page 5 of 6)

Primary Activity – Support Services	**Yes**	**No**	**N/A**
Planned facility available	☐	☐	
Staff available to operate facility	☐	☐	
Equipment available	☐	☐	
Temporary Care Facility			
Planned facility available	☐	☐	
Staff available to operate facility	☐	☐	
Equipment available	☐	☐	
Hospital			
Is the hospital designated to treat radiologically contaminated patients open	☐	☐	☐

Areas Requiring Follow-up	**Yes**	**No**	**N/A**
1.			
2.			
3.			
4.			
5.			
Compensatory Measures in effect			
1.			
2.			
3.			
4.			

ATTACHMENT 5
FEMA POST DISASTER REVIEW CHECKLIST
(Page 6 of 6)

Special Addendum for Catastrophic Event

Catastrophic Impact – Population Shifts	**Yes**	**No**	**N/A**
Disaster related population changes in the EPZ	☐	☐	
Temporary (increase or decrease) after reentry	☐	☐	
Estimated increase in EPZ population:			
Temporary Housing Areas developed in EPZ	☐	☐	☐
Developed notification procedures (attach procedures)	☐	☐	
Identified resources to assist with evacuation, if needed	☐	☐	
Plans developed for transport dependent population	☐	☐	
Permanent change in population	☐	☐	☐
Greater than 10% of total	☐	☐	
Catastrophic Impact – Evacuation Routes	**Yes**	**No**	**N/A**
Roads destroyed and negative impact on evacuation	☐	☐	
Rerouting of evacuation traffic	☐	☐	
Impact on evacuation times			
Bridges			
Problems with bridges	☐	☐	
If yes,			
Identify location of bridge(s):			
Bridge(s) closed	☐	☐	☐
Damage minor and accessible	☐	☐	
Damage major and non-accessible	☐	☐	
Non-functioning drawbridge	☐	☐	☐
Impact on Evacuation Routes:			
Public allowed accessed to area served by damaged bridge	☐	☐	
Alternative methods for crossing waterways	☐	☐	
Schedule for revising evacuation time estimate, if needed:			

Areas Requiring Follow-up	**Yes**	**No**	**N/A**
1.			
2.			
3.			
4.			
Compensatory Measures in effect			
1.			
2.			
3.			
4.			