

July 11, 2002

L-2002-134 10 CFR 50 Appendix E

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

Re:

St. Lucie Units 1 and 2

Docket Nos. 50-335 and 50-389

**Emergency Plan Implementing Procedure** 

In accordance with 10 CFR 50 Appendix E, enclosed is a copy of a revised implementing procedure for the St. Lucie Plant Radiological Emergency Plan:

Number	<u>Title</u>	Revision	Implementation Date
EPIP-01	Classification of Emergencies	4	June 28, 2002

EPIP-01 was revised in accordance with Revision 40 to the St. Lucie Plant Radiological Emergency Plan. The following revisions were made: 1) Initiating Conditions (IC) for RCS leakage were revised, 2) Emergency Action Levels (EAL) under security threat Initiating Conditions were added, 3) definitions for EAL and IC were added, 4) guidance for multiple and dual unit events was added, and 5) several editorial and administrative changes were made.

Please contact us if there are any questions regarding this procedure.

Very truly yours,

Bonald E. Jernigan Vice President St. Lucie Plant

DEJ/tlt

**Enclosure** 

A045



# ST. LUCIE PLANT

# EMERGENCY PLAN IMPLEMENTING PROCEDURE

SAFETY RELATED

Procedure No.

EPIP-01

Current Revision No.

4

Effective Date 06/28/02

Title:

# CLASSIFICATION OF EMERGENGIES Responsible Department: EMERGENCY PLANNING REVISION SUMMARY:

Revision 4 - Revised IAW revision to E-Plan (R40). Revised in itiating condition for RGS leakage. Added EALs under security threat initiating condition. Added definitions for EAL and IC. Added guidance for multiple and dual unit events. Made editorial and administrative changes. (J.R. Walker, 05/23/02)

**Revision 3** - Added PMAI references, added definitions for OCA, PA and power block, clarified classification guidance and made editorial/administrative changes. (J. R. Walker, 02/09/01)

**Revision 2** - Clarified initiating conditions and emergency action levels to correspond to changes in the PSL emergency plan in accordance with PMAI PM99-09-154, defined classification table and made editorial changes. (J. R. Walker, 10/13/00)

**Revision 1** - Revised to RCS EAL for alert based on NESP007 guidance. (J. R. Walker, 04/21/00)

Revision 0	FRG Review Date 12/15/97	Approved By J. Scarola	Approval Date 12/15/97	DATE	OPS
		Plant General Manager	***	DOCT	PROCEDURE
Revision	FRG Review Date	Approved By	Approval Date	DOCN	EPIP-01
4	05/23/02	D. Rose	05/23/02	SYS	
		Plant General Manager		COM	COMPLETED
		N/A		ITM	4
		Designated Approver N/A			
		Designated Approver (Minor Correction)			

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#### 1.0 PURPOSE

This procedure provides instructions on the classification of emergencies at St. Lucie Plant.

Emergency classifications in order of increasing seriousness are:

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

Specific criteria are provided to assure proper escalation and de-escalation between emergency classification levels.

#### 2.0 REFERENCES / RECORDS REQUIRED / COMMITMENT DOCUMENTS

#### NOTE

One or more of the following symbols may be used in this procedure:

- § Indicates a Regulatory commitment made by Technical Specifications, Condition of License, Audit, LER, Bulletin, Operating Experience, etc. and shall NOT be revised without Facility Review Group review and Plant General Manager approval.
- ¶ Indicates a management directive, vendor recommendation, plant practice or other non-regulatory commitment that should NOT be revised without consultation with the plant staff.
- Ψ Indicates a step that requires a sign off on an attachment.

#### 2.1 References

- 1. St. Lucie Plant Radiological Emergency Plan (E-Plan)
- **2.** E-Plan Implementing Procedures (EPIP 00-13)
- 3. C-200, Offsite Dose Calculation Manual (ODCM)
- 4. AP 0010502, Oil and Hazardous Material Emergency Response Plan

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### 2.1 References (continued)

- 5. ¶<sub>1</sub> NUREG-1022, Section 3.1.1
- 6.  $\P_2$  NRC IEN No. 85-80, Timely Declaration of an Emergency Class, Implementation of an Emergency Plan, and Emergency Notifications, October 15, 1985
- 7. ¶<sub>3</sub> NRC EPPOS No. 2, Emergency Preparedness Position (EPPOS) on Timeliness of Classification of Emergency Conditions, August, 1995
- 8. ¶4 PMAI PM98-01-017, Loss of Seismic Monitoring Capability

### 2.2 Records Required

The basis for classifying an emergency condition shall be recorded in appropriate emergency logs.

#### 2.3 Commitment Documents

- §1 CR 00-0614 (RCS leakage during shutdown cooling)
- §<sub>2</sub> PMAI PM99-09-154 (IC and EAL changes submitted under FPL letter L-98-2000).

#### 3.0 RESPONSIBILITIES

- 3.1 Nuclear Plant Supervisor (NPS)
  - 1. The Nuclear Plant Supervisor is responsible to promptly classify abnormal situations into one of the four defined categories.
  - 2. If an emergency has been declared, the Nuclear Plant Supervisor is responsible for assuming the position of Emergency Coordinator and retaining this position until relieved.

# **3.2** Emergency Coordinator (EC)

The Emergency Coordinator is responsible to continually evaluate changes in plant conditions against the classification table in this procedure.

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#### 4.0 DEFINITIONS

### **4.1** Emergency Action Level (EAL)

1. A pre-determined, site-specific, observable threshold for a plant Initiating Condition that places the plant in a given emergency class. An EAL can be: an instrument reading; an equipment status indicator; a measurable parameter (on-site or off-site); a discrete, observable event; results of analyses; entry into specific emergency operating procedures; or another phenomenon which, if it occurs, indicates entry into a particular emergency class.

### **4.2** Emergency Classes

#### 1. Unusual Event

This classification is represented by off-normal events or conditions at the plant for which no significant degradation of the level of safety of the plant has occurred or is expected. Any releases of radioactive material which may have occurred or which may be expected are minor and constitute no appreciable health hazard.

#### 2. Alert

This classification is represented by events which involve an actual or potential substantial degradation of the level of safety of the plant combined with a potential for limited uncontrolled releases of radioactivity from the plant.

# 3. Site Area Emergency

This classification is composed of events which involve actual or likely major failures of plant functions needed for protection of the public combined with a potential for significant uncontrolled releases of radioactivity from the plant.

# 4. General Emergency

This classification is composed of events which involve actual or imminent substantial core degradation and potential loss of containment integrity combined with a likelihood of significant uncontrolled releases of radioactivity from the plant.

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#### 4.3 Classification Table

A composite of Initiating Conditions (ICs) and their Emergency Action Levels (EALs) used to evaluate off normal/emergency conditions resulting in declaration of one of the four Emergency Classes, as appropriate. The Table is arranged in the following categories:

- 1. Events Affecting Primary Pressure
  - A. Abnormal Primary Leak Rate
  - B. Abnormal Primary/Secondary Leak Rate
  - C. Loss of Secondary Coolant
- 2. Abnormal Radiation, Contamination and Effluent Releases
  - A. Uncontrolled Effluent Release
  - B. High Radiation Levels in Plant
- 3. Fires, Explosions
- 4. Accident Involving Fuel
  - A. Fuel Element Failure
  - B. Fuel Handling
- 5. Natural Emergencies
  - A. Earthquake
  - B. Hurricane
  - C. Tornado
  - D. Abnormal Water Level
- 6. Miscellaneous Events
  - A. Increased Awareness or Potential Core Melt
- 7. Electrical Malfunctions
  - A. Loss of Power

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- **4.3** Classification Table (continued)
  - 8. Degradation of Control Capabilities
    - A. Loss of Plant Control Functions
    - B. Loss of Alarms, Communications, Monitoring
  - 9. Hazards to Station Operation
    - A. Aircraft, Missile
    - B. Turbine Failure
    - C. Toxic or Flammable Gas
  - 10. Security Threat
- **4.4** Initiating Condition (IC)
  - 1. One of a predetermined subset of nuclear power plant conditions where either the potential exists for a radiological emergency, or such an emergency has occurred.
- 4.5 Plant The St. Lucie Plant, Unit 1 and Unit 2
- **4.6 Site** A general term referring to the location of the St. Lucie Nuclear Power Plant. Other terms related to the site are given below:
  - 1. Owner Controlled Area That portion of FPL property surrounding and including the St. Lucie Nuclear Power Plant which is subject to limited access and control as deemed appropriate by FPL.
  - 2. Protected Area The area (within the Owner Controlled Area) occupied by the nuclear units and associated equipment and facilities enclosed with the security perimeter fence. The area within which accountability of personnel is maintained in an emergency.

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# 4.6 Site (continued)

- 3. §2 **Power Block** Structures, systems or components in the areas listed below that support the production of power. This includes any equipment needed for the direct generation of power or necessary for safe operation and/or shutdown of one or both of the reactors.
  - A. Reactor Containment and Shield Buildings
  - B. Reactor Auxiliary Buildings including the following areas:
    - 1. Refueling Water Tank (RWT)
    - 2. Component Cooling Water (CCW) platform area
    - 3. Diesel Generator Buildings and Fuel Oil Storage Tanks
    - 4. Fuel Handling Building
    - 5. Primary Water Tank and Pumps
  - C. Intake Area
  - D. Discharge Canal & Headwall
  - E. Ultimate Heat Sink Structure
  - F. Fire Protection System including the fire pumps and the City Water Storage Tanks (CWST), but not including parts of the system associated with the North or South Service Buildings or other outlying facilities.
  - G. Turbine Buildings (all levels)
  - H. Condensate Storage Tanks (CST)
  - I. Main, Auxiliary and Startup Transformers
  - J. Steam Trestles
  - K. Turbine Lube Oil Storage Tanks
  - L. Gas House

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#### 5.0 INSTRUCTIONS

- 5.1 Direct Initial Investigative and Mitigating Actions to Address the Event
  - 1. <u>If</u> the event involves entry into the Off-Normal Operating Procedures (ONOPs) or Emergency Operating Procedures (EOPs), <u>Then</u> perform steps per ONOPs or EOPs until appropriate or directed to classify event.
  - 2. If the event involves a release of hazardous materials to the environment, Then respond per AP 0010502, Oil and Hazardous Material Emergency Response Plan.
  - 3. <u>If</u> the event involves a release of radioactive material to the environment, <u>Then</u> direct Chemistry personnel to implement EPIP-09, Off-site Dose Calculations.

**END OF SECTION 5.1** 

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#### NOTE

Initiating Conditions / Emergency Action Levels are applicable to <u>all</u> modes unless otherwise indicated.

### 5.2 Classifying the Event

- 1. ¶<sub>3</sub> A goal of fifteen (15) minutes should be used for assessing and classifying an emergency once indications (Emergency Action Levels (EALs)) are available to Control Room Operators that an Initiating Condition (IC) has been met and/or exceeded.
  - A. This goal should allow time for determination of indications (leak rate, etc.) and detailed review of Attachment 1, Emergency Classification Table.
- 2. Use the best information available when working through the Emergency Classification Table. When confronted with conflicting information for which resolution is not apparent, classify the condition at the highest appropriate emergency class.
- 3. <u>If</u>, in the judgement of the Nuclear Plant Supervisor (NPS)/Emergency Coordinator (EC), a situation is more serious than indicated by instrument readings or other parameters, <u>Then</u> classify the emergency condition at the more serious level (i.e., at the highest appropriate emergency class).
- 4. Multiple and Dual Unit Events

#### **CAUTION**

There can not be two concurrent declared emergency classes under the St. Lucie Plant Radiological Emergency Plan.

- A. If one Unit is in a classified event and the same or the other Unit enters into an event where the same or lesser Emergency Class would apply, Then a new classification should NOT be declared. The event should be documented on a SNF as "Additional Information or Update" and issued as soon as practicable.
- B. If one Unit is in a classified event and the other Unit enters into a more severe event in which a higher Emergency Class would apply, Then the new classification shall be declared and promptly, within the regulatory time limits, issued to the State, Counties and the NRC.

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### **5.2** Classifying the Event (continued)

- 5.  $\P_2$  If an EAL was met and the condition completely cleared prior to an emergency classification being declared, Then:
  - A. Classify the event in accordance with Attachment 1.
  - B. Termination of the event
    - 1. An event classified as an Unusual Event or Alert may be terminated at the time of declaration by the EC.
    - 2. An event classified as a Site Area Emergency or General Emergency may only be downgraded and/or terminated by the Recovery Manager (RM).

**END OF SECTION 5.2** 

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- 5.3 ¶<sub>1</sub> Classification of An Event Based On Subsequent Information
  - 1. <u>If</u> subsequent information of a more detailed nature (e.g., sampling results) becomes available after the initial classification has been made, <u>Then</u> reclassify as appropriate.
  - 2. <u>If</u> results of a protracted review (i.e., Engineering Evaluation, CR disposition, etc.) of an event indicate that conditions were met for an Emergency Classification, and the condition has completely cleared prior to recognition of possible classification, <u>Then</u> notify NRC within one hour of discovery of the undeclared event.
    - **A.** Contact Emergency Preparedness for briefing of state and local agencies.

**END OF SECTION 5.3** 

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CAUTION

Section 1.A should not be used for a steam generator tube leak/rupture.

**EVENT/CLASS** 

1.A. ABNORMAL PRIMARY LEAK RATE (Page 1 of 2) **UNUSUAL EVENT** 

Reactor Coolant System (RCS) Leakage

- RCS leakage GREATER THAN
   10 gpm as indicated by:
- A. Control Room observation
- OR

  B. Inventory balance calculation
- OR C. Field observation
- D. Emergency Coordinator judgement AND Inability to reduce the leak rate to

Inability to reduce the leak rate to technical specification limits within the timeframe of the action statement.

NOTE
For RCS Leakage in Section 1
above, the (Notification of)
Unusual Event should be
declared upon commencing a
load reduction/mode change.

OR

2. Indication of leaking RCS safety or relief valve which causes RCS pressure to drop below setpoints:

Unit 1 - 1600 psiaUnit 2 - 1736 psia

**ALERT** 

RCS Leakage GREATER THAN 50 gpm

- Unisolable RCS leakage as indicated by Charging/letdown mismatch greater than 50 gpm but less than available charging pump capacity.

  OR
- Unisolable measured RCS leakage indicating greater than 50 gpm but less than available charging pump capacity.

SITE AREA EMERGENCY

LOCA GREATER THAN capacity of charging pumps

- RCS leakage greater than available makeup occurring with RCS pressure below HPSI shutoff head.
   OR
   Loss of RCS subcooled margin due to
- RCS leakage (saturated conditions).

  OR

  Containment High Range Radiation
  Monitors indicate 7.3 X 10<sup>3</sup> R/hr (If
  CHRRM inoperable, Post-LOCA
  monitors indicate between 100 and

1000 mR/hr).

**GENERAL EMERGENCY** 

A release has occurred or is in progress resulting in:

- Containment High Range Radiation monitor greater than 1.46 X 10<sup>5</sup> R/hr (If CHRRM inoperable, Post-LOCA monitors greater than 1000 mR/hr).
- OR

  2. Performance of EPIP-09 (Off-site Dose Calculations) or measured dose rates from off-site surveys indicate site boundary (1 mile) exposure levels have been exceeded as indicated by either A, B, C or D below:
  - A. 1000 mrem/hr (total dose rate)
  - . 1000 mrem (total dose TEDE)
  - C. 5000 mrem/hr (thyroid dose rate)
  - D. 5000 mrem (thyroid dose CDE) (continued on next page)

1.A. <u>ABNORMAL PRIMARY</u> <u>LEAK RATE</u>

AFTER CLASSIFYING, GO TO EPIP-02, DUTIES AND RESPONSIBILITIES OF THE EMERGENCY COORDINATOR

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**EVENT/CLASS** 

**UNUSUAL EVENT** 

**ALERT** 

SITE AREA EMERGENCY

**GENERAL EMERGENCY** 

1.A. ABNORMAL PRIMARY LEAK RATE (Page 2 of 2)

Loss of 2 of the 3 fission product barriers with imminent loss of the third (any two of the following exist and the third is imminent).

Fuel element failure (confirmed DEQ I-131 activity greater than 275 µCi/mL).

2. LOCA or Tube rupture on unisolable steam generator.

AND
3. Containment Integrity Breached.

NOTE
Also refer to Potential Core Melt
Event / Class 6.A.

1.A. <u>ABNORMAL PRIMARY</u> <u>LEAK RATE</u>

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**EVENT/CLASS** 

1.B. ABNORMAL
PRIMARY TO
SECONDARY LEAK
RATE
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**UNUSUAL EVENT** 

RCS PRI/SEC Leakage

- Measured RCS to secondary leakage exceeds Tech. Spec. limits.
- 2. Secondary plant activity is detected.

**ALERT** 

Rapid gross failure of one steam generator tube (WITHIN charging pump capacity) with loss of offsite power

- Measured RCS to secondary leakage greater than Tech. Spec. Limits and within charging pump capacity.
- AND
  2. Secondary plant activity is detected.
- AND
  3. Loss of both Non-Vital 4.16 KV buses.

(continued on next page)

SITE AREA EMERGENCY

Rapid gross failure of steam generator tubes (GREATER THAN charging pump capacity) with a loss of offsite power

- AND
  2. Secondary plant activity is detected.
- AND
  3. Loss of both Non-Vital 4.16 KV buses.

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GENERAL EMERGENCY

Loss of 2 of the 3 fission product barriers with imminent loss of the third (any two of the following exist and the third is imminent).

- Fuel element failure (confirmed DEQ I-131 activity greater than 275 μCi/mL).
- AND
  2. LOCA or Tube rupture on unisolable steam generator.
- AND
  3. Containment integrity breached.

NOTE
Also refer to Potential Core Melt
Event/Class 6.A.

1.B. ABNORMAL PRIMARY TO SECONDARY LEAK RATE

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**EVENT/CLASS** 

**UNUSUAL EVENT** 

**ALERT** 

SITE AREA EMERGENCY

**GENERAL EMERGENCY** 

1.B. ABNORMAL
PRIMARY TO
SECONDARY LEAK
RATE
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Rapid failure of steam generator tubes (GREATER THAN charging pump capacity)

- Measured RCS to secondary leakage greater than charging pump capacity.

   <u>AND</u>
   Secondary plant activity is detected.
- §2 Rapid failure of steam generator tube(s) (GREATER THAN charging pump capacity) with steam release in progress
  - Measured RCS to secondary leakage greater than charging pump capacity.

     <u>AND</u>
     Secondary plant activity is detected.

    AND

  - 3. Secondary steam release in progress from affected generator (i.e., ADVs, stuck steam safety(s) or unisolable leak.) leak.)

1.B. <u>ABNORMAL</u> <u>PRIMARY TO</u> SECONDARY LEAK

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**EVENT/CLASS** 

1.C. LOSS OF SECONDARY COOLANT (Page 1 of 2)

**UNUSUAL EVENT** 

Rapid depressurization of secondary <u>plant</u>

1. Rapid drop in either steam generator pressure to less than 600 psia. **ALERT** 

Major steam leak with **GREATER THAN 10 gpm** primary/secondary leakage

 Rapid drop in either steam generator pressure to less than 600 psia.

AND

2. Known pri/sec leak of greater than 10 gpm.

3. Secondary plant activity is detected.

Total loss of feedwater

1. No main or auxiliary feedwater flow available for greater than 15 minutes when required for heat removal.

<u>AND</u> 2. Steam Generator levels are less than 40% wide range.

SITE AREA EMERGENCY

Major steam leak with GREATER THAN 50 gpm primary/secondary leakage and fuel damage indicated

1. Rapid drop in either steam generator pressure to less than 600 psia.

<u>AND</u> 2. Known pri/sec leak of greater than 50 gpm.

<u>AND</u> 3. Secondary plant activity is detected.

4. Fuel element damage is indicated (Refer to Fuel Element Failure Event/Class 4.A).

TLOF with once-through cooling <u>initiated</u>

1. No main or auxiliary feedwater flow available.

<u>AND</u> 2. PORV(s) have been opened to facilitate core heat removal.

**GENERAL EMERGENCY** 

A release has occurred or is in progress resulting in:

Containment High Range Radiation monitor greater than 1.46 X 10<sup>5</sup> R/hr (If CHRRM inoperable, Post-LOCA monitors greater than 1000 mR/hr).

<u>OR</u> 2. Performance of EPIP-09 (Off-site Dose Calculations) or measured dose rates from off-site surveys indicate site boundary (1 mile) exposure levels have been exceeded as indicated by either A, B, C or D below:

> A. 1000 mrem/hr (total dose rate)

1000 mrem (total dose -TEDE)

C. 5000 mrem/hr (thyroid dose rate)

D. 5000 mrem (thyroid dose-CDE)

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1.C. <u>LOSS OF</u> <u>SECONDARY</u> <u>COOLANT</u>

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EVENT/CLASS	UNUSUAL EVENT	ALERT	SITE AREA EMERGENCY	GENERAL EMERGENCY
1.C. LOSS OF SECONDARY COOLANT (Page 2 of 2)				Loss of 2 of the 3 fission product barriers with imminent loss of the third (any two of the following exist and the third is imminent).  1. Fuel element failure (confirmed DEQ I-131 activity greater than 275 µCi/mL).  AND
				LOCA or Tube rupture on unisolable steam generator. <u>AND</u> Containment Integrity Breached
				NOTE Also refer to Potential Core Melt Event/Class 6.A.
1.C. LOSS OF SECONDARY COOLANT				
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**EVENT/CLASS** 

2.A. <u>UNCONTROLLED</u> <u>EFFLUENT RELEASE</u>

#### **UNUSUAL EVENT**

Radiological effluent limits exceeded

- Plant effluent monitor(s) exceed alarm setpoint(s).
   <u>AND</u>
- Confirmed analysis results for gaseous or liquid release which exceeds ODCM limits.

#### NOTE

If analysis is not available within one hour and it is expected that release is greater than ODCM limit, classify as <u>UNUSUAL EVENT</u>.

#### **ALERT**

A release has occurred or is in progress that is 10 times the effluent limit

- Plant effluent monitor(s) significantly exceed alarm setpoints.
- Confirmed analysis results for gaseous or liquid release which exceeds 10 times ODCM limits.

#### NOTE

If analysis is not available within one hour and it is expected that release is equal to or greater than 10 times ODCM limit, classify as ALERT.

#### SITE AREA EMERGENCY

- §2 A release has occurred or is in progress resulting in:
  - Containment High Range Radiation Monitor greater than 7.3 X 10<sup>3</sup> R/hr (Post-LOCA monitors indicate between 100 and 1000 mR/hr, if CHRRM inoperable).
  - Measured Dose Rates or Offsite Dose Calculation (EPIP-09) worksheet values at one mile in excess of:
    - So mrem/hr (total dose rate) or 250 mrem/hr (thyroid dose rate) for 1/2 hour.
       OR
    - 500 mrem/hr (total dose rate) or 2500 mrem/hr (thyroid dose rate) for two minutes at one mile.

#### **GENERAL EMERGENCY**

A release has occurred or is in progress resulting in:

- Containment High Range Radiation monitor greater than 1.46 X 10<sup>5</sup> R/hr (If CHRRM inoperable, Post-LOCA monitors greater than 1000 mR/hr).
- Performance of EPIP-09 (Off-site Dose Calculations) or measured dose rates from off-site surveys indicate site boundary (1 mile) exposure levels have been exceeded as indicated by either A, B, C or D below:
  - A. 1000 mrem/hr (total dose rate)
  - B. 1000 mrem (total dose TEDE)
  - C. 5000 mrem/hr (thyroid dose rate)
  - D. 5000 mrem (thyroid dose-CDE)

ODCM - refers to Chemistry Procedure C-200, Offsite Dose Calculation Manual (ODCM)

2.A. <u>UNCONTROLLED</u> <u>EFFLUENT RELEASE</u>

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EVENT/CLASS	UNUSUAL EVENT	ALERT	SITE AREA EMERGENCY	GENERAL EN	MERGENCY
2.B. <u>HIGH RADIATION</u> <u>LEVELS IN PLANT</u>		High radiation levels or high airborne contamination which indicates a severe degradation in the control of radioactive materials			
		<ol> <li>Any valid area monitor alarm from indeterminable source with meter near or greater than full scale deflection (10³ mR/hr).         <u>OR</u></li> <li>Unexpected plant iodine or particulate airborne concentration of 1000 DAC as seen in routine surveying or sampling.         <u>OR</u></li> <li>Unexpected direct radiation dose rate reading or unexpected airborne radioactivity concentration from an indeterminable source in excess of 1000 times normal levels.</li> </ol>			

AFTER CLASSIFYING, GO TO EPIP-02, DUTIES AND RESPONSIBILITIES OF THE EMERGENCY COORDINATOR

2.B. <u>HIGH RADIATION</u> <u>LEVELS IN PLANT</u>

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EVENT/CLASS	UNUSUAL EVENT	ALERT	SITE AREA EMERGENCY	GENERAL EMERGENCY
3. <u>FIRE</u>	§2 <u>Uncontrolled fire within the Power</u> Block lasting more than 10 minutes.	Uncontrolled fire     Potentially affecting safety systems.     AND     Requiring off-site support in the opinion of the NPS/EC.	§2 Fire compromising the function of safety systems (e.g., both trains rendered inoperable).	NOTE Refer to Potential Core Melt Event/Class 6.A.
	§ <sub>2</sub> Explosion is defined a	NOTE s a rapid chemical reaction resulting in nois	e, heat and rapid expansion of gas.	
EXPLOSION	Occurrence of an explosion within the Owner Controlled Area.	§2 Damage to structures/components in the Protected Area by explosion which affects plant operation.	§2 Severe damage to safe shutdown equipment from explosion (e.g., both trains rendered inoperable.	
3. <u>FIRE</u>				
<b>EXPLOSION</b>				

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#### **EVENT/CLASS**

4.A. FUEL ELEMENT **FAILURE** 

#### **UNUSUAL EVENT**

#### Fuel element damage

- 1. Process monitors or area radiation surveys indicate increased letdown activity
- AND 2. Confirmed RCS sample indicating:
  - A. Coolant activity greater than the Tech Spec limit for iodine spike (Tech Spec Figure 3.4-1.).
  - OR

    B. Coolant activity greater than 100/Ē μCi/gram specific activity.

#### NOTE

If analysis is not available within one hour and it is expected that activity is greater than Tech Spec limit, classify as UNUSUAL EVENT.

#### **ALERT**

#### Fuel element failure

1. Process monitors or area radiation surveys indicate increased letdown activity and confirmed RCS Samples indicating DEQ I-131 activity greater than or equal to 275 μCi/mL.

#### SITE AREA EMERGENCY

Fuel element failure with inadequate core cooling

- 1. RCS DEQ I-131 activity greater than or equal to 275 µCi/mL.
- AND 2. Highest CET per core quadrant indicates greater than 10°F superheat or 700°F.

#### **GENERAL EMERGENCY**

A release has occurred or is in progress resulting in:

- 1. Containment High Range Radiation monitor greater than 1.46 X 10<sup>5</sup> R/hr (If CHRRM inoperable, Post-LOCA monitors greater than 1000 mR/hr).
- OR 2. Performance of EPIP-09 (Off-site Dose Calculations) or measured dose rates from off-site surveys indicate site boundary (1 mile) exposure levels have been exceeded as indicated by either A, B, C or D below:
  - A. 1000 mrem/hr (total dose rate)
  - B. 1000 mrem (total dose TEDE)
  - C. 5000 mrem/hr (thyroid dose
  - D. 5000 mrem (thyroid dose -

NOTE

If analysis is not available within one hour and it is expected that RCS activity for DEQ I-131 is greater than 275 µCi/mL, classify as an ALERT.

4.A <u>FUEL ELEMENT</u> **FAILURE** 

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EVENT/CLASS

**UNUSUAL EVENT** 

**ALERT** 

SITE AREA EMERGENCY

**GENERAL EMERGENCY** 

4.B. FUEL HANDLING ACCIDENT

Fuel handling accident which results in the release of radioactivity to Containment or Fuel Handling

Building

Major damage to irradiated fuel in Containment or Fuel Handling

Building Building:

- 1. NPS/EC determines that an irradiated fuel assembly may have been damaged. <u>AND</u>
- 2. Associated area or process radiation monitors are in alarm.
- Affected area radiation monitor greater than 1000 mrem/hr. <u>AND</u> 2. Damage to more than one
  - irradiated fuel assembly. OR Major damage resulting from uncovering of one or more irradiated fuel assemblies in the Spent Fuel Pool.

4.B. <u>FUEL HANDLING</u> <u>ACCIDENT</u>

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EVENT/CLASS	UNUSUAL EVENT	ALERT	SITE AREA EMERGENCY	GENERAL EMERGENCY
5.A. <u>EARTHQUAKE</u>	§ <sub>2</sub> A confirmed earthquake has occurred	§ <sub>2</sub> A confirmed earthquake has occurred.	§ <sub>2</sub> A confirmed earthquake has occurred.	NOTE
	1. A confirmed earthquake has been experienced within the Owner Controlled Area.  OR 2. ¶4 An earthquake is detected by plant seismic monitor instruments or other means.	<ol> <li>A confirmed earthquake has occurred which registered GREATER THAN 0.05g within the Owner Controlled Area.         <u>OR</u></li> <li>A confirmed earthquake has occurred that could or has caused trip of the turbine generator or reactor.</li> </ol>	1. A confirmed earthquake has occurred which registered GREATER THAN 0.1g within the Owner Controlled Area and the plant not in Cold Shutdown.  OR  2. A confirmed earthquake has occurred that has caused loss of any safety system function (e.g., both trains inoperable).	Refer to Potential Core Melt Event / Class 6.A.
5.B. <u>HURRICANE</u>	Hurricane Warning	Hurricane warning with winds near design basis	Hurricane warning with winds GREATER THAN design basis	NOTE Refer to Potential Core Melt Event / Class 6.A.
	Confirmed hurricane warning is in effect.	Confirmed hurricane warning is in effect and winds are expected to exceed 175 mph within the Owner Controlled Area.  NOTE  At FPL's request, NOAA will provide an accurate projection of wind speeds onsite 24 hours prior to the onset of hurricane force winds. If that projection is not available within 12 hours of entering into the warning, classify the event using current track and wind speeds to project onsite onditions. For example, projected onsite wind speed would be less than maximum hurricane wind speed if the track is away from PSL.	onsite wind speed would be less than	

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EVENT/CLASS

5.C. TORNADO

UNUSUAL EVENT

Notification of a tornado sighted in

ALERT §2 Any tornado striking the Power

SITE AREA EMERGENCY

GENERAL EMERGENCY

NOTE

Refer to Potential Core Melt Event / Class 6.A.

5.D. <u>ABNORMAL WATER</u> <u>LEVEL</u>

Abnormal water level conditions are expected or occurring

the Owner Controlled Area

- Low intake canal level of -10.5 ft.
   MLW for 1 hour or more.
- Visual sightings by station personnel that water levels are approaching storm drain system capacity.

- Flood, low water, hurricane surge or other abnormal water level conditions

  1. The storm drain capacity is exceeded during hurricane surge
- OR

  2. Low intake canal level of -10.5 ft.
  MLW for 1 hour or more with
  emergency barrier valves open.

or known flood conditions.

Flood, low water, hurricane surge or other abnormal water level conditions causing failure of vital equipment

- Flood/surge water level reaching elevation +19.5 ft. (turbine building/RAB ground floor).
   OR
- Low intake canal level has caused the loss of all ICW flow.

5.C. TORNADO

5.D. <u>ABNORMAL WATER</u> <u>LEVEL</u>

₹ 4

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# **ATTACHMENT 1 EMERGENCY CLASSIFICATION TABLE**

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NOTE Activation of the Emergency Response Facilities does not require declaration of an emergency or entry into a specific emergency classification.

#### **EVENT/CLASS**

6.A. <u>INCREASED</u> **AWARENESS OR** POTENTIAL CORE MELT (Page 1 of 2)

#### **UNUSUAL EVENT**

operating staff and/or local authorities.

- 1. The plant is shutdown under abnormal conditions (e.g., exceeding cooldown rates or primary system pipe cracks are found during operation).
- OR

  2. Any plant shutdown required by Technical Specifications in which the required shutdown is not reached within action limits.

# **ALERT**

#### SITE AREA EMERGENCY

#### **GENERAL EMERGENCY**

Emergency Coordinator's judgement that plant conditions exist which warrant increased awareness on the part of the increased awareness of the part of the increased awareness of the part of the increased awareness large amounts of radioactivity in a short period appear possible or likely. (Any core melt situation.)

- 1. LOCA with failure of ECCS leading to severe core degradation or melt.
- OR
  2. LOCA with initially successful ECCS and subsequent failure of containment heat removal systems for greater than 2 hours.

<u>OR</u> 3. Total loss of feedwater followed by failure of once-through-cooling (ECCS) to adequately cool the core.

OR

4. Failure of off-site and on-site power along with total loss of feedwater makeup capability for greater than 2 hours.

OR

5. ATWS occurs which results in core damage or causes failure of core cooling and make-up systems.

OR

6. Any major internal or external event (e.g., fire, earthquake or tornado substantially beyond design basis)
which in the ECs opinion has or could cause massive damage to plant systems resulting in any of the above.

(continued on next page)

6.A. <u>INCREASED AWARENESS</u> <u>OR POTENTIAL CORE MELT</u>

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6.A. INCREASED AWARENESS OR POTENTIAL CORE MELT (Page 2 of 2)				mode is r release of Quicker r for failure isolation s 2. General f declared events. I	Emergency must be for the above listed The likelihood of action (repair of p, etc.) should not
6.A. INCREASED AWARENESS OR POTENTIAL CORE MELT					
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**EVENT/CLASS** 7.A. LOSS OF POWER **UNUSUAL EVENT** 

OR

2. Loss of capability to power at least

one vital 4.16 kv bus from any

available emergency diesel

1. Loss of off-site AC power.

generator.

Loss of off-site power or loss of all on-site AC power capability.

- 1. Loss of off-site AC power. <u>AND</u>
- 2. Failure of both emergency diesel generators to start or load.

**ALERT** 

Loss of all on-site DC power

Drop in A and B DC bus voltages to less than 70 VDC.

SITE AREA EMERGENCY

§2 Station Blackout (Total Loss of AC) §2 Station Blackout (Total Loss of AC) for GREATER THAN 15 minutes

1. Loss of offsite AC power.

AND 2. Sustained failure of both emergency diesel generators to start or load. <u>AND</u>

3. Failure to restore AC power to at least one vital 4.16 kv bus within 15 minutes.

Loss of all vital on-site DC for greater than 15 minutes

Sustained drop in A and B DC bus voltages to 70 VDC for greater than 15 minutes.

**GENERAL EMERGENCY** 

NOTE Refer to Potential Core Melt Event / Class 6.A.

7.A. LOSS OF POWER

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**EVENT/CLASS** 

8.A. <u>LOSS OF PLANT</u> CONTROL FUNCTIONS

**UNUSUAL EVENT** 

**ALERT** 

Loss of Plant Control Functions

- 1. Complete loss of any function needed for plant cold shutdown. <u>OR</u>
- 2. Failure of the Reactor Protection System to bring the reactor subcritical when needed.
- OR
  3. Control Room is evacuated (for other than drill purposes) with control established locally at the Hot Shutdown Control Panel.

Loss of Shutdown Cooling

- 1. Complete loss of functions needed to maintain cold shutdown.
- A. Failure of shutdown cooling systems, resulting in loss of cold shutdown conditions.
- AND

  B. RCS subcooling can NOT be maintained greater than 0°F.

SITE AREA EMERGENCY

Critical Loss of Plant Control Functions

- 1. Loss of any function or system which, in the opinion of the Emergency Coordinator, precludes
- placing the plant in Hot Shutdown.

  OR

  2. Failure of the RPS to trip the reactor when needed and operator actions fail to bring the reactor subcritical.
- OR
  3. Control Room is evacuated (for other than drill purposes) and control cannot be established locally at the Hot Shutdown Control Panel within 15 minutes.

**GENERAL EMERGENCY** 

NOTE

Refer to Potential Core Melt Event / Class 6.A.

8.A. <u>LOSS OF PLANT</u> <u>CONTROL FUNCTIONS</u>

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**EVENT/CLASS** 

8.B. LOSS OF ALARMS / COMMUNICATION / MONITORING **UNUSUAL EVENT** 

§2 Significant loss of effluent monitoring §2 Loss of alarms capability, communications, indication and alarm panels, etc., which impairs ability to perform accident or emergency assessment.

- 1. Loss of effluent or radiological monitoring capability requiring plant shutdown.
- plant shutdown.

  OR

  2. Loss of all primary and backup communication capability with offsite locations.

  OR

  3. Unplanned loss of most (greater than 75%) or all Safety System annunciators for greater than 15 minutes. 15 minutes.

**ALERT** 

- 1. Unplanned loss of most (greater than 75%) or all safety system annunciators.
- AND
  2. Plant transient in progress.

SITE AREA EMERGENCY

**GENERAL EMERGENCY** 

1. Inability to monitor\* a significant transient in progress.

Loss of alarms/monitoring

\*Monitoring means loss of ERDADS, QSPDS and/or the inability to determine any one of the following: reactivity control, core cooling, RCS status or containment integrity.

8.B. LOSS OF ALARMS / COMMUNICATION / MONITORING

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SITE AREA EMERGENCY **GENERAL EMERGENCY UNUSUAL EVENT ALERT EVENT/CLASS** §2 <u>Damage to vital systems from aircraft/missiles</u> §2 Aircraft/missile impact 9.A. AIRCRAFT / MISSILE Unusual aircraft activity 1. Aircraft crash into the Power Block. 1. Aircraft crash in the Owner 1. Aircraft crash into the Power OR

2. Visual or audible indication of missile impact on the Power Block. Controlled Area or unusual aircraft Block damaging vital plant systems. activity over facility that in the opinion of the NPS/EC, could OR

2. Damage resulting in loss of safe shutdown equipment from any threaten the safety of the plant or personnel. missile. Turbine rotating component failure Visual indication that the turbine 9.B. TURBINE FAILURE causing rapid plant shutdown. casing has been penetrated by blading. 9.C. <u>TOXIC OR</u> <u>FLAMMABLE GAS</u> Entry of toxic or flammable gas into §2 Toxic or flammable gas has diffused Unplanned/uncontrolled toxic or flammable gas release in the Owner areas potentially affecting plant into vital areas compromising the Controlled Area that could affect function of safety related equipment plant/personnel safety. (e.g., both trains rendered inoperable). 9.A. AIRCRAFT / MISSILE

9.B. TURBINE FAILURE

9.C. TOXIC OR FLAMMABLE GAS

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**EVENT/CLASS** 10. SECURITY THREAT

**UNUSUAL EVENT** A SECURITY ALERT has been

Security threat
Protected Area intrusion attempt

Bomb threat

Attack threat

Sabotage attempt Internal disturbance

Civil disturbance Vital Area intrusion Security Force strike 10. Credible site-specific Security

threat notification

1.

called by the Security Force in response to one or more of the items listed below.

A SECURITY EMERGENCY has been called by the Security Force as defined in the Safeguards Contingency Plan.

**ALERT** 

SITE AREA EMERGENCY

A SECURITY EMERGENCY involving imminent occupancy of the control room or other area(s) vital to the operation of the reactor as defined in the Safeguards Contingency Plan.

**GENERAL EMERGENCY** 

A successful takeover of the plant including the Control Room or any other area(s) vital to the operation of

AFTER CLASSIFYING, GO TO EPIP-02, DUTIES AND RESPONSIBILITIES OF THE EMERGENCY COORDINATOR

the reactor (as per the Security Plan).

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10. SECURITY THREAT