



Crystal River Nuclear Plant
15760 W. Power Line Street
Crystal River, FL 34428

Docket 50-302
Operating License No. DPR-72

10 CFR 50.4(b)(5)(iii)
10 CFR 50.54(q)(5)
10 CFR 50, Appendix E, Section V

March 12, 2014
3F0314-02

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555-0001

Subject: Crystal River Unit 3 – Revisions to the Radiological Emergency Response Plan
Implementing Procedures and Document

Dear Sir:

In accordance with 10 CFR 50.4(b)(5)(iii), 10 CFR 50.54(q)(5), and 10 CFR 50, Appendix E, Section V, Duke Energy Florida, Inc. hereby submits revisions to the Radiological Emergency Response Plan implementing procedures and document for Crystal River Unit 3 (CR-3).

CR-3 has evaluated these revisions, in accordance with 10 CFR 50.54(q), and determined the revisions do not reduce the effectiveness of the CR-3 Radiological Emergency Response Plan and the Plan continues to meet the standards of 10 CFR 50.47(b) and the requirements of 10 CFR 50, Appendix E.

Enclosure 1 provides a list of the revised Radiological Emergency Response Plan implementing procedures and document. Enclosure 2 provides a 10 CFR 50.54(q)(5) analysis summary for the revised Radiological Emergency Response Plan implementing procedures and document. Enclosure 3 provides a copy of the revised Radiological Emergency Response Plan implementing procedures and document.

There are no new regulatory commitments made within this submittal.

If you have any questions regarding this submittal, please contact Mr. Dan Westcott, Manager, Nuclear Regulatory Affairs, at (352) 563-4796.

Sincerely,

Phyllis A. Dixon
Director – Decommissioning Support
Crystal River Nuclear Plant

PAD/sam

Enclosures: 1. List of Revisions to the Radiological Emergency Response Plan
Implementing Procedures and Document
2. 10 CFR 50.54(q)(5) Analysis Summary
3. Copy of Revised Radiological Emergency Response Plan Implementing
Procedures and Document

xc: NRR Project Manager
Regional Administrator, Region I

AX45
NRR

DUKE ENERGY FLORIDA, INC.

DOCKET NUMBER 50 - 302 / LICENSE NUMBER DPR - 72

ENCLOSURE 1

**LIST OF REVISIONS TO THE RADIOLOGICAL EMERGENCY
RESPONSE PLAN IMPLEMENTING PROCEDURES AND
DOCUMENT**

LIST OF REVISIONS TO THE RADIOLOGICAL EMERGENCY RESPONSE PLAN
IMPLEMENTING PROCEDURES AND DOCUMENT

Title	Revision	Effective Date
EM-103, Operation and Staffing of the CR-3 Control Room During Emergency Classifications	23	02/25/2014
EM-202, Duties of the Emergency Coordinator	102	02/11/2014
EM-206, Emergency Response Organization Notification	110	02/27/2014
EM-211, Duties of the CR3 Nuclear Security Organization	28	02/20/2014
EM-500, Equipment Important to Emergency Preparedness and Response	1	03/05/2014
Emergency Action Level Bases Manual	17	02/11/2014

DUKE ENERGY FLORIDA, INC.

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ENCLOSURE 2

10 CFR 50.54(q)(5) ANALYSIS SUMMARY

10 CFR 50.54(q)(5) ANALYSIS SUMMARY

In accordance with 10 CFR 50.54(q)(5), Duke Energy Florida, Inc. (DEF), is providing an analysis summary for the revised Radiological Emergency Response Plan (RERP) implementing procedures and document that are being submitted with this letter. The analysis summary for changes associated with program elements, administrative changes, and editorial corrections are described below.

The following changes do not require a 10 CFR 50.54 (q) Evaluation:

1. EM-103, "Operation and Staffing of the CR-3 Control Room During Emergency Classifications," Revision 23

- Nuclear Operations Commitment System (NOCS) references, equipment titles, position titles, and procedure title references were updated.
- SECTION 6, "PRECAUTIONS, LIMITATIONS, NOTES," was revised to identify that in the event that the Control Room is evacuated, Control Room Emergency Plan functions may be performed in the Technical Support Center (TSC).
- SECTION 7, "SPECIAL TOOLS AND EQUIPMENT," was revised to include a notation that the Emergency Response Data System, the Plant Integrated Computer System, and the Safety Parameters Display System are standard desktop items.
- SECTION 9, "INSTRUCTIONS," was revised to reflect communication from the TSC to Control Room personnel. A NOTE was modified to clarify that a Health Physics Technician does not need to be a member of the reentry team if there are no radiological consequences identified for an event.
- ENCLOSURE 1, "DISPATCHING OF RESOURCES DURING AN EMERGENCY PLAN ENTRY," was updated to correct capitalization, bold font use, and inconsistencies in the emphasis on the wording "Within" and "Outside."

Reference: Emergency Response Regulatory Review Action Request (EREG AR) 666453

2. EM-202, "Duties of the Emergency Coordinator," Revision 102

- SECTION 3, "DEFINITIONS," was updated to align the definition of "OWNER CONTROLLED AREA" and "SITE BOUNDARY" with the definitions contained in the Crystal River Unit 3 (CR-3) Final Safety Analysis Report, Revision 33.
- SECTION 6, "PRECAUTIONS, LIMITATIONS, AND NOTES," was modified to document the expectation that all emergency declarations shall be made within 15 minutes of information becoming available to Control Room personnel that conditions have reached an Emergency Action Level (EAL) threshold. This allows adequate time to assess, classify and declare events, which complies with regulation 10 CFR 50, Appendix E, Section IV.C.2.

Reference: EREG AR 664742

3. EM-206, "Emergency Response Organization Notification," Revision 110

- Position titles, procedure title and section references were updated.
- Instructions were revised to incorporate applicable information from EMG-NGGC-0005, "Activation of the Emergency Response Organization Notification System," Revision 4, and remove reference to EMG-NGGC-0004, "Maintenance of the Emergency Response

Organization Notification System," Revision 4, as a result of CR-3 removal from these fleet procedures. Changes to incorporate applicable portions of EMG-NGGC-0005 are identified below.

1. SECTION 3, "DEFINITIONS"
 2. SECTION 4, "RESPONSIBILITIES"
 3. SECTION 5, "PREREQUISITES"
 4. SECTION 6, "PRECAUTIONS, LIMITATIONS, AND NOTES"
 5. SECTION 9, "INSTRUCTIONS"
 6. ATTACHMENTS 1 through 4 were added.
- ATTACHMENT 5, "ERONS-2 – Using the Internet Launch Process to Activate the ERO," and ATTACHMENT 6, "ERONS-2 – Using the IVR Launch Process to Activate the ERO," were added to relocate instructions for human factoring.

Reference: EREG AR 664005

4. EM-211, "Duties of the CR3 Nuclear Security Organization," Revision 28

- Position titles, references, procedure title and section references were updated.
- ENCLOSURE 1, "SUGGESTED NOTES," was revised to specify log entry notes for the Security Coordinator in the TSC.
- ATTACHMENT 1, "SECURITY COORDINATOR'S SUGGESTED ACTION CHECKLIST," was revised to add an additional note to give direction to the Security Coordinator to ensure notification is performed in accordance with SEC-92147, "Reporting of Safeguards and Fitness-For-Duty Events," Revision 0, to meet 10 CFR 73.71, "Reporting of safeguards events," requirements.
- ATTACHMENT 2, "SECURITY SHIFT SUPERVISOR'S (OR DESIGNEES) SUGGESTED ACTION CHECKLIST," was revised to include a step to notify Security on call to establish a follow up notification to the initial Emergency Response Organization standby notification by ERONS at an Unusual Event.

Reference: EREG AR 666634

5. EM-500, "Equipment Important to Emergency Preparedness and Response," Revision 1

- Position titles, references, procedure title and section references were updated.
- Instructions were revised to incorporate applicable information from EMG-NGGC-0007, "Equipment Important to Emergency Preparedness and Response," Revision 0, as a result of the removal of CR-3 from this fleet procedure. Changes to SECTION 3, "DEFINITIONS/ABBREVIATIONS," and SECTION 9, "INSTRUCTIONS," incorporated applicable portions of EMG-NGGC-0007.
- SECTION 9, "INSTRUCTIONS," was revised to combine instructions for planned and unplanned loss of equipment important to Emergency Preparedness (EP) for human factoring.
- ATTACHMENT 1, "Planned or Unplanned Loss of Equipment Important to EP," was revised to combine the flowcharts that support instructions for planned and unplanned loss of equipment important to EP.

- ATTACHMENT 2, "Equipment Important to Emergency Response (EIER) list and Compensatory Actions," was added to relocate the EIER information for human factoring. In addition, the recommendation for the Remote or Alternate TSC location areas was clarified.
- ATTACHMENT 3, "Reactor Coolant System Leakage Instrumentation," was added to relocate the applicable equipment list information for human factoring.

Reference: EREG AR 669403

6. "Emergency Action Level Bases Manual," Revision 17

- SECTION 3.1, "DEFINITIONS," was updated to align the definition of "OWNER CONTROLLED AREA" and "SITE BOUNDARY" with the definitions contained in the CR-3 FSAR. The new definitions were incorporated as applicable throughout the EAL Bases Manual.
- EAL 2.19 (ALERT), "Security Event," was revised to clarify applicability of the EAL for any HOSTILE ACTION occurring, or that has occurred, in the OWNER-CONTROLLED AREA outside of the PROTECTED AREA. For events that affect the PROTECTED AREA, EAL 2.20 (SITE AREA EMERGENCY), "Security Event," or EAL 2.21 (GENERAL EMERGENCY), "Security Event," should be referenced.

Reference: EREG AR 664742

The changes described above (Items 1 through 6) do not add or delete currently applicable requirements, tasks, or commitments from RERP implementing procedures, and do not change the intent of the procedures. The changes do not involve 10 CFR 50, Appendix E or the 10 CFR 50.47(b) Planning Standards.

DUKE ENERGY FLORIDA, INC.

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ENCLOSURE 3

**COPY OF REVISED RADIOLOGICAL EMERGENCY
RESPONSE PLAN IMPLEMENTING PROCEDURES AND
DOCUMENT**

CRYSTAL RIVER UNIT 3
PLANT OPERATING MANUAL

EM-103

**OPERATION AND STAFFING OF THE CR-3 CONTROL ROOM
DURING EMERGENCY CLASSIFICATIONS**

REVISION 23

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1.0 PURPOSE

1. This procedure provides instructions for the operation and staffing of the CR-3 Control Room during emergency classifications at CR-3. **[R1]**
2. This procedure is an Emergency Plan implementing procedure. Any revisions must be carefully considered for Emergency Plan impact.

2.0 REFERENCES

2.1 Developmental References

1. 10CFR50, Appendix E, Emergency Planning and Preparedness for Production and Utilization Facilities
2. 10CFR50.47, Emergency Plans
3. AI-505, Conduct of Operations during Abnormal and Emergency Events
4. Control Room Habitability, NUREG-0737, Item III D.3.4
5. CR-3 Severe Accident Guideline
6. EM-102, Operation of the Technical Support Center
7. EM-104, Operation of the Operational Support Center
8. EM-202, Duties of the Emergency Coordinator
9. EM-210A, Duties of the Radiation Monitoring Team; CR-3 and Generating Complex Personnel and Area Monitoring
10. EM-225, Duties of the Technical Support Accident Assessment Team
11. HPP-409, Inventory and Availability of Emergency Supplies/Equipment
12. NEI 91-04, Revision 1, Severe Accident Issue Closure Guidelines
13. NUREG-0654, Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants
14. Radiological Emergency Response Plan
15. **[R1]** NOCS 12055 (Inactive)
16. **[R2]** NOCS 40743
17. **[R3]** NOCS 62719
18. **[R4]** NOCS 62720
19. **[R5]** NOCS 96042
20. **[R6]** NOCS 100056
21. **[R7]** NOCS 100521

3.0 DEFINITIONS

1. **Re-entry:** The return of personnel to an area evacuated during an emergency condition.
2. **Severe Accident:** An accident beyond that assumed in the CR-3 design and licensing basis that results in catastrophic fuel rod failure, core degradation and fission product release in the Rx vessel, Reactor Building, or the environment.

4.0 RESPONSIBILITIES

1. The Shift Supervisor directs Control Room activities and implements this procedure and all actions required to place the plant in as safe a condition as possible to preserve the safety and well being of the general public.
2. The Shift Supervisor is the Emergency Coordinator during the initial phase of the emergency until properly relieved by the Plant General Manager or designee.
3. The Emergency Coordinator implements the requirements of EM-202.
4. The Emergency Coordinator assigns an individual the task of recording actions taken, information received, notifications made using procedures, log books or any other form of documenting the activities. Plant stabilization takes priority over assignment of these functions. **[R5]**
5. The Shift Supervisor /Emergency Coordinator is responsible for authorizing the administration of Potassium Iodide (KI).
6. The Shift Supervisor implements mitigation strategies developed and approved by the Technical Support Center (TSC) during a Severe Accident.
7. The Shift Supervisor maintains contact with the Emergency Coordinator located at the TSC by various communication systems.

5.0 PREREQUISITES

None

6.0 PRECAUTIONS, LIMITATIONS, AND NOTES

1. RM-A5 monitors the Control Room atmosphere and places the Control Room ventilation system in a recirculation path, through charcoal and HEPA filters, when the high alarm set point on either the gas or iodine channel is reached.
2. If RM-A5 or RM-G1 becomes inoperable or unreliable, a Health Physics Technician provides additional monitoring equipment and gross iodine analysis. These emergency supplies are provided in the Emergency Kit located in the Control Room.
3. In the event the Control Room is evacuated, Control Room Emergency Plan functions can be performed in the TSC.
4. In the event Control Room personnel are unable to arrange for the purchase of food during emergency conditions, a seven day food supply is located and maintained on the 124' elevation of the Control Complex in locked cabinets with key control by the Control Room Supervisor. **[R2]**

7.0 SPECIAL TOOLS AND EQUIPMENT

1. The following equipment is available in the Control Room:
 - a. Communication Equipment
 - 1) State Hot Ringdown [State Watch Office (SWO), [Bureau of Radiation Control, Orlando, Citrus and Levy County notification] **[R7]**
 - 2) Commercial Telephone System **[R7]**
 - 3) Florida Emergency Management Network (EMnet) [SWO, Citrus, and Levy County notification] **[R7]**
 - 4) Emergency Notification System (ENS) [NRC]
 - 5) Microwave Telephone System
 - 6) Dose Assessment Ringdown Telephone
 - 7) PAX System
 - 8) Accident Assessment Ringdown
 - 9) Portable Transceivers (as assigned by the Emergency Coordinator)
 - 10) Emergency Phone
 - 11) Telecopy Machine (FAX)
 - b. Other Emergency Related Equipment
 - 1) Dose Assessment software on Support Specialist's computer in office outside the Control Room)
 - 2) SPDS (Safety Parameters Display System)*
 - 3) PICS Archiver Retrieval (Plant Integrated Computer System stored data)*
 - 4) ERDS (Emergency Response Data System)*
 - * Standard desktop item
 - c. Emergency Kits
 - 1) Control Room Emergency Kit contents are described in HPP-409, Enclosure 1. General contents include protective clothing, respirators, personnel monitoring devices and smear capability.
 - d. Potassium Iodide (KI)
 - 1) The KI tablets are located at the Control Room Supervisor's station in the Control Room.

8.0 ACCEPTANCE CRITERIA

None

9.0 INSTRUCTIONS

9.1 General Control Room Staffing

CAUTION

Individuals who have known allergies to iodide substances such as shell fish, and adults with Graves' disease, thyroid nodules, or Hashimoto's thyroiditis shall **NOT** be issued KI

1. IF indication of high iodine concentrations are present in the Control Room (e.g., RM-A5 Particulate/Iodine channel off-scale), **THEN ADMINISTER** KI tablets to personnel in the Control Complex, **AND NOTIFY** the TSC of actions taken. [R3], [R4]

NOTE: On-shift Operations Personnel may delay reporting to the Control Room to perform emergency actions during an Alert, as instructed by the Emergency Coordinator

2. During an Alert, Site Area Emergency, or General Emergency classification, on-shift and off-shift Operations personnel **REPORT** to the Control Room.
3. **ESTABLISH** the following positions in the Control Room during an Alert, Site Area or General Emergency, as personnel become available and the TSC/OSC becomes operational, for monitoring key plant parameters and relaying information to and from the TSC as appropriate.

NOTE: The Control Room Accident Assessment Ringdown Communicator is designated by the TSC Accident Assessment Coordinator.

- a. Control Room Accident Assessment Ringdown Communicator
 - **ESTABLISH** communication with the TSC Ringdown Communicator on the Accident Assessment Ringdown phone.
 - **COMMUNICATE** status of overall plant conditions and questions to the TSC Accident Assessment Team.
 - **COMMUNICATE** instructions to Control Room Personnel for mitigating actions as directed by the TSC Emergency Coordinator.
 - **COMMUNICATE** Control Complex repair requests to TSC Ringdown communicator.

9.1 General Control Room Staffing (Cont'd)

NOTE: The Dose Assessment Communicator is an alternate source of radiological and meteorological monitoring data. This individual is assigned to the Control Room by the Radiation Controls Coordinator, or designee, in the TSC

- b. Dose Assessment Communicator
 - COLLECT **AND** EVALUATE radiological and meteorological information.
 - TRANSMIT the data to the Dose Assessment Team via the Dose Assessment Ringdown phone.
- 4. LIMIT access to the Control Room to Plant Staff directly responsible for operation of the plant, technical advisors who may be requested to support operations, and NRC personnel.

NOTES: 1. A Control Complex emergency team is assigned from the OSC consisting of an electrician, I/C Technician, HVAC Mechanic, and a Health Physics Technician (HPT), as they become available. This team takes direction from the OSC Manager and remains in the Control Complex for repairs.

2. Reentry teams consist of at least two people including a HPT, unless there are no radiological consequences. The HPT assigned to the Control Room may be used for re-entry if an immediate reentry is made by an operator

- 5. DETERMINE radiological conditions prior to re-entry.
- 6. ENSURE Control Room personnel follow the guidelines for exposure of emergency workers as outlined in EM-104, Section 6.0, Precautions, Limitations, and Notes, during re-entry activities.
- 7. Health Physics Technicians ENSURE completion of Emergency Team Authorization form. An additional ETA form is **NOT** needed for Control Complex repairs.
- 8. **IF** the Control Complex exceeds, or personnel evacuate to or through an area which exceeds, acceptable contamination or airborne activity levels, **THEN** DON respirators and protective clothing as needed, as provided in the Emergency Kit.
- 9. **IF** the Control Complex becomes the alternate location for TSC/OSC staff during an emergency, **AND** is placed in the emergency recirculation mode, **THEN** ENSURE Health Physics establishes O₂ and CO₂ monitoring for the Control Complex as outlined in EM-210A, Section 4.2, RMT Functions.
- 10. IMPLEMENT mitigation strategies developed by the TSC Accident Assessment Team and approved by the Emergency Coordinator during a Severe Accident.
[R6]

9.2 Operator Dispatch

1. REFER TO Enclosure 1, Dispatch of Resources During Emergency Plan Entry, for operator dispatch matrix.
2. **WHEN** the TSC is operational, **AND** additional personnel are available, **THEN** ASSIGN two operators to the TSC/OSC.
3. **IF** the TSC is operational, **AND** immediate re-entry of an operator from the Control Room is necessary, **THEN** DISPATCH operator from Control Room **AND** NOTIFY the TSC (via Accident Assessment Control Room Ringdown).
4. INSTRUCT operators assigned to the TSC/OSC to identify themselves to the OSC Manager and Accident Assessment Coordinator for TSC/OSC dispatch availability.
5. **IF** Operators are **NOT** available at the TSC/OSC, **AND** Operators are dispatched from the Control Room to perform an action or join reentry team from the OSC, **THEN** COORDINATE a briefing or meeting place with the OSC.

10.0 RECORDS

None

DISPATCHING OF RESOURCES DURING EMERGENCY PLAN ENTRY

TSC <u>NOT</u> Operational	
Dispatching Operators* and other resources (non-Operators) WITHIN Control Complex Habitability Envelope	Dispatched by the on-duty SRO.
Dispatching Operators* and other resources (non-Operators) OUTSIDE Control Complex Habitability Envelope	Dispatched by the on-duty SRO with Health Physics coverage as needed. Provide turnover to TSC.
TSC Operational with Minimum Staffing	
Dispatching Operators* and other resources (non-Operators) WITHIN and OUTSIDE Complex Habitability Envelope	Dispatched by the on-duty SRO with Health Physics coverage as needed. (Keep TSC informed.)
TSC Operational with Full Staffing	
Dispatching Operators* WITHIN Control Complex Habitability Envelope	Dispatched by the on-duty SRO. (Keep TSC informed.)
Dispatching Operators OUTSIDE Control Complex Habitability Envelope	IF Operators are assigned to OSC, THEN Operators are dispatched by TSC. IF Operators are NOT assigned to OSC, THEN Operators are dispatched by the on-duty SRO. (Keep TSC informed.)
Dispatching Fire Brigade OUTSIDE Control Complex Habitability Envelope	Dispatched with EAD's by the on-duty SRO. Then notify TSC to support with Health Physics coverage
Dispatching Emergency Medical Personnel	Notify Emergency Response Coordinator (ERC) of medical emergency. Then notify TSC to coordinate support from Security and Health Physics.
Dispatching Other Resources (Non-Operators) WITHIN Control Complex Habitability Envelope	Dispatched by the TSC.
Dispatching Other Resources (Non-Operators) OUTSIDE Control Complex Habitability Envelope	Dispatched by the TSC.

* Includes the Fire Brigade

Summary of Changes

PRR 611246

NOTES: PROCEDURE SPONSOR: To ensure information between EIPs does not conflict, review the following:

- 1.) EM-103, NOTES for 9.1.5 and EM-104, Step 6.0.5.
- 2.) EM-103, Step 9.2.5 and EM-104, Step 9.2.2.18.
- 3.) EM-103, Step 9.2.4 and EM-104, Step 9.3.1.1.

SECTION/STEP	CHANGE
Cover page	Changed logo to Duke Energy.
Throughout	Reformatted IAW PRO-NGGC-0201 and changed revision number to Rev. 23.
2.1.21, 7.0.1.a.1, 7.0.1.a.2, & 7.0.1.a.3	Added new step for [R7] NOCS 100521, per PRR 545774 and CR 539068-31. Also, added " [R7] " to appropriate steps.
Section 2.1	Moved Imbedded NOCS commitments to the Developmental References section and used the " [R] " number in the procedure where it is used.
4.0	Changed Shift Manager to Shift Supervisor to match DTO org chart.
6.0.3	Add " In the event the Control Room is evacuated, Control Room Emergency Plan functions can be performed in the TSC ." PRR 474927
7.0.1.a.1, 7.0.1.a.3	Changed "State Warning Point" to "State Watch Office" and removed the word "Tallahassee" to be consistent with EM-202. Also, changed "SWP" to "SWO".
7.1.b	Add notation that ERDS, PICS and SPDS are standard desktop items. PRR 401390
9.1.3.a, 3 rd & 4 th bullet	Deleted communication to control supervisor. This will be a direct communication from TSC to control room personnel.
Note 2 prior to 9.1.5	Added "unless there are no radiological consequences" to the end of the end of the first sentence. No HP technician will be necessary on a reentry team if there are no radiological consequences.
9.1.6	Added title of Precaution, Limitations, and Notes section reference
9.1.9	Added title of RMT Function section reference
9.2.3	Deleted word "communicator" as this is performed by any Control Room personnel.

Enclosure 1	Corrected inconsistencies in the emphasis on the wording "Within" and "Outside" throughout the enclosure. Bolded and capitalized wording. Also, Bolded the word " NOT " throughout, for consistency.
Summary of Changes	Added the NOTE to the top of this revision summary page per PRR 411896



R
Reference
Use

CRYSTAL RIVER UNIT 3
PLANT OPERATING MANUAL

EMERGENCY PLAN IMPLEMENTING PROCEDURE

EM-202

DUTIES OF THE EMERGENCY COORDINATOR

REVISION 102

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1.0 PURPOSE

1. This procedure provides instructions and guidelines used by the Emergency Coordinator during initiation of the Radiological Emergency Response Plan. Specific guidelines include emergency classification, reporting and notification requirements, and protective action recommendations for non-essential Energy Complex personnel and the public. Portions of this procedure are also used by the Emergency Operations Facility staff for offsite notifications, protective action recommendations, and Emergency Action Level determinations.
2. This procedure is an Emergency Plan Implementing Procedure. Any revisions must be carefully considered for Emergency Plan impact.

2.0 REFERENCES

2.1 Developmental References

1. 10 CFR 50.47, Emergency Plans
2. 10 CFR 50, Appendix E, Emergency Planning and Preparedness for Production and Utilization Facilities
3. 10 CFR 50.72, Immediate Notification Requirements for Operating Nuclear Power Reactors
4. CR3 Severe Accident Guideline
5. Emergency Action Level Bases Manual
6. Letter FCS-9852, Oct 12, 1988, Gilbert Engineering Study "Internal Flooding of Power Plant Building."
7. Manual of Protective Action Guides and Protective Actions for Nuclear Incidents, EPA-400-R-92-001, Environmental Protection Agency (October, 1991)
8. NEI 91-04, Revision 1, Severe Accident Issue Closure Guidelines
9. NEI 97-03, Methodology for Development of Emergency Action Levels
10. NUREG-0654, Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants
11. Off-Site Dose Calculation Manual
12. Radiological Emergency Response Plan
13. Safety Evaluation of FPC proposed EAL changes for CR3 (TAC No. MA2231), NRC to FPC letter 3N0299-02
14. NRC Order for Interim Safeguards and Security Compensatory Measures, Dated 02/25/02
15. NRC RIS 2003-12, Clarification of NRC Guidance for Modifying Protective Actions
16. NRC Bulletin 2005-02, "Emergency Preparedness and Response Actions for Security-based Events"
17. NEI 99-01, Rev. 5, Methodology for Development of Emergency Action Levels
18. EMG-NGGC-0005, Activation of the Emergency Response Organization Notification System

19. NRC RIS 2009-10, Communications Between the NRC and Reactor Licensees During Emergencies and Significant Events
20. EM-102, Operation of the Technical Support Center (TSC)
21. EM-103, Operation and Staffing of the CR-3 Control Room During Emergency Classifications
22. EM-400, Operation of the Emergency Operations Facility (EOF)

3.0 DEFINITIONS

1. **Aircraft:** Aircraft smaller than an Airliner.
2. **Airliner:** A large aircraft with the potential for causing significant damage to the Plant. (The NRC notification should designate aircraft vs. airliner.)
3. **Bomb:** An explosive device suspected of having sufficient force to damage Plant systems or structures. (See EXPLOSION.)
4. **Civil Disturbance:** A group of persons violently protesting station operations or activities at the site. A civil disturbance is considered violent when force has been used in an attempt to injure site personnel or damage Plant property.
5. **Committed Dose Equivalent (CDE):** Dose to an organ due to the intake of radioactive materials.
6. **Credible Site-Specific Security Threat Notification:** A threat specifically to CR3 confirmed and validated by Nuclear Security or received over the Emergency Notification System (ENS) from the NRC. Notification may be received from recognized law enforcement or governmental agencies (e.g. Federal Bureau of Investigation (FBI), Florida Department of Law Enforcement (FDLE), Division of Emergency Management (DEM), Nuclear Regulatory Commission NRC.)
7. **Deep Dose Equivalent (DDE):** External whole body dose.
8. **Emergency Action Level (EAL):** A pre-determined, observable threshold for Plant conditions that places the Plant in a given emergency classification.
9. **Emergency Classification:** A system of classification in which emergency occurrences are categorized according to specific protective action levels. The four emergency classifications are:
 - a. **Unusual Event:** This classification refers to any event(s), in process or having occurred, indicating a potential degradation of the level of safety of the Plant **OR** indicate a security threat to facility protection. NO releases of radioactive material requiring offsite response or monitoring are expected unless further degradation of safety occurs. This classification brings the operating staff to a state of readiness if escalation to a more severe action level classification occurs.
 - b. **Alert:** This classification refers to event(s) that are in process, or have occurred, involving an actual or potentially substantial degradation of the level of safety of the Plant **OR** a security event that involves probable life threatening risk to site personnel or damage to site equipment because of **HOSTILE ACTION**. Any releases are expected to be limited to small fractions of the EPA Protective Action Guideline exposure levels. The Technical Support Center (TSC) and Emergency Operations Facility (EOF) are staffed and assembly and accountability are performed at local assembly areas.

3.0 Definitions (Cont'd)

- c. **Site Area Emergency:** This classification refers to event(s) that are in process, or have occurred, involving actual or likely major failures of Plant functions needed for the protection of the public **OR** HOSTILE ACTION that results in intentional damage or malicious acts; (1) toward site personnel or equipment that could lead to the likely failure of or; (2) prevents effective access to equipment needed for the protection of the public. Any releases are **NOT** expected to result in exposure levels, which exceed EPA Protective Action Guideline exposure levels at the SITE BOUNDARY. The TSC and the Emergency Operations Facility (EOF) are staffed and radiation monitoring teams may be dispatched. Protected Area evacuation and accountability is performed at CR3. Assembly and accountability is performed at Units 1/2 & 4/5.
 - d. **General Emergency:** This classification refers to event(s) that are in process, or have occurred, involving actual or imminent substantial core degradation or nuclear fuel melting with the potential for loss of containment integrity **OR** HOSTILE ACTION that results in an actual loss of physical control of the facility. Releases can be reasonably expected to exceed EPA Protective Action Guidelines exposure levels for more than the immediate site area. This classification initiates predetermined protective actions for the public, provides continuous assessment of information from on-site and off-site measurements, initiates additional measures indicated by the event, and provides current information and consultation with off-site authorities and the public. The Emergency Coordinator will probably decide to evacuate the Energy Complex.
- 10. **Emergency Coordinator (EC):** This position is the highest level of authority for the CR3 Emergency Organization and on-site emergency activities. This position is held by the Plant General Manager or designated alternate. The Shift Manager assumes the position until the Plant General Manager or designated alternate arrives to assume Emergency Coordinator responsibilities.
 - 11. **Emergency Response Data System (ERDS):** NRC requirement {10 CFR 50.72(a)(4)} to have the ability to acquire data from nuclear power Plants in the event of an emergency at the Plant. ERDS is a direct real-time transfer of data from CR3 to NRC. Once initiated, ERDS operates automatically.
 - 12. **Explosion:** A rapid, violent, unconfined combustion, or a catastrophic failure of pressurized equipment that imparts energy of sufficient force to potentially damage permanent structures, systems, or components.
 - 13. **Extortion:** An attempt to cause an action at CR3 by threat of force. Bomb threats that are unsubstantiated are **NOT** included in this definition.
 - 14. **Fire:** Combustion characterized by heat and light. Sources of smoke such as slipping drive belts or overheated electrical equipment do **NOT** constitute fires. Observation of flame is preferred but is **NOT** required if large quantities of smoke and heat are observed.
 - 15. **Hostage:** A person or object held as leverage against the station to ensure that demands will be met by CR3.

3.0 Definitions (Cont'd)

16. **Hostile Action:** An act toward a nuclear power Plant or its personnel that includes the use of violent force to destroy equipment, take hostages, and/or intimidate the licensee to achieve an end. This includes attack by air, land, or water using guns, explosives, projectiles, vehicles, or other devices used to deliver destructive force. Other acts that satisfy the overall intent may be included. Hostile action should **NOT** be construed to include acts of civil disobedience or felonious acts that are **NOT** part of a concerted attack on the nuclear power Plant. Non-terrorism-based EALs should be used address such activities (e.g., violent acts between individuals in the Owner Controlled Area).
17. **Hostile Force:** One or more individuals who are engaged in a determined assault, overtly or by stealth and deception, equipped with suitable weapons capable of killing, maiming, or causing destruction.
18. **IDLH Level:** Level of toxic gas Immediately Dangerous to Life or Health
19. **Incident Report:** A report of the actual scenario of the emergency, the identified cause(s) of the emergency, and the radiological history of the emergency, including released quantities, existing radiological activity, abnormal doses for emergency worker and population doses.
20. **Intrusion/Intruder:** Suspected hostile individual (outsider) present in the Protected Area without authorization. An intruder also includes a badged employee (insider) attempting to commit or providing assistance to others in committing sabotage. These activities may occur while the insider is either physically inside or outside the Protected Area. Upon identification, the insider's authorization is immediately revoked by Nuclear Security.
21. **Local Assembly Area:** A pre-designated area personnel report for organization, roll call, and supervision following an "Alert" emergency classification.
22. **Main Assembly Area (MAA):** The place personnel report for organization and supervision following an evacuation of the CR3 Protected Area. The Main Assembly Area is the Site Administration Building Auditorium.
23. **MODES:** The ITS based designator of Plant status based on Reactivity, Temperature and RCS status and includes operating modes 1 through 6 and defueled (no mode) as applicable. The term "MODES:ALL" applies to MODES 1-6 and defueled (no mode).
24. **Owner-Controlled Area:** The area of land (approximately 4738 acres) that is owned, leased, or otherwise controlled by DEF, situated between the mouths of the Withlacoochee and Crystal Rivers and bounded to the north by woodlands, to the east by Highway 19, to the south by medium to dense woodlands and to the west by marshlands and the Gulf of Mexico. The OWNER CONTROLLED AREA is indicated in Figure 2-3 of the FSAR and encompasses both the PROTECTED AREA and the SITE BOUNDARY.
25. **Protected Area:** All areas within the CR3 security perimeter fence that require badged authorization for entry.

3.0 Definitions (Cont'd)

26. **Protective Action Recommendations:** Emergency measures recommended for purposes of preventing or minimizing radiological exposures to Energy Complex personnel or members of the public. Protective Action Recommendations are made using all available data, primarily Plant conditions. Off-site dose projections and/or field survey results can also be factored in to Protective Action Recommendations if confidence in their accuracy is high (monitored release, confirmed field survey results).
27. **RCS Barrier:** The RCS primary side and its connections up to and including the Pressurizer safety and relief valves, and other connections up to and including the primary isolation valves. An isolable leak in an interfacing or connecting system that contains reactor coolant (MU, DH, SF, WD, etc.) is **NOT** an "RCS leak."
28. **Release** (Florida Nuclear Plant Emergency Notification Form): Any of the following:

NOTE: If RM-A2 is out of service and normal Auxiliary Building ventilation is in service, RM-A4 and/or RM-A8 exceeding its warning setpoint may be used to determine a release in progress.

- Exceeding the warning setpoint in count rate on an effluent monitor that is a direct result of an event that has initiated an emergency declaration
OR
- Radioactivity detected by environmental monitoring
OR
- OTSG tube rupture > 10 gpm with either of the following:
 - Prolonged steaming to the atmosphere from the affected OTSG
OR
 - an unisolable steam leak outside RB from the affected OTSG
OR

NOTE: Design Basis Leakage or other suspected leakage should **NOT** be categorized as a release until confirmed by environmental monitoring.

- Radioactivity escaping unmonitored from the Plant.
29. **Release, Unplanned** (Reactor Plant Event Notification Worksheet): Release is **NOT** authorized by a Release Permit or exceeds the conditions (e.g., minimum dilution flow, maximum discharge flow, alarm setpoints, etc.) on the applicable permit.

3.0 Definitions (Cont'd)

- 30. **Sabotage:** Deliberate damage, mis-alignment, or mis-operation of Plant equipment with the intent to render the equipment unavailable. Equipment found tampered with or damaged due to malicious mischief may **NOT** meet the definition of SABOTAGE until this determination is made by Nuclear Security.
- 31. **Safe Shutdown Equipment:** Equipment necessary to achieve and maintain the reactor subcritical with controlled decay heat removal to bring the Plant to the ITS applicable shutdown condition / mode.
- 32. **Security Condition:** Any Security Event as listed in the approved security contingency plan that constitutes a threat/compromise to site security, threat/risk to site personnel, or a potential degradation to the level of safety of the plant. A SECURITY CONDITION does not involve a HOSTILE ACTION.
- 33. **Severe Accident:** An accident beyond that assumed in the CR3 design and licensing basis that results in catastrophic fuel rod failure, core degradation, and fission product release into the Reactor vessel, Reactor Building, or the environment.
- 34. **Significant Transient:** An UNPLANNED event involving one or more of the following:
 - a. Automatic turbine trip at greater than 25% reactor thermal power
 - b. Electrical load rejection greater than 25% full electrical load
 - c. Plant runback
 - d. Reactor trip
 - e. Safety injection system actuation
 - f. Greater than 10% thermal power oscillations
 - g. Loss of decay heat removal in Mode 4 ("Significant Transient" is **NOT** used in any Mode 5 or 6 EAL)
- 35. **Site Boundary:** That area, including the PROTECTED AREA that extends 4400 feet or 0.83 miles in a circle around the Reactor Building.
- 36. **Strike Action:** Is a work stoppage within the PROTECTED AREA by a body of workers to enforce compliance with demands made. The strike actions must threaten to interrupt normal Plant operations.
- 37. **Thyroid CDE Dose:** Dose to the thyroid due to intake of radioactive iodine.
- 38. **Total Effective Dose Equivalent (TEDE):** The sum of external dose (DDE) and the equivalent amount of whole body dose due to individual organ uptakes.
- 39. **Unplanned:** An event or action is UNPLANNED if it is **NOT** the expected result of normal operations, testing, or maintenance. Events that result in corrective or mitigative actions being taken in accordance with abnormal or emergency procedures are UNPLANNED.

3.0 Definitions (Cont'd)

40. **Valid:** An indication or report or condition is considered VALID when it is conclusively verified by (1) an instrument channel check, or (2) indications on related or redundant indicators, or (3) by direct observation by Plant personnel, such that doubt related to the indicator's operability, the condition's existence, or the report's accuracy is removed. Implicit in this definition is the need for timely assessment (e.g., within 15 minutes).
41. **Visible Damage:** Damage to equipment or structure that is readily observable without measurements, testing, or analyses. Damage is sufficient to cause concern regarding the continued operability or reliability of affected safety structure, system, or component. Example system/component damage includes: deformation due to heat or impact, denting, penetration, rupture, cracking, paint blistering due to fire. Example structure damage includes exposed and/or broken rebar, failed supports/pipe hangers, etc. Surface blemishing (e.g., paint chipping, scratches, concrete spalling) should **NOT** be included.

4.0 RESPONSIBILITIES

1. The Emergency Coordinator controls all activities at CR3 during activation of the Radiological Emergency Response Plan.
2. The Emergency Coordinator shall **NOT** delegate the decisions related to classification of the emergency condition.
3. The Emergency Coordinator shall **NOT** delegate the decisions related to notification and protective action recommendations to State and Local authorities who implement off-site emergency measures, until the EOF Director communicates to the Emergency Coordinator the EOF accepts the State notification and Protective Action Recommendations (PARs) responsibilities. At this time, the EOF completes the Florida Nuclear Plant Emergency Notification Form.
4. Upon arrival on-site, the Plant General Manager (PGM) or designated alternate contacts the Control Room Emergency Coordinator or goes to the Control Room and receives a briefing about the status of the emergency condition and the implementation of the Radiological Emergency Response Plan. When ready to assume responsibility as the Emergency Coordinator and declare the TSC operational, inform the Control Room Emergency Coordinator and Technical Support Center staff.
5. The Emergency Coordinator provides the Emergency Operations Facility Director an Incident Report when a sustained Site Area Emergency or General Emergency involves a Recovery Plan. This documents the emergency and serves as a basis for recovery phase operations.
6. During declared emergency conditions, the Emergency Coordinator is the sole contact for emergency regulatory directives and evaluates these directives for possible response to the emergency condition.
7. The Emergency Coordinator responsibilities in other Emergency Plan Implementing Procedures are implemented when Plant conditions warrant.

4.0 Responsibilities (Cont'd)

8. Based on the evaluation of the emergency condition, the Emergency Coordinator has the authority to implement the following actions:
 - Direct personnel to shelter or evacuate the Energy Complex.
 - Order Energy Complex Plants placed in a safe shutdown condition.
 - Notify all applicable agencies of the Plant status.
 - Suspend security safeguards as appropriate. {10 CFR 50.54(x) (y)} or Section 24, Temporary Suspension of Security Measures of the CR3 Physical Security Plan.
 - Request outside assistance, if necessary.
 - Make the necessary personnel assignments to provide continuing response for long-term activities.
 - Approve media releases until the EOF is operational and assumes responsibility.
 - Approve re-entries into the Plant by emergency response teams
 - Approve emergency exposure dose during re-entries. Refer to Enclosure 3, Guidelines for Protective Action Recommendations for Non-Essential Energy Complex Personnel and General Population for emergency worker exposure limits.
 - Provide support for the Incident Commander in performance of EM-913.
9. The Emergency Coordinator reports to the EOF Director, once the EOF is operational.
10. The EOF Director provides for the direction and control of all emergency phase activities once the EOF is declared operational. The EOF Director has authority and responsibility for management of emergency response resources, coordination of radiological and environmental assessment, recommendations for public protective actions, and coordination of emergency response activities with Federal, State, and local agencies.
11. The Licensing / Regulatory Programs Unit prepares a written summary of any Alert, Site Area Emergency or General Emergency for the NRC and the State of Florida within twenty-four hours (or the next working day) from termination of the event.
12. The TSC Emergency Coordinator and/or the EOF Director may be requested to participate in conference calls with the NRC during certain emergencies and significant events. The purpose of these calls is to assist the NRC in their understanding of the nature of the emergency or significant event in a timely fashion. Depending on the nature of the event, participants from the NRC may include the NRC Executive Team Director, NRC Headquarters Safeguards Team personnel, and/or NRC regional responders. These calls may be conducted over existing telecommunication networks (i.e. the FTS-2001 system). Other conference / bridge lines may also be established by the NRC. Refer to Enclosure 6, Communication with NRC Management During an Event, for typical topics likely to be discussed during these conference calls.

4.0 Responsibilities (Cont'd)

13. During Severe Accident conditions, the Emergency Coordinator reviews and provides final approval of all mitigation strategies developed by the Accident Assessment Team before implementation. [NOCS 100056]
14. Nuclear Security activates the Emergency Response Organization and implements evacuation of the Crystal River Energy Complex based on requests from the Emergency Coordinator. If Nuclear Security is unable to activate the ERO due to the nature of the event, ERO activation will be performed by the Control Room staff.
15. During certain emergencies (e.g., security-related events, large area fire), the Crystal River Energy Complex Emergency Response Coordinator may establish an Incident Command Post (ICP). In the event an ICP is established, the Emergency Coordinator may assign Operations personnel to staff the ICP to support its function and to provide liaison between CR3 Operations and off-site response agencies (e.g., local law enforcement, fire/rescue, emergency medical, etc.)

5.0 PREREQUISITES

None

6.0 PRECAUTIONS, LIMITATIONS, AND NOTES

1. Upon declaration of a General Emergency, the minimum protective action recommendation is EVACUATE ZONE 1.
2. Some EALs allow an off-normal condition to exist for a period of time before the EAL threshold is met. This time period is intended to be used for validation and assessment of the off-normal condition. For example, EAL 2.14 (Fire – Unusual Event) allows 15 minutes for a fire to be extinguished before the EAL threshold is met. However, the emergency assessment and declaration phases should occur concurrently in order to ensure that emergencies are declared in a timely manner. The Emergency Coordinator should not delay declaration of an event when it is likely that the event will meet an EAL threshold even if the specified assessment time period has not expired.
3. All emergency declarations shall be made within 15 minutes following information becoming available to Control Room personnel that conditions have reached an EAL threshold based upon VALID indications, reports or conditions. The expectation is that emergency classifications are to be made as soon as conditions are present for the classification, but within 15 minutes in all cases. The 15 minute time period allows adequate time to assess, classify and declare events.
4. During the initial phase of an emergency condition, the lack of information may prevent the Emergency Coordinator from completing the Florida Nuclear Plant Emergency Notification Form. If information is **NOT** available, do **NOT** delay notification to State Watch Office. Indicate additional information will follow when it becomes available.
5. The Reactor Plant Event Notification Worksheet is used as a guideline to provide adequate detail to the NRC Headquarters Operations Officer to understand the event and its significance. The initial NRC notification may be performed using the information from Items 4 through 7 and Item 11 of the FLORIDA NUCLEAR PLANT EMERGENCY NOTIFICATION FORM, in order to expedite notification from the Main Control Room. Since the NRC is **NOT** familiar with the EAL numbers from Item 6, Enclosure 4 should be used to provide the paraphrased EAL. If an open communications channel is established, routine use of the form is **NOT** required, if verified changes in Plant / equipment status are communicated to the NRC verbally and a summary of the communications with the NRC is maintained in the log. All the information regarding an event may **NOT** be available at the time of notification, but at a minimum must provide the event classification and description as soon as possible after the State of Florida notification, within the required time.
6. For all radiological, hazardous material spills, toxic gas releases or violent weather conditions, the Emergency Coordinator determines the safe actions for Plant personnel, which may include delaying the staffing of the TSC and EOF until it is safe to do so.
7. The Emergency Coordinator directly notifies the Plant General Manager or EC On-Call and EOF Director to ensure the rationale of the emergency classification is understood. It is acceptable, if the EC requests the PGM or EC On-Call to notify the EOF Director or the EC may establish a conference call.

6.0 Precautions, Limitations, and Notes (Cont'd)

8. Individuals assigned to make notifications are trained on how to make notifications and are familiar with communication systems. [NOCS 21207]
9. The Technical Support Center (TSC) continues to complete items on the Florida Nuclear Plant Emergency Notification Form and transmits to the EOF until the EOF Director declares the EOF operational, and informs the Emergency Coordinator the EOF accepts responsibility for State notifications and Protective Action Recommendations. At this time, the EOF Director assumes full responsibility for completing the Florida Nuclear Plant Emergency Notification Form. Any exceptions to the transfer of these responsibilities (delay in transfer, etc) must be clearly communicated during the facility turnover briefing.
10. Telephone notifications to the Nuclear Regulatory Commission (NRC), State of Florida, Citrus and Levy Counties are complete when direct voice contacts are made with the responsible representatives of the agencies notified. The leaving of a message with an agency's telephone operator, secretary, answering service, or message recording device is **NOT** a completed notification.
11. The Emergency Action Levels are **NOT** intended for maintenance and/or testing situations where abnormal instrument readings, alarms, and observations are expected. Some maintenance evolutions may require compensatory actions.
12. A security threat or event presents unique challenges to protecting the health and safety of the public and Plant staff. Normal emergency response procedure steps may be hindered due to events that are occurring. EM-911 provides operational activities and considerations to protect Plant personnel for a security threat. All actions of EM-911 should still be completed from the Control Room even when the TSC/EOF are operational.
13. Once Protective Action Recommendations are made to the State of Florida and Risk Counties, do **NOT** relax / reduce the recommendations until the threat is clearly under control or the emergency is terminated.

7.0 SPECIAL TOOLS AND EQUIPMENT

None

8.0 ACCEPTANCE CRITERIA

None

9.0 INSTRUCTIONS

1. RECORD significant information, events, and actions taken during the emergency condition **AND** RETAIN for later evaluation. Information substantiating the sequence of events is compiled from procedures, communication logs, tape recordings, flip charts, message copies, photographs (if available) and other pertinent documentation
2. DETERMINE the emergency classification using Enclosure 1, Emergency Classification Table.
 - Page 2 FISSON PRODUCT BARRIER MATRIX
 - Page 3 ABNORMAL RAD LEVELS / RADIOLOGICAL EFFLUENT
 - Page 5 NATURAL / MANMADE HAZARDS AND EC JUDGEMENT
 - Page 12 SYSTEM MALFUNCTION
 - Page 17 LOSS OF POWER
3. PERFORM steps from the Emergency Coordinator Guide for each emergency classification as indicated in the following Subsections:
 - 9.1 UNUSUAL EVENT
 - 9.2 ALERT
 - 9.3 SITE AREA EMERGENCY
 - 9.4 GENERAL EMERGENCY
4. USE the time blocks in Subsections 9.1, 9.2, 9.3 and 9.4 to provide a reference of actions taken during the emergency condition. All actions, with the exception of decisions relating to classification and notification and Protective Action Recommendations made to State and Local authorities, can be performed in parallel by delegation from the Emergency Coordinator.
5. **IF** an emergency classification is upgraded before the first notification is made, **THEN** ENSURE SWO notification is made within 15 minutes of original classification.
6. **IF** it is discovered after the fact (review of routine log entries, etc.) that a condition previously existed that should have resulted in an emergency declaration, **AND** the condition **NO** longer exists, **THEN** make notifications to the NRC Operations Center via ENS within one hour of discovering the undeclared event, **AND** NOTIFY the Emergency Preparedness staff to NOTIFY the State and Local Governments on the next working day. An emergency declaration is **NOT** required.

Subsection 9.0, INSTRUCTIONS (Cont'd)

7. **IF** a transient event condition is corrected before a declaration is made, **AND** analyses of the event is **NOT** required to determine whether further Plant damage occurred while corrective actions were being taken, **THEN** a declaration is **NOT** warranted but the event is reported and notification made to the NRC Operations Center via ENS within one hour of the event, **AND ENSURE** the Emergency Preparedness staff is notified to NOTIFY the State and Local Governments on the next working day. (e.g., the PORV (RCV-10) develops a leak or fails open with a leak rate of greater than 25 gpm and the block valve (RCV-11) is closed and successfully isolates the leak to less than the EAL threshold).
8. Information requested for TSC turnover is contained in Attachment 1 of EM-102, Operation of the Technical Support Center. CONSIDER establishing a conference call with the EC On-Call and EOF Director for this turnover.
9. REFER to EM-103 for additional Control Room activities during a declared emergency including dispatch of Operators outside of the Control Complex.
10. In most situations, events are terminated rather than downgraded. However, there may be conditions where downgrading is appropriate. For downgrading the emergency classification level, if the current Plant conditions have improved to satisfy a lower classification Emergency Action Level, NOTIFY the Emergency Coordinator On-Call and EOF Director for concurrence to downgrade. For Alerts or higher, unless the conditions are resolved within 30 minutes, downgrading should **NOT** occur until after the TSC and EOF (as appropriate) are operational and the event sufficiently evaluated by the Emergency Response Organization.
11. For Emergency Phase termination and transition to the Recovery Phase, from an Unusual Event or Alert, DETERMINE the need for a Recovery Plan and a support organization. For a Site Area Emergency or General Emergency, ASSIST the EOF Director with the completion of the Termination Checklist from EM-400. **IF** the Site Area Emergency event is of short duration (approximately 30 minutes or less), and the EOF is **NOT** operational, **THEN TERMINATE** the event. If conditions will allow for termination of the Emergency Phase, ENTER the Recovery Phase. If conditions do **NOT** support termination of the emergency and entry into the Recovery Phase, CONTINUE the Emergency Phase.
12. REFER to EM-913 for EC/EC Designee responsibilities in response to a large area fire.

9.1 Emergency Coordinator's Guide for Unusual Event [NOCS 1129, 96042]

TIME

1. **UNUSUAL EVENT DECLARED**DATE ____ / ____
(If event is transitory in nature, refer to item 9.0.7 before declaring event)
2. **RECOMMENDED WITHIN 5 MINUTES**
 - a. NOTIFY Control Room staff of:
 - 1) Emergency declaration
 - 2) Upgrade criteria (if any)
 - 3) Release status
 - b. **IF** the emergency is due to a Security Event, **THEN REFER** TO EM-911 before proceeding with the following steps.
 - c. NOTIFY Plant Personnel using information from Step 9.1.7.
3. **REQUIRED WITHIN 15 MINUTES**
 - a. NOTIFY SWO, Citrus County, and Levy County within 15 minutes of declaration using Attachment 1, Florida Nuclear Plant Emergency Notification Form, **AND FAX** after notification is complete. [NOCS 1129, 96042]
4. **RECOMMENDED WITHIN 30 MINUTES**
 - a. NOTIFY PGM or EC On-Call and the EOF Director. /
 - b. NOTIFY Nuclear Security to place the Emergency Response Organization on standby using Scenario 2 (Enclosure 5, Emergency Response Facility Activation Scenarios).....
 - c. **IF** Emergency Response Organization support is desired, **THEN** NOTIFY Nuclear Security to activate:
 - TSC/OSC using Scenario 3 (Enclosure 5, Emergency Response Facility Activation Scenarios).**OR**
 - TSC/OSC/EOF/ENC using Scenario 4 (Enclosure 5, Emergency Response Facility Activation Scenarios).
 - d. NOTIFY CR3 NRC Resident Inspector.....
 - e. NOTIFY Units 1/2 & 4/5 Control Rooms per Attachment 4..... /

TIME

- f. REVIEW Enclosure 2, Evacuation Planning Guide for applicability to this event..... _____
- g. **IF** a release is occurring as a result of this event, **AND** RM-A2 is needed for evaluation, **THEN COMPLETE** EM-204A or EMG-NGGC-0002, as time permits..... _____
- h. NOTIFY NRC via ENS as soon as practicable after the State using information from Items 4 – 7 and Item 11 of the Florida Nuclear Plant Emergency Notification Form or Attachment 3, Reactor Plant Event Notification Worksheet. **REQUIRED WITHIN 60 MINUTES.** [NOCS 96042]..... _____
- i. NOTIFY CR3 Emergency Preparedness..... _____

5. **UNUSUAL EVENT UPDATES**

- a. PROVIDE periodic Plant status updates to:
 - SWO (every 60 minutes or as agreed upon) per Attachment 1, Florida Nuclear Plant Emergency Notification Form..... ☐
 - NRC per Attachment 3, Reactor Plant Event Notification Worksheet (after State of Florida update, unless continuous communication is established) ☐
 - Units 1/2 & 4/5 Control Rooms per Attachment 4, Emergency Notification for Units 1/2 & 4/5 ☐
 - CR3 Plant Personnel via PA announcements..... ☐

6. **UNUSUAL EVENT TERMINATION**

- a. Upon the decision to terminate, NOTIFY:.....DATE ____/____/____
 - Emergency Coordinator On-Call and EOF Director..... _____, _____
 - SWO and document on Attachment 1, Florida Nuclear Plant Emergency Notification Form _____
 - Nuclear Security to inform the Emergency Response Organization of event termination using Scenario 13 (Enclosure 5, Emergency Response Facility Activation Scenarios). _____
 - NRC within one hour of termination with verbal summary _____
 - Unit 1/2 & 4/5 Control Rooms per Attachment 4 _____
 - CR3 Plant Personnel via PA announcement _____

7. **PA Announcement for an Unusual Event (a. OR b.)**

a. ANNOUNCE **OR** PERFORM the following:

Time: _____

- 1) ACTUATE the appropriate local evacuation alarm if required. ☐
- 2) "ATTENTION ALL PERSONNEL, CRYSTAL RIVER 3 IS IN AN UNUSUAL EVENT BASED ON

_____"
- 3) "THERE (IS **OR** IS **NOT**) A RADIOLOGICAL RELEASE TO THE ENVIRONMENT IN PROGRESS." ☐
- 4) STATE any appropriate special instructions (areas to be avoided or evacuated, etc.). (IF conditions warrant personnel accountability, **THEN** REQUEST personnel to report to Local Assembly Areas).

- 5) REPEAT the announcement..... ☐
- 6) ESTABLISH continuous monitoring on PL-1. ☐

OR

- b. USE this announcement for a Credible Site-Specific Security Threat where time is available and a decision has been made to use the Remote TSC (during normal hours)..... ☐
- 1) ACTUATE the appropriate local evacuation alarm if required. ☐
"ATTENTION ALL PERSONNEL, CRYSTAL RIVER 3 IS IN AN UNUSUAL EVENT BASED ON CREDIBLE SITE-SPECIFIC SECURITY THREAT. TSC / OSC STAFF PERSONNEL ARE TO REPORT TO THE EOF. HEALTH PHYSICS PERSONNEL ARE TO RELOCATE THE ESV AND EMERGENCY KITS TO THE EOF. FIRE BRIGADE MUSTER AT THE _____."
 - 2) REPEAT the announcement..... ☐
 - 3) ESTABLISH continuous monitoring on PL-1. ☐

9.2 Emergency Coordinator's Guide for an Alert [NOCS 1129, 96042]

TIME

1. **ALERT DECLARED**DATE ____/____/____
(If event is transitory in nature, refer to item 9.0.7 before declaring event)
2. **RECOMMENDED WITHIN 5 MINUTES**
 - a. NOTIFY Control Room:
 - 1) Emergency declaration
 - 2) Upgrade criteria (if any)
 - 3) Release status
 - b. **IF** the emergency is due to a Security Event, **THEN REFER** TO EM-911 before proceeding with the following steps.
 - c. **IF** safe conditions exist, **THEN NOTIFY** Nuclear Security to activate the Emergency Response Organization using Scenario 5 (Enclosure 5, Emergency Response Facility Activation Scenarios).....
 - d. **IF** conditions (security event, violent weather, natural disaster, etc.) require activation of remote emergency facilities, **THEN NOTIFY** Nuclear Security to activate the Emergency Response Organization using Scenario 8 (Enclosure 5, Emergency Response Facility Activation Scenarios).
 - e. NOTIFY Plant Personnel using information from Step 9.2.9.
3. **REQUIRED WITHIN 15 MINUTES**
 - a. NOTIFY SWO, Citrus County, and Levy County within 15 minutes of declaration per Attachment 1, Florida Nuclear Plant Emergency Notification Form, **AND FAX** after notification is complete. [NOCS 1129, 96042]

Subsection 9.2, Emergency Coordinator's Guide for an Alert [NOCS 1129, 96042] (Cont'd)

4. **RECOMMENDED WITHIN 30 MINUTES** **TIME**
- a. NOTIFY PGM or EC On-Call and the EOF Director ,
 - b. NOTIFY CR3 NRC Resident Inspector.....
 - c. NOTIFY Units 1/2 & 4/5 Control Rooms per Attachment 4..... ,
 - d. REVIEW Enclosure 2, Evacuation Planning Guide for applicability to this event.....
 - e. **IF** a release is occurring as a result of this event, **AND** RM-A2 is needed for evaluation, **THEN COMPLETE** EM-204A or EMG-NGGC-0002, as time permits.
 - f. NOTIFY NRC via ENS as soon as practicable after the State using information from Items 4 – 7 and Item 11 of the Florida Nuclear Plant Emergency Notification Form or Attachment 3, Reactor Plant Event Notification Worksheet. **REQUIRED WITHIN 60 MINUTES.** [NOCS 96042]
 - g. ENSURE ERDS is activated per Attachment 5, Initiation of the Emergency Response Data System (ERDS). **REQUIRED WITHIN 60 MINUTES** [NOCS 40730] **LL**
 - h. REVIEW EM-103 for operator dispatch requirements.
5. **ONCE TSC OPERATIONAL**
- a. NOTIFY ANI insurance that CR3 is in an emergency declaration. (Off-Site Support Phone Directory)
 - b. NOTIFY Risk Management to notify NEIL insurance that CR3 is in an emergency declaration. (Off-Site Support Phone Directory).....
 - c. NOTIFY INPO that CR3 has declared an Alert (Off-Site Support Phone Directory).....
6. **ALERT UPDATES**
- a. PROVIDE periodic Plant status updates to:
 - SWO (every 60 minutes or as agreed upon) per Attachment 1, Florida Nuclear Plant Emergency Notification Form including Items 12, 13, and 14 ☐
 - Units 1/2 & 4/5 Control Rooms per Attachment 4 ☐
 - CR3 Plant Personnel via PA announcements..... ☐
7. **ALERT DOWNGRADING**
- a. CONSULT with the EC and EOF Director for concurrence before downgrading occurs /
Date / Time

8. **ALERT TERMINATION**

TIME

- a. Upon the decision to terminate, NOTIFY:.....Date: _____, _____
- PGM and EOF Director..... _____
 - SWO and document on Attachment 1, Florida Nuclear Plant Emergency Notification Form _____
 - Nuclear Security to inform the Emergency Response Organization of event termination using Scenario 13 (Enclosure 5, Emergency Response Facility Activation Scenarios). _____
 - NRC within one hour of termination with verbal summary _____
 - Unit 1/2 & 4/5 Control Rooms per Attachment 4 _____
 - CR3 Plant Personnel via PA announcement _____
 - American Nuclear Insurers (ANI) (Off-Site Support Phone Directory)..... _____
 - Risk Management (Off-Site Support Phone Directory) _____
 - INPO (Off-Site Support Phone Directory) _____
- b. REQUEST the Licensing/Regulatory Programs Unit to prepare a written summary within twenty-four hours (or next working day) of termination to SWO and NRC. _____

9. **PA ANNOUNCEMENT FOR AN ALERT**

- a. CONSIDER the safety of Plant personnel and then ANNOUNCE
OR PERFORM the following:

Time: _____

- 1) ACTUATE the appropriate local evacuation alarm if required. ☐
- 2) "ATTENTION ALL PERSONNEL, CRYSTAL RIVER 3 IS IN AN
ALERT BASED ON _____"
- 3) "THERE (IS OR IS NOT) A RADIOLOGICAL
RELEASE TO THE ENVIRONMENT IN
PROGRESS." ☐
- 4) "ACTIVATE THE TSC/OSC. REPORT TO YOUR
SHOP OR LOCAL ASSEMBLY AREA FOR
ACCOUNTABILITY." ☐
- 5) STATE any appropriate special instructions (areas to be avoided or
evacuated, remaining at critical jobs, etc.).

- 6) "ALL EOF PERSONNEL, REPORT TO THE EOF." ☐
- 7) REPEAT the announcement..... ☐
- 8) ESTABLISH continuous monitoring on PL-1. ☐

9.3 Emergency Coordinator's Guide for Site Area Emergency [NOCS 1129, 96042]

TIME

1. **SITE AREA EMERGENCY DECLARED**DATE: _____, _____
2. **RECOMMENDED WITHIN 5 MINUTES**
 - a. **NOTIFY** Control Room staff:
 - 1) Emergency declaration
 - 2) Upgrade criteria (if any)
 - 3) Release status
 - b. **IF** the emergency is due to a Security Event, **THEN REFER** TO EM-911 before proceeding with the following steps.
 - c. **IF** safe conditions exist, **THEN NOTIFY** Nuclear Security to activate the Emergency Response Organization (if **NOT** already activated) using Scenario 6 (Enclosure 5, Emergency Response Facility Activation Scenarios)
 - d. **IF** conditions (security event, violent weather, natural disaster, etc.) require activation of remote emergency facilities, **THEN NOTIFY** Nuclear Security to activate the Emergency Response Organization (if **NOT** already activated) using Scenario 9 (Enclosure 5, Emergency Response Facility Activation Scenarios).....
 - e. **IF** personnel can evacuate safely, **THEN NOTIFY** Plant Personnel using information from Step 9.3.10 **AND ACTUATE** Site Evacuation Alarm. **REVIEW** Enclosure 2, Evacuation Planning Guide for applicability.....
3. **REQUIRED WITHIN 15 MINUTES**
 - a. **NOTIFY** SWO, Citrus County, and Levy County within 15 minutes of declaration per Attachment 1, Florida Nuclear Plant Emergency Notification Form, **AND FAX** after notification is complete. (Also **REFER** to Step 9.3.0.c) [NOCS 1129, 96042]
4. **RECOMMENDED WITHIN 15 MINUTES**
 - a. **DETERMINE** protective actions for Energy Complex using Enclosure 2, Evacuation Planning Guide. **NOTIFY** Nuclear Security to coordinate protective action instructions for all areas of the Energy Complex.
 - b. **NOTIFY** Units 1/2 & 4/5 Control Rooms per Attachment 4....., _____

TIME

5. RECOMMENDED WITHIN 30 MINUTES

- a. NOTIFY PGM or EC On-Call and the EOF Director.,
- b. NOTIFY CR3 NRC Resident Inspector.
- c. **IF** a release is occurring as a result of this event,
AND RM-A2 is needed for evaluation, **THEN COMPLETE**
EM-204A or **EMG-NGGC-0002**, as time permits.
- d. NOTIFY NRC via ENS as soon as practicable after the State
using information from Items 4 - 7 and Item 11 of the Florida
Nuclear Plant Emergency Notification Form or Attachment 3,
Reactor Plant Event Notification Worksheet. **REQUIRED**
WITHIN 60 MINUTES. [NOCS 96042]
- e. ENSURE ERDS is activated per Attachment 5, Initiation of
the Emergency Response Data System (ERDS).
REQUIRED WITHIN 60 MINUTES. [NOCS 40730].....
- f. REVIEW EM-103 for operator dispatch requirements.

6. ONCE TSC OPERATIONAL

- a. VERIFY Protected Area accountability is completed by
Nuclear Security within 30 minutes of an evacuation of the
Protected Area.
- b. NOTIFY ANI insurance that CR3 is in an emergency
declaration. (Off-Site Support Phone Directory)
- c. NOTIFY Risk Management to notify NEIL insurance that
CR3 is in an emergency declaration. (Off-Site Support
Phone Directory).....
- d. NOTIFY INPO that CR3 has declared a Site Area
Emergency. (Off-Site Support Phone Directory).....

7. SITE AREA EMERGENCY UPDATES

- a. PROVIDE periodic Plant status updates to:
 - SWO (every 60 minutes or as agreed upon) per
Attachment 1, Florida Nuclear Plant Emergency
Notification Form including Items 12,13, and 14 ☐
 - Units 1/2 & 4/5 Control Rooms per Attachment 4 ☐
 - CR3 Plant Personnel via PA announcements..... ☐

8. SITE AREA EMERGENCY DOWNGRADING

- a. **IF** the EC and EOF Director were notified,
THEN CONSULT with them for concurrence before
downgrading occurs. DATE ____/____/____

- | | SITE AREA EMERGENCY TERMINATION | TIME |
|----|--|-------------|
| 9. | | |
| a. | IF the EOF is operational, THEN ASSIST with the completion of the Termination Checklist from <u>EM-400</u> | _____ |
| b. | IF the event is of short duration (approximately 30 minutes or less) and the EOF is NOT operational, THEN TERMINATE the event | _____ |
| c. | Upon the decision to terminate, NOTIFY:.....DATE ____/____ | |
| | <ul style="list-style-type: none"> • SWO and document on Attachment 1, Florida Nuclear Plant Emergency Notification Form • NRC within one hour of termination with verbal summary • Nuclear Security to inform the Emergency Response Organization of event termination using Scenario 13 (Enclosure 5, Emergency Response Facility Activation Scenarios) • Units 1/2 & 4/5 Control Rooms per Attachment 4 • CR3 Plant Personnel via PA announcement • American Nuclear Insurers (ANI) (Off-Site Support Phone Directory) • Risk Management (Off-Site Support Phone Directory) • INPO (Off-Site Support Phone Directory) | |
| d. | REQUEST the Licensing/Regulatory Programs Unit to prepare a written summary within twenty-four hours (or next working day) of termination to SWO and NRC. | _____ |

10. **PA Announcement for a Site Area Emergency** [NOCS 7455]

- a. CONSIDER the safety of Plant personnel and then ANNOUNCE
OR PERFORM the following:

Time: _____

- 1) ACTUATE the Site Evacuation alarm. ☐
- 2) "ATTENTION ALL PERSONNEL, CRYSTAL RIVER 3 IS IN A SITE
AREA EMERGENCY BASED ON _____"

- 3) "THERE (IS OR IS NOT) A RADIOLOGICAL
RELEASE TO THE ENVIRONMENT IN
PROGRESS." ☐
- 4) IF the TSC/OSC is NOT activated,
THEN ANNOUNCE: "ACTIVATE THE TSC/OSC." N/A ☐ ☐
- 5) "PERSONNEL ARE TO IMMEDIATELY EVACUATE
THE PROTECTED AREA AND REPORT TO THE
SITE ADMINISTRATION BUILDING AUDITORIUM." ☐
- 6) "ALL EOF PERSONNEL, REPORT TO THE EOF." ☐
- 7) STATE any appropriate special instructions (areas to be avoided or
evacuated, etc.).

- 8) REPEAT the announcement. ☐
- 9) ESTABLISH continuous monitoring on PL-1. ☐

9.4 Emergency Coordinator's Guide for General Emergency [NOCS 1129, 96042]

1. **GENERAL EMERGENCY DECLARED.**..... DATE ____ TIME ____
2. **RECOMMENDED WITHIN 5 MINUTES**

TIME

 - a. **IF** the EOF is operational, **THEN NOTIFY** the EOF Director of the classification change.
 - b. **NOTIFY** Control Room staff of:
 - 1) Emergency declaration
 - 2) Release status
 - c. **IF** the emergency is due to a Security Event, **THEN REFER** TO EM-911 before proceeding with the following steps.
 - d. **IF** safe conditions exist, **THEN NOTIFY** Nuclear Security to activate the Emergency Response Organization (if **NOT** already activated) using Scenario 7 (Enclosure 5, Emergency Response Facility Activation Scenarios).....
 - e. **IF** conditions (security event, violent weather, natural disaster, etc.) require activation of remote emergency facilities, **THEN NOTIFY** Nuclear Security to activate the Emergency Response Organization (if **NOT** already activated) using Scenario 10 (Enclosure 5, Emergency Response Facility Activation Scenarios).....
 - f. **IF** personnel can evacuate safely, **THEN NOTIFY** Plant Personnel using information from Step 9.4.9 **AND ACTUATE** Site Evacuation Alarm if Protected Area **NOT** already evacuated. **REVIEW** Enclosure 2, Evacuation Planning Guide for applicability.
3. **REQUIRED WITHIN 15 MINUTES**
 - a. **DETERMINE** Protective Action Recommendations per Enclosure 3
(Minimum Protective Action Recommendation is to evacuate Zone 1.)
 - b. **IF** the EOF is **NOT** operational, **THEN NOTIFY** SWO, Citrus County, and Levy County within 15 minutes of declaration per Attachment 1, Florida Nuclear Plant Emergency Notification Form, **AND FAX** after notification is complete. (Also REFER to Step 9.4.5.b) [NOCS 1129, 96042].....

4. **RECOMMENDED WITHIN 15 MINUTES** **TIME**
 - a. DETERMINE Energy Complex protective actions per Enclosure 2, Evacuation Planning Guide, **AND NOTIFY** Nuclear Security to coordinate evacuation instructions for all areas of the Energy Complex.
 - b. NOTIFY Units 1/2 & 4/5 Control Rooms per Attachment 4.
5. **RECOMMENDED WITHIN 30 MINUTES (NOT necessary if TSC and EOF operational)** **TIME**
 - a. NOTIFY CR3 NRC Resident Inspector.
 - b. **IF** a release is occurring as a result of this event, **AND** RM-A2 is needed for evaluation, **THEN COMPLETE** EM-204A or EMG-NGGC-0002, as time permits.
 - c. NOTIFY NRC via ENS as soon as practicable after the State using information from Items 4 - 7 and Item 11 of the Florida Nuclear Plant Emergency Notification Form or Attachment 3, Reactor Plant Event Notification Worksheet. **REQUIRED WITHIN 60 MINUTES.** [NOCS 96042]
 - d. ENSURE ERDS is activated per Attachment 5, Initiation of the Emergency Response Data System (ERDS). **REQUIRED WITHIN 60 MINUTES.** [NOCS 40730]
 - e. REVIEW EM-103 for operator dispatch requirements.
6. **ONCE TSC IS OPERATIONAL** **TIME**
 - a. VERIFY Protected Area accountability is completed by Security within 30 minutes of an evacuation of the Protected Area.
 - b. NOTIFY ANI insurance that CR3 is in an emergency declaration. (Off-Site Support Phone Directory)
 - c. NOTIFY Risk Management to notify NEIL insurance that CR3 is in an emergency declaration. (Off-Site Support Phone Directory)
 - d. NOTIFY INPO that CR3 that CR3 has declared a General Emergency. (Off-Site Support Phone Directory)

7. **GENERAL EMERGENCY UPDATES**

a. PROVIDE periodic Plant status updates to:

- SWO (every 60 minutes or as agreed upon) per Attachment 1, Florida Nuclear Plant Emergency Notification Form including Items 12, 13, and 14 ☐
- Units 1/2 & 4/5 Control Rooms per Attachment 4, Emergency Notification for Units 1/2 & 4/5 ☐
- CR3 Plant Personnel via PA announcements..... ☐

8. **GENERAL EMERGENCY TERMINATION**

- a. IF the EOF is **NOT** operational, **THEN WAIT** until the EOF is operational before terminating.
- b. IF the EOF is operational, **THEN ASSIST** with the completion of the Termination Checklist from EM-400
- c. Upon the decision to terminate, NOTIFY:.....DATE ____/____
- NRC within one hour of termination with verbal summary
 - Nuclear Security to inform the Emergency Response Organization of event termination using Scenario 13 (Enclosure 5, Emergency Response Facility Activation Scenarios).
 - Unit 1/2 & 4/5 Control Rooms per Attachment 4, Emergency Notification for Units 1/2 & 4/5
 - CR3 Plant Personnel via PA announcement
 - American Nuclear Insurers (ANI) (Off-Site Support Phone Directory).....
 - Risk Management (Off-Site Support Phone Directory)
 - INPO (Off-Site Support Phone Directory)
- d. REQUEST the Licensing/Regulatory Programs Unit to prepare a written summary within twenty-four hours (or next working day) of termination to SWO and NRC.

9. **PA ANNOUNCEMENT FOR A GENERAL EMERGENCY**
[NOCS 7455]

- a. CONSIDER the safety of Plant personnel and then ANNOUNCE or PERFORM the following:

Time: _____

- 1) IF the Protected Area has **NOT** been evacuated,
THEN ACTUATE the Site Evacuation alarm..... N/A ☐ ☐
- 2) "ATTENTION ALL PERSONNEL, CRYSTAL RIVER 3 IS IN A
GENERAL EMERGENCY BASED ON _____"
- 3) "THERE (IS OR IS NOT) A RADIOLOGICAL
RELEASE TO THE ENVIRONMENT IN
PROGRESS." ☐
- 4) IF the TSC/OSC is **NOT** activated,
THEN ANNOUNCE: "ACTIVATE THE TSC/OSC." N/A ☐ ☐
- 5) IF the Protected Area has **NOT** been evacuated,
THEN ANNOUNCE: "ALL NON-ESSENTIAL
PERSONNEL, IMMEDIATELY EVACUATE THE
PROTECTED AREA **AND** FOLLOW INSTRUCTIONS
FROM SECURITY." N/A ☐ ☐
- 6) IF the EOF is **NOT** activated, THEN ANNOUNCE:
"ALL EOF PERSONNEL, REPORT TO THE EOF." N/A ☐ ☐
- 7) STATE any appropriate special instructions (areas to be avoided or
evacuated, etc.). _____

- 8) REPEAT the announcement..... ☐
- 9) ESTABLISH continuous monitoring on PL-1. ☐

10.0 **RECORDS**

Subsection 9.1 – Emergency Coordinator's Guide for Unusual Event
Subsection 9.2 – Emergency Coordinator's Guide for an Alert
Subsection 9.3 – Emergency Coordinator's Guide for Site Area Emergency
Subsection 9.4 – Emergency Coordinator's Guide for General Emergency
Attachment 1 – Florida Nuclear Plant Emergency Notification Form

EMERGENCY CLASSIFICATION TABLE**EMERGENCY ACTION LEVEL INDEX**

ABNORMAL RAD LEVELS / RADIOLOGICAL EFFLUENT				
CATEGORY	UE	ALERT	SAE	GE
Gaseous Effluents	1.1	1.2	1.3	1.4
Liquid Effluents	1.5	1.6		
Unexpected Radiation Levels	1.7	1.8		
Irradiated Fuel Damage Due to Mechanical Damage or Uncontrolled Loss of Water Level Outside the Reactor Vessel	1.9	1.10		

NATURAL / MANMADE HAZARDS AND EC JUDGEMENT				
CATEGORY	UE	ALERT	SAE	GE
Earthquake Experienced	2.1	2.2		
External Flooding	2.3	2.4		
Hurricane	2.5			
Tornado/High Winds	2.6	2.7		
Aircraft/Vehicle Crash	2.8	2.9		
Toxic or Flammable Gases	2.10	2.11		
Explosions/Catastrophic Pressurized Equipment Failure	2.12	2.13		
Fire	2.14	2.15		
Control Room Evacuation		2.16	2.17	
Security Event	2.18	2.19	2.20	2.21
Internal Flooding	2.22	2.23		
Emergency Coordinator Judgment	2.24	2.25	2.26	2.27

SYSTEM MALFUNCTION				
CATEGORY	UE	ALERT	SAE	GE
Loss of Communications	3.1			
Failure of Reactor Protection		3.2	3.3	3.4
Inability to Reach ITS Time Limits	3.5			
Loss of Alarms/Indications	3.6	3.7	3.8	
Fuel Clad Degradation	3.9			
Turbine Failure	3.10	3.11		
RCS Leakage	3.12			
Inability to Maintain Hot Shutdown			3.13	
Inadvertent Criticality	3.14			
Inability to Maintain Plant in Cold Shutdown		3.15		
Loss of Water Level in Reactor Vessel that has Uncovered or Will Uncover Fuel			3.16	

LOSS OF POWER				
CATEGORY	UE	ALERT	SAE	GE
Loss of AC Power	4.1	4.2	4.3	4.4
Loss of AC Power (Shutdown)		4.5		
Loss of Vital DC Power			4.6	
Loss of Vital DC Power (Shutdown)	4.7			

MODES: ALL = Modes 1-6 and Defueled/No Mode

**EMERGENCY CLASSIFICATION TABLE
FISSION PRODUCT BARRIER MATRIX**
Applicable Modes: 1 - 4 Complete For All Barriers

5.1 LOSS OF FUEL CLAD If any item is checked, barrier is lost. Enter 4 for FUEL CLAD in classification table below.	6.1 LOSS OF REACTOR COOLANT SYSTEM If any item is checked, barrier is lost. Enter 4 for RCS in classification table below.	7.1 LOSS OF CONTAINMENT If any item is checked, barrier is lost. Enter 2 for CONTAINMENT in classification table below.
1. CORE CONDITIONS IN REGION 3 OR SEVERE ACCIDENT REGION OF ICC CURVES	1. RCS LEAK OR OTSG TUBE LEAK RESULTING IN LOSS OF ADEQUATE SUBCOOLING MARGIN (REFER TO EALBM EAL 6.1)	1. RAPID UNEXPLAINED RB PRESSURE DECREASE FOLLOWING INITIAL INCREASE
2. RCS ACTIVITY >300 μ Ci/gm I-131 DOSE EQUIVALENT (REFER TO EALBM EAL 5.1) [NOCS 100441]	2. RM-G29 OR 30 > 10 R/hr FOR 15 MINUTES OR LONGER	2. CONTAINMENT PRESSURE OR SUMP LEVEL RESPONSE NOT CONSISTENT WITH LOCA CONDITIONS
3. RM-G29 OR 30 >100 R/hr FOR 15 MINUTES OR LONGER (REFER TO EALBM EAL 5.1 & Att. 2)	3. EC DEEMS RCS BARRIER IS LOST	3. AN OTSG HAS > 10 GPM TUBE RUPTURE WITH PROLONGED STEAMING TO THE ATMOSPHERE FROM THE AFFECTED OTSG OR AN UNISOLABLE STEAM LEAK OUTSIDE RB FROM THE AFFECTED OTSG (REFER TO EALBM EAL 7.1)
4. EC DEEMS FUEL CLAD BARRIER IS LOST		4. CONTAINMENT ISOLATION IS INCOMPLETE AND RELEASE PATH TO THE ENVIRONMENT EXISTS
		5. EC DEEMS CONTAINMENT BARRIER IS LOST
5.2 POTENTIAL LOSS OF FUEL CLAD If any item is checked, barrier is potentially lost. Enter 3 for FUEL CLAD in classification table below.	6.2 POTENTIAL LOSS OF REACTOR COOLANT SYSTEM If any item is checked, barrier is potentially lost. Enter 3 for RCS in classification table below.	7.2 POTENTIAL LOSS OF CONTAINMENT If any item is checked, barrier is potentially lost. Enter 1.5 for CONTAINMENT in classification table below.
1. ENTRY INTO EOP-07 BY PROCEDURAL DIRECTION	1. RCS LEAK OR OTSG TUBE LEAK REQUIRING ONE OR MORE INJECTION VALVES (REFER TO EALBM EAL 6.2)	1. RB PRESSURE >54 psig
2. CORE EXIT THERMOCOUPLES >700°F	2. RCS LEAK OR OTSG TUBE LEAK RESULTS IN ES ACTUATION ON LOW RCS PRESSURE	2. RB HYDROGEN CONCENTRATION >4%
3. EC DEEMS FUEL CLAD BARRIER IN JEOPARDY	3. RCS PRESSURE/TEMPERATURE RELATIONSHIP VIOLATES NDT LIMITS	3. RB PRESSURE >30 psig WITH NO BUILDING SPRAY AVAILABLE
	4. HPI/PORV OR HPI/SAFETY VALVE COOLING IS IN PROGRESS	4. RMG-29 OR 30 READINGS >5,000 R/hr
	5. EC DEEMS RCS BARRIER IN JEOPARDY	5. CORE CONDITIONS IN SEVERE ACCIDENT REGION OF ICC CURVES FOR >15 MINUTES
		6. EC DEEMS CONTAINMENT BARRIER IN JEOPARDY

CLASSIFICATION TABLE

ENTER LOSS OR POTENTIAL LOSS OR ZERO FOR EACH BARRIER THEN TOTAL AND DETERMINE CLASS BELOW

FUEL CLAD _____	+ RCS _____	+ CONTAINMENT _____	= _____
-----------------	-------------	---------------------	---------

IF TOTAL IS:	RECOMMENDED EVENT CLASSIFICATION IS:
> 0 BUT ≤ 2	UNUSUAL EVENT
> 2 BUT ≤ 4	ALERT
> 4 BUT ≤ 8.5	SITE AREA EMERGENCY
> 8.5	GENERAL EMERGENCY

EMERGENCY CLASSIFICATION TABLE
ACCIDENT CONDITION:
ABNORMAL RAD LEVELS / RADIOLOGICAL EFFLUENT

CATEGORY	UNUSUAL EVENT	ALERT	SITE AREA EMERGENCY	GENERAL EMERGENCY																
Gaseous Effluents MODES: ALL	1.1 MODES: ALL (1 or 2) 1. A VALID reading on RM-A1 or RM-A2 Normal Range monitor exceeds the high alarm setpoint for 60 minutes or longer <u>OR</u> 2. Sample analysis confirms gaseous effluent being released exceeds 5.0E-4 $\mu\text{Ci/cc}$ for 60 minutes or longer	1.2 MODES: ALL (1 or 2) 1. A VALID reading on RM-A1 or RM-A2 exceeds 5.0E-3 $\mu\text{Ci/cc}$ for 15 minutes or longer <u>OR</u> 2. Sample analysis confirms gaseous effluent being released exceeds 5.0E-3 $\mu\text{Ci/cc}$ for 15 minutes or longer	1.3 MODES: ALL (1 or 2 or 3) 1. VALID RM-A1 or RM-A2 Accident Range monitor reading exceeds the values on the following Table for the current Stability Class for 15 minutes or longer: <table><tr><th>Stability Class</th><th>On-Line Operations ($\mu\text{Ci/cc}$)</th><th>Extended Shutdown or SF Pools ($\mu\text{Ci/cc}$)</th></tr><tr><td>A, B, or C</td><td>5.1E-1</td><td>7.5E-2</td></tr><tr><td>D or E</td><td>3.3E-1</td><td>5.4E-2</td></tr><tr><td>F or G</td><td>3.0E-1</td><td>4.5E-2</td></tr></table> <u>OR</u> 2. Dose Assessment results indicate SITE BOUNDARY dose >100 mR TEDE or >500 mR thyroid CDE for the actual or projected duration of the release <u>OR</u> 3. Field survey results indicate closed windows dose rates >100mR/hr expected to continue for more than one hour; or analyses of field survey samples indicate thyroid CDE of 500mR for one hour of inhalation, at or beyond SITE BOUNDARY	Stability Class	On-Line Operations ($\mu\text{Ci/cc}$)	Extended Shutdown or SF Pools ($\mu\text{Ci/cc}$)	A, B, or C	5.1E-1	7.5E-2	D or E	3.3E-1	5.4E-2	F or G	3.0E-1	4.5E-2	1.4 MODES: ALL (1 or 2 or 3) 1. VALID RM-A1 or RM-A2 Accident Range monitor reading exceeds the values in the following table for 15 minutes or longer: <table><tr><th>On-Line Operations ($\mu\text{Ci/cc}$)</th><th>Extended Shutdown or SF Pools ($\mu\text{Ci/cc}$)</th></tr><tr><td>3.0E+0</td><td>4.5E-1</td></tr></table> <u>OR</u> 2. Dose Assessment results indicate SITE BOUNDARY dose >1000 mR TEDE or >5000 mR thyroid CDE for the actual or projected duration of the release AND core damage is suspected or has occurred <u>OR</u> 3. Field survey results indicate closed windows dose rates >1000mR/hr expected to continue for more than one hour; or analyses of field survey samples indicate thyroid CDE of 5000 mR for one hour of inhalation, at or beyond SITE BOUNDARY	On-Line Operations ($\mu\text{Ci/cc}$)	Extended Shutdown or SF Pools ($\mu\text{Ci/cc}$)	3.0E+0	4.5E-1
Stability Class	On-Line Operations ($\mu\text{Ci/cc}$)	Extended Shutdown or SF Pools ($\mu\text{Ci/cc}$)																		
A, B, or C	5.1E-1	7.5E-2																		
D or E	3.3E-1	5.4E-2																		
F or G	3.0E-1	4.5E-2																		
On-Line Operations ($\mu\text{Ci/cc}$)	Extended Shutdown or SF Pools ($\mu\text{Ci/cc}$)																			
3.0E+0	4.5E-1																			
Liquid Effluents MODES: ALL	1.5 MODES: ALL (1 or 2) 1. A VALID reading on RM-L2, RM-L7, or sample analysis confirms the release exceeds 2 times the ODCM release setpoint for 60 minutes or longer <u>OR</u> 2. Release continued for 60 minutes or longer with no dilution flow (REFER TO EALBM EAL 1.5)	1.6 MODES: ALL A VALID reading on RM-L2, RM-L7, or sample analysis confirms the release exceeds 200 times the ODCM release setpoint for 15 minutes or longer	Not Applicable																	

EMERGENCY CLASSIFICATION TABLE

ACCIDENT CONDITION:

ABNORMAL RAD LEVELS/RADIOLOGICAL EFFLUENT (Continued)

CATEGORY	UNUSUAL EVENT	ALERT	SITE AREA EMERGENCY	GENERAL EMERGENCY
Unexpected Radiation Levels MODES: ALL	1.7 MODES: ALL One or more VALID radiation monitor readings unexpectedly exceed the values below for 15 minutes or longer: RM-G3 = 400 mR/hr RM-G4 = 600 mR/hr RM-G5 = 3,000 mR/hr RM-G9 = 100 mR/hr RM-G10 = 800 mR/hr RM-G14 = 1,000 mR/hr RM-G17 = 800 mR/hr	1.8 MODES: ALL (1 or 2) 1. VALID radiation reading greater than 15 mR/hr for 15 minutes or longer in the Control Room (RM-G1) or the Central Alarm Station (CAS) <u>OR</u> 2. One or more VALID radiation monitor readings unexpectedly exceed the values below for 15 minutes or longer: RM-G3 = 5,000 mR/hr RM-G4 = 5,000 mR/hr RM-G9 = 5,000 mR/hr RM-G10 = 5,000 mR/hr RM-G17 = 5,000 mR/hr	<i>Refer to Fission Product Barrier Matrix, Gaseous Effluents, or Emergency Coordinator Judgment</i>	<i>Refer to Fission Product Barrier Matrix, Gaseous Effluents, or Emergency Coordinator Judgment</i>
Irradiated Fuel Damage Due to Mechanical Damage or Uncontrolled Loss of Water Level Outside the Reactor Vessel MODES: ALL	1.9 MODES: ALL (1 and 2) 1. (a or b) a. Uncontrolled level decrease resulting in indications of -2.5 feet in spent fuel pool <u>OR</u> b. Confirmed Plant personnel report of uncontrolled significant water level drop in spent fuel pool or transfer canal when Spent Fuel transfer tubes are open <u>AND</u> 2. Fuel remains covered with water	1.10 MODES: ALL (1 or 2) 1. (a and b) a. Plant personnel report damage of irradiated fuel <u>AND</u> b. VALID high alarm as indicated on RM-G15 or RM-G16 <u>OR</u> 2. Plant personnel report spent fuel pool or transfer canal water level drop has or will exceed makeup capacity such that irradiated fuel will be uncovered	<i>Refer to Gaseous Effluents or Emergency Coordinator Judgment</i>	<i>Refer to Gaseous Effluents or Emergency Coordinator Judgment</i>

EMERGENCY CLASSIFICATION TABLE
ACCIDENT CONDITION:
NATURAL / MANMADE HAZARDS AND EC JUDGEMENT

CATEGORY	UNUSUAL EVENT	ALERT	SITE AREA EMERGENCY	GENERAL EMERGENCY
Earthquake Experienced [NOCS 24320] MODES: ALL	2.1 MODES: ALL (1 and 2) 1. Ground motion sensed by Plant personnel <u>AND</u> 2. Confirmed earthquake causing Annunciator C-3-14 "Seismic System Trouble" alarm	2.2 MODES: ALL (1 and 2) 1. Ground motion sensed by Plant personnel or confirmed Annunciator C-3-14 "Seismic System Trouble" alarm <u>AND</u> 2. (a or b) a. Analysis confirms the earthquake at >0.05g <u>OR</u> b. Indications show degraded SAFE SHUTDOWN EQUIPMENT performance due to the earthquake	Refer to Fission Product Barrier Matrix or Emergency Coordinator Judgment	Refer to Fission Product Barrier Matrix or Emergency Coordinator Judgment
External Flooding MODES: ALL	2.3 MODES: ALL Intake canal level or visual observation indicates flood water level \geq 98 feet	2.4 MODES: ALL (1 and 2) 1. Intake canal level or visual observation indicates flood water level \geq 98 feet <u>AND</u> 2. Indications show degraded SAFE SHUTDOWN EQUIPMENT performance due to the flooding	Refer to Fission Product Barrier Matrix or Emergency Coordinator Judgment	Refer to Fission Product Barrier Matrix or Emergency Coordinator Judgment
Hurricane MODES: ALL	2.5 MODES: ALL The Plant is within a Hurricane Warning area	Refer to Fission Product Barrier Matrix Tornado/High Winds, or Emergency Coordinator Judgment	Refer to Fission Product Barrier Matrix or Emergency Coordinator Judgment	Refer to Fission Product Barrier Matrix or Emergency Coordinator Judgment

EMERGENCY CLASSIFICATION TABLE
ACCIDENT CONDITION:
NATURAL / MANMADE HAZARDS AND EC JUDGEMENT (Continued)

CATEGORY	UNUSUAL EVENT	ALERT	SITE AREA EMERGENCY	GENERAL EMERGENCY
Tornado/High Winds MODES: ALL	2.6 MODES: ALL Report by Plant personnel of a Tornado striking within the PROTECTED AREA	2.7 MODES: ALL (1 or 2) 1. Tornado <u>or</u> High Winds <u>or</u> windborne object cause significant VISIBLE DAMAGE to any of the following structures: - Auxiliary Building, - BWST, - Control Complex, - Diesel Generator Building (EGDG-1A/1B) - EFT-2 Building, - Intermediate Building, - Reactor Building - EFP-3 Building <u>OR</u> 2. Indications show degraded SAFE SHUTDOWN EQUIPMENT performance due to the tornado or high winds or windborne objects	Refer to Fission Product Barrier Matrix or Emergency Coordinator Judgment	Refer to Fission Product Barrier Matrix or Emergency Coordinator Judgment
Accidental Aircraft / Vehicle Crash MODES: ALL	2.8 MODES: ALL Report by Plant personnel of Aircraft <u>or</u> Vehicle Crash involving the following structures: - Auxiliary Building, - BWST, - Control Complex - Diesel Generator Building (EGDG-1A/1B) - EFT-2 Building - Intermediate Building - Reactor Building - EFP-3 Building	2.9 MODES: ALL (1 or 2) 1. Confirmed report of significant VISIBLE DAMAGE to any of the following structures: - Auxiliary Building - BWST - Control Complex - Diesel Generator Building (EGDG-1A/1B) - EFT-2 Building - Intermediate Building - Reactor Building - EFP-3 Building <u>OR</u> 2. Indications show degraded SAFE SHUTDOWN EQUIPMENT performance due to the Aircraft <u>or</u> Vehicle Crash	Refer to Fission Product Barrier Matrix or Emergency Coordinator Judgment	Refer to Fission Product Barrier Matrix or Emergency Coordinator Judgment

EMERGENCY CLASSIFICATION TABLE

ACCIDENT CONDITION:

NATURAL / MANMADE HAZARDS AND EC JUDGEMENT (Continued)

CATEGORY	UNUSUAL EVENT	ALERT	SITE AREA EMERGENCY	GENERAL EMERGENCY
Toxic or Flammable Gases MODES: ALL	2.10 MODES: ALL (1 or 2) 1. Report or detection of Toxic or Flammable Gas within the SITE BOUNDARY that could enter the Protected Area at levels > IDLH or > 25% Lower Explosive Limits affecting normal operation of the Plant. <u>OR</u> 2. Confirmed notification by PE, County, or State personnel to evacuate or shelter site personnel based on an offsite event	2.11 MODES: ALL (1 or 2 or 3) 1. Flammable Gas levels > 25% Lower Explosive Limit in areas required to maintain safe operations or establish and maintain cold shutdown <u>OR</u> 2. Toxic Gas levels \geq IDLH levels in areas that require continuous occupancy to maintain safe operation or establish or maintain cold shutdown <u>OR</u> 3. Toxic Gas levels \geq IDLH levels within the PROTECTED AREA such that Plant personnel are unable to perform actions necessary to maintain safe operations or establish and maintain cold shutdown using protective equipment	<i>Refer to Fission Product Barrier Matrix, System Malfunction, or Emergency Coordinator Judgment</i>	<i>Refer to Fission Product Barrier Matrix, System Malfunction, or Emergency Coordinator Judgment</i>

EMERGENCY CLASSIFICATION TABLE

ACCIDENT CONDITION:

NATURAL / MANMADE HAZARDS AND EC JUDGEMENT (Continued)

CATEGORY	UNUSUAL EVENT	ALERT	SITE AREA EMERGENCY	GENERAL EMERGENCY
Explosions/ Catastrophic Pressurized Equipment Failure MODES: ALL	2.12 MODES: ALL Report by Plant personnel of VISIBLE DAMAGE to permanent structures or equipment within the PROTECTED AREA due to an EXPLOSION or catastrophic failure of pressurized equipment <i>Refer to Security Event</i>	2.13 MODES: ALL (1 or 2) 1. EXPLOSION or catastrophic failure of pressurized equipment causes significant VISIBLE DAMAGE to any of the following structures. <ul style="list-style-type: none"> - Auxiliary Building - BWST - Control Complex - Diesel Generator Building (EGDG-1A/1B) - EFT-2 Building - Intermediate Building - Reactor Building - EFP-3 Building OR 2. Indications show degraded SAFE SHUTDOWN EQUIPMENT performance due to the EXPLOSION or pressurized equipment failure	<i>Refer to Fission Product Barrier Matrix, System Malfunction, or Emergency Coordinator Judgment</i>	<i>Refer to Fission Product Barrier Matrix, System Malfunction, or Emergency Coordinator Judgment</i>
Fire MODES: ALL	2.14 MODES: ALL (1 and 2) 1. FIRE in or threatening one of the following structures: <ul style="list-style-type: none"> - Auxiliary Building - BWST - Control Complex - Diesel Generator Building (EGDG-1A/1B) - EFT-2 Building - Intermediate Building - Reactor Building - EFP-3 Building AND 2. FIRE not extinguished within 15 minutes from either Control Room notification or receipt of a VALID fire alarm in the Control Room	2.15 MODES: ALL (1 or 2) 1. Report by Plant personnel of VISIBLE DAMAGE to SAFE SHUTDOWN EQUIPMENT due to the FIRE OR 2. Indications show degraded SAFE SHUTDOWN EQUIPMENT performance due to the FIRE	<i>Refer to Fission Product Barrier Matrix, Control Room Evacuation, System Malfunctions, or Emergency Coordinator Judgment</i>	<i>Refer to Fission Product Barrier Matrix, Control Room Evacuation, System Malfunctions, or Emergency Coordinator Judgment</i>

EMERGENCY CLASSIFICATION TABLE

ACCIDENT CONDITION:

NATURAL / MANMADE HAZARDS AND EC JUDGEMENT (Continued)

CATEGORY	UNUSUAL EVENT	ALERT	SITE AREA EMERGENCY	GENERAL EMERGENCY
Control Room Evacuation MODES: ALL	<i>Not Applicable</i>	2.16 MODES: ALL Control Room evacuation is required per AP-990, "Shutdown From Outside the Control Room"	2.17 MODES: ALL (1 and 2) 1. Control Room evacuation is required per AP-990, "Shutdown From Outside the Control Room" <u>AND</u> 2. Control of the necessary equipment <u>not</u> established per AP-990 within 15 minutes (REFER TO EALBM EAL 2.17)	<i>Refer to Fission Product Barrier Matrix, System Malfunction, or Emergency Coordinator Judgment</i>
Security Event MODES: ALL	2.18 MODES: ALL (1 or 2 or 3) Report by Security Shift Supervisor or NRC of one or more of the following events: 1. A validated notification from NRC providing information of an AIRCRAFT or AIRLINER threat. <u>OR</u> 2. A CREDIBLE SITE-SPECIFIC SECURITY THREAT NOTIFICATION <u>OR</u> 3. A SECURITY CONDITION that does NOT involve a HOSTILE ACTION as reported by the Security Shift Supervisor.	2.19 MODES: ALL (1 or 2) 1. A validated notification from NRC of an AIRLINER attack threat less than 30 minutes away <u>OR</u> 2. A HOSTILE ACTION is occurring or has occurred within the OWNER CONTROLLED AREA as reported by the Security Shift Supervisor.	2.20 MODES: ALL A HOSTILE ACTION is occurring or has occurred within the PROTECTED AREA as reported by the Security Shift Supervisor.	2.21 MODES: ALL (1 or 2) 1. A HOSTILE ACTION has occurred such that plant personnel are unable to operate equipment required to maintain safety functions. <u>OR</u> 2. A HOSTILE ACTION has caused failure of Spent Fuel Cooling Systems and imminent fuel damage is likely.

EMERGENCY CLASSIFICATION TABLE

ACCIDENT CONDITION:

NATURAL / MANMADE HAZARDS AND EC JUDGEMENT (Continued)

CATEGORY	UNUSUAL EVENT	ALERT	SITE AREA EMERGENCY	GENERAL EMERGENCY
Internal Flooding Modes: ALL	2.22 MODES: ALL (1 and 2) 1. Indication of uncontrolled flooding in the Auxiliary Building or Intermediate Building <u>AND</u> 2. Water level/flooding has the potential to affect or immerse SAFE SHUTDOWN EQUIPMENT	2.23 MODES: ALL (1 and 2) 1. Water level exceeds 5 inches in the Auxiliary Building or Intermediate Building <u>AND</u> 2. (a or b) a. Indications show degraded SAFE SHUTDOWN EQUIPMENT due to the flooding <u>OR</u> b. Electrical hazards prevent Plant personnel normal access to areas of Plant containing SAFE SHUTDOWN EQUIPMENT	Refer to Fission Product Barrier Matrix or Emergency Coordinator Judgment	Refer to Fission Product Barrier Matrix or Emergency Coordinator Judgment

EMERGENCY CLASSIFICATION TABLE

ACCIDENT CONDITION:

NATURAL / MANMADE HAZARDS AND EC JUDGEMENT (Continued)

CATEGORY	UNUSUAL EVENT	ALERT	SITE AREA EMERGENCY	GENERAL EMERGENCY
Emergency Coordinator Judgment MODES: ALL	2.24 MODES: ALL Other conditions exist which indicate a potential degradation of the level of safety of the Plant	2.25 MODES: ALL Other conditions exist which indicate that events are in process or have occurred which involve potential or actual substantial degradation of the level of safety of the Plant	2.26 MODES: ALL Other conditions exist which indicate actual or likely major failures of Plant functions needed for the protection of the public	2.27 MODES: ALL (1 or 2) Other conditions exist which indicate: 1. Actual or imminent substantial core degradation with potential loss of containment integrity <u>OR</u> 2. The potential for uncontrolled radionuclide releases that can be expected to exceed EPA Protective Action Guidelines Plume Exposure Levels beyond the SITE BOUNDARY (see EAL 1.4)

EMERGENCY CLASSIFICATION TABLE
ACCIDENT CONDITION:
SYSTEM MALFUNCTION

CATEGORY	UNUSUAL EVENT	ALERT	SITE AREA EMERGENCY	GENERAL EMERGENCY
Loss of Communication MODES: ALL	3.1 MODES: ALL (1 or 2) 1. Loss of <u>all</u> the following in-Plant communications capability: a. PE Internal Telephone System b. PAX c. Portable UHF Radios <u>OR</u> 2. Loss of <u>all</u> of the following Offsite Communication capability: a. PE Telephone System b. State Hot Ringdown (SHRD) c. All FTS 2001 NRC phones (ENS, HPN, etc.) d. Emergency Management Network (EMnet) e. Cellular Telephones	<i>Not Applicable</i>	<i>Not Applicable</i>	<i>Not Applicable</i>
Failure of Reactor Protection MODES: 1,2,3 for ALERT MODES: 1,2 for SITE AREA and GENERAL Emergencies	<i>Not Applicable</i>	3.2 MODES: 1,2,3 (1 and 2) 1. RPS Trip setpoint exceeded and no Reactor trip occurred <u>AND</u> 2. Manual Reactor trip from Control Room was successful and reactor is shutdown (REFER TO EALBM EAL 3.2)	3.3 MODES: 1,2 (1 and 2) 1. RPS Trip setpoint exceeded and no Reactor trip occurred <u>AND</u> 2. Manual Reactor trip from Control Room was <u>not</u> successful in shutting down the reactor (REFER TO EALBM EAL 3.3)	3.4 MODES: 1,2 (1 and 2 and 3) 1. RPS Trip setpoint exceeded and no Reactor trip occurred <u>AND</u> 2. Manual Reactor trip from Control Room was <u>not</u> successful in shutting down the reactor <u>AND</u> 3. (a or b) a. Core exit thermocouple temperatures > 700°F, as indicated on SPDS. <u>OR</u> b. Adequate Secondary Cooling not available

EMERGENCY CLASSIFICATION TABLE
ACCIDENT CONDITION:
SYSTEM MALFUNCTION (Continued))

CATEGORY	UNUSUAL EVENT	ALERT	SITE AREA EMERGENCY	GENERAL EMERGENCY
Inability to reach required mode within Improved Technical Specification time limits MODES: 1,2,3,4	3.5 MODES: 1,2,3,4 (1 and 2) 1. Entry into an Improved Technical Specification LCO statement requiring a mode reduction <u>AND</u> 2. The Plant is <u>not</u> in the required operating mode within the time prescribed by the LCO required action	Not Applicable	Not Applicable	Not Applicable
Loss of Alarms/Indications MODES: 1,2,3,4	3.6 MODES: 1,2,3,4 (1 or 2) 1. UNPLANNED loss of Annunciator panels A-L <u>and</u> Annunciator printer for 15 minutes or longer <u>OR</u> 2. UNPLANNED loss of NNI-X and NNI-Y for 15 minutes or longer	3.7 MODES: 1,2,3,4 (1 and 2) 1. (a or b) a. UNPLANNED loss of Annunciator panels A-L <u>and</u> Annunciator printer for 15 minutes or longer <u>OR</u> b. UNPLANNED loss of NNI-X and NNI-Y for 15 minutes or longer <u>AND</u> 2. (a or b) a. SIGNIFICANT TRANSIENT in progress <u>OR</u> b. Loss of Plant Computer <u>and</u> SPDS	3.8 MODES: 1,2,3,4 (1 and 2 and 3 and 4) 1. (a or b) a. Loss of Annunciator panels A-L <u>and</u> Annunciator printer for 15 minutes or longer <u>OR</u> b. Loss of NNI-X and NNI-Y for 15 minutes or longer <u>AND</u> 2. SIGNIFICANT TRANSIENT in progress <u>AND</u> 3. Loss of Plant Computer <u>and</u> SPDS <u>AND</u> 4. Inability to directly monitor any one of the following: Subcriticality Core Cooling Containment RCS Inventory	Refer to Fission Product Barrier Matrix or Emergency Coordinator Judgment

EMERGENCY CLASSIFICATION TABLE
ACCIDENT CONDITION:
SYSTEM MALFUNCTION (Continued)

CATEGORY	UNUSUAL EVENT	ALERT	SITE AREA EMERGENCY	GENERAL EMERGENCY
Fuel Clad Degradation MODES: 1,2,3,4,5	3.9 MODES: 1,2,3,4,5 (a or b) Radiochemistry analysis indicates: a. Dose Equivalent Iodine (I-131) > 1.0 $\mu\text{Ci/gm}$ for 48 hours or longer <u>OR</u> b. Specific activity >100/E-bar for 48 hours or longer	Refer to Fission Product Barrier Matrix	Refer to Fission Product Barrier Matrix	Refer to Fission Product Barrier Matrix
Turbine Failure MODES: 1,2,3	3.10 MODES: 1,2,3 Report by Plant personnel of main turbine failure causing penetration of the turbine casing or damage to main generator seals	3.11 MODES: 1,2,3 (1 or 2) 1. Report by Plant personnel of projectiles generated by a main turbine failure causing significant VISIBLE DAMAGE any of the following structures: <ul style="list-style-type: none"> - Auxiliary Building - BWST - Control Complex - Diesel Generator Building (EGDG-1A/1B) - EFT-2 Building - Intermediate Building - Reactor Building - EFP-3 Building <u>OR</u> 2. Indications show degraded SAFE SHUTDOWN EQUIPMENT performance due to turbine generated projectiles	Refer to Fission Product Barrier Matrix	Refer to Fission Product Barrier Matrix

EMERGENCY CLASSIFICATION TABLE
ACCIDENT CONDITION:
SYSTEM MALFUNCTION (Continued)

CATEGORY	UNUSUAL EVENT	ALERT	SITE AREA EMERGENCY	GENERAL EMERGENCY
RCS Leakage [NOCS 40503] MODES: 1,2,3,4	3.12 MODES: 1,2,3,4 (1 or 2) 1. Unidentified Leakage \geq 10 gpm <u>or</u> Pressure Boundary Leakage \geq 10 gpm <u>OR</u> 2. Identified leakage \geq 25 gpm	Refer to Fission Product Barrier Matrix or Emergency Coordinator Judgment	Refer to Fission Product Barrier Matrix or Emergency Coordinator Judgment	Refer to Fission Product Barrier Matrix or Emergency Coordinator Judgment
Inability to Maintain Hot Shutdown MODES: 1,2,3,4	Not Applicable	Not Applicable	3.13 MODES: 1,2,3,4 (1 and 2) 1. Complete loss of Main, Emergency, and Auxiliary Feedwater and unable to establish HPI cooling <u>AND</u> 2. Loss of subcooling margin	Refer to Fission Product Barrier Matrix or Emergency Coordinator Judgment
Inadvertent Criticality MODES: 2,3,4,5,6	3.14 MODES: 2,3,4,5,6 An extended and unplanned sustained positive startup rate monitored by nuclear instrumentation	Not Applicable	Not Applicable	Not Applicable
Inability to Maintain Plant in Cold Shutdown MODES: 5,6	Not Applicable	3.15 MODES: 5,6 (1 or 2) 1. Inability to maintain reactor coolant temperature below 200°F <u>OR</u> 2. Uncontrolled reactor coolant temperature approaching 200°F	Refer to Loss of Water in Reactor Vessel that has uncovered or will uncover fuel	Not Applicable

EMERGENCY CLASSIFICATION TABLE
ACCIDENT CONDITION:
SYSTEM MALFUNCTION (Continued)

CATEGORY	UNUSUAL EVENT	ALERT	SITE AREA EMERGENCY	GENERAL EMERGENCY
<p>Loss of Water Level in Reactor Vessel that Has Uncovered or Will Uncover Fuel</p> <p>MODES: 5, 6</p>	Not Applicable	Not Applicable	<p>3.16 MODES 5,6 (1 and 2)</p> <p>1. Loss of decay heat removal per AP-404</p> <p><u>AND</u></p> <p>2. (a or b)</p> <p>a. Incores indicating superheated conditions</p> <p><u>OR</u></p> <p>b. Incores unavailable and time to uncover exceeded as specified in OP-103H</p>	Not Applicable

EMERGENCY CLASSIFICATION TABLE

ACCIDENT CONDITION:

LOSS OF POWER

CATEGORY	UNUSUAL EVENT	ALERT	SITE AREA EMERGENCY	GENERAL EMERGENCY
Loss of AC Power MODES: ALL for UNUSUAL EVENT MODES: 1,2,3,4 for ALERT, SITE AREA and GENERAL Emergencies	4.1 MODES: ALL (1 and 2) 1. Offsite Power Transformer (OPT) <u>and</u> Backup ES Transformer (BEST) <u>and</u> Auxiliary Transformer not available for 15 minutes or longer <u>AND</u> 2. EDGs supplying power to 4160V ES Busses	4.2 MODES: 1,2,3,4 AC power capability to the 4160V ES busses reduced to a single power source for 15 minutes or longer such that only one of the following is available: - "A" EDG - "B" EDG - Offsite Power Transformer (OPT) - Backup ES Transformer (BEST)	4.3 MODES: 1,2,3,4 Neither 4160V ES bus is capable of being energized within 15 minutes	4.4 MODES: 1,2,3,4 (1 and 2) 1. Neither 4160V ES bus is capable of being energized <u>AND</u> 2. (a or b) a. Restoration of 4160V ES Bus A or 4160V ES Bus B is not likely within 4 hours <u>OR</u> b. Core exit thermocouples > 700°F as indicated on SPDS
Loss of AC Power (Shutdown) MODES: 5,6, No Mode (defueled)	Not Applicable	4.5 MODES: 5,6, No Mode Neither 4160V ES bus is capable of being energized within 15 minutes	Not Applicable	Not Applicable
Loss of Vital DC Power MODES: 1,2,3,4	Not Applicable	Not Applicable	4.6 MODES: 1,2,3,4 Standby Power Status Lights for BUS A1, A2, and BUS B1, B2 on the Main Control Board (SSF Panel) are out for 15 minutes or longer	Refer to Fission Product Barrier Matrix
Loss of Vital DC Power (Shutdown) MODES: 5,6, No Mode (defueled)	4.7 MODES: 5,6, No Mode Standby Power Status Lights for BUS A1, A2, and BUS B1, B2 on the Main Control Board (SSF Panel) are out for 15 minutes or longer	Not Applicable	Not Applicable	Not Applicable

EVACUATION PLANNING GUIDE

1.0 ENERGY COMPLEX PROTECTIVE ACTIONS

1. DETERMINE protective actions for the Energy Complex using B or C or D or E below. (USE information in the tables and map on the following pages of this enclosure as necessary.)
 - A. UNUSUAL EVENT **OR** ALERT: **NO** protective actions. (Actions may be required in some security events as determined by Security.)
 - B. SITE AREA EMERGENCY:
 - PERFORM assembly and accountability **AND** INSTRUCT Fossil Control Rooms to report results to Nuclear Security at extension 3258 or 795-5078.
 - CONSIDER discretionary evacuation of non-essential personnel if plant conditions are likely to degrade or conditions exist that could impede site evacuation.
 - CONSIDER sheltering for releases lasting less than two hours.
 - For releases lasting greater than two hours or for planned releases, EVACUATE non-essential personnel
 - C. GENERAL EMERGENCY:
(Release has **NOT** occurred and release **NOT** likely within 3 hours.)
 - PERFORM assembly and accountability **AND** INSTRUCT Fossil Control Rooms to report results to Nuclear Security at extension 3258 or 795-5078.
 - EVACUATE non-essential personnel (including Main Assembly Area personnel).
 - NOTIFY Fossil Control Rooms to standby for instructions.
 - CONSIDER supplying dosimetry to remaining personnel.
 - D. GENERAL EMERGENCY:
(Release has occurred or is imminent **AND** RELEASE duration projected less than 2 hours.)
 - NOTIFY Fossil Control Rooms to direct all personnel to take shelter in closest building and standby for further instructions.

EVACUATION PLANNING GUIDE (Cont'd)

1.0 ENERGY COMPLEX PROTECTIVE ACTIONS (Cont'd)

- E. GENERAL EMERGENCY:
(Release has occurred or is likely within 3 hours AND release duration unknown.)
 - NOTIFY Fossil Control Rooms to secure their Plants.
 - EVACUATE the Energy Complex even if a release has already started (including Main Assembly Area personnel).
 - EVACUATE without performing assembly.
- 2. NOTIFY Units 1/2 & 4/5 using Attachment 4, Emergency Notification for Units 1/2 & 4/5.
- 3. ENSURE Nuclear Security coordinates these protective action instructions to all areas of the Energy Complex, per the EC Guide.

EVACUATION PLANNING GUIDE (Cont'd)

2.0 EVACUATION CONSIDERATIONS

1. IF evacuation is likely, THEN CONSIDER the following measures. UTILIZE Security, other CREC facilities, or local law enforcement agencies (LLEA) as needed.

NOTE: Evacuation of non-essential CREC personnel can be accomplished in 90-165 minutes depending upon onsite population size and weather conditions. "Contra-flow" is the establishment of outbound traffic utilizing both lanes of the access road.

	CREC Worker Vehicles (Day Shift)	Evacuation Times (Low) (good weather w/contra-flow)	Evacuation Times (High) (adverse weather w/o contra-flow)
Normal operations (all units)	Up to ~850	~90 minutes	~110 minutes
Typical Unit 3 refuel outage	Up to ~1100	~110 minutes	~135 minutes
Concurrent CREC outages and/or major projects, etc.	Up to ~1600	~125 minutes	~165 minutes

- SUSPEND inbound traffic of non-essential personnel.
- SUSPEND inbound and outbound train traffic by calling (407) 880-8500
- SUSPEND barge traffic in the intake canal by calling (352) 302-2189.
- IMPLEMENT a staggered evacuation sequence of CREC facilities to reduce traffic congestion.
- OPEN the exit lane vehicle barrier at the Access Control Point.

CAUTION

Contra-flow should not be established if buses are used to evacuate personnel or if emergency vehicles are required onsite

- ESTABLISH contra-flow (outbound traffic utilizing both lanes of the access road) if practicable in the following order:
 - a) From the North Access Road east to US Highway 19
 - b) From the southeast corner of the main CR3 parking lot (3-way intersection) east to US Highway 19

EVACUATION PLANNING GUIDE (Cont'd)

2.0 EVACUATION CONSIDERATIONS (Cont'd)

- **IF** buses are in use but inadequate to evacuate contractor personnel, **THEN IMPLEMENT** car-pooling to transport them to the bus staging area.
- EVACUATE non-essential CR3 personnel directly from Local Assembly Areas, bypassing the Main Assembly Area. Essential personnel can report to the Main Assembly Area if deemed appropriate.
- ESTABLISH traffic control points at the following intersections (in order of priority):
 - a) US Highway 19 and Power Line Road
 - b) Power Line Road and the North Access Road
 - c) Power Line Road and the southeast corner of the main CR3 parking lot (3-way intersection)
 - d) Power Line Road and North Tallahassee Road

EVACUATION PLANNING GUIDE (Cont'd)

3.0 WIND DIRECTION DATA

WIND FROM DIRECTION	WIND FROM DEGREES	SECTORS AFFECTED
N	349-11 (349-371)	H J K
NNE	12-33 (372-393)	J K L
NE	34-56 (394-416)	K L M
ENE	57-78 (417-438)	L M N
E	79-101 (439-461)	M N P
ESE	102-123 (462-483)	N P Q
SE	124-146 (484-506)	P Q R
SSE	147-168 (507-528)	Q R A
S	169-191 (529-540)	R A B
SSW	192-213	A B C
SW	214-236	B C D
WSW	237-258	C D E
W	259-281	D E F
WNW	282-303	E F G
NW	304-326	F G H
NNW	327-348	G H J

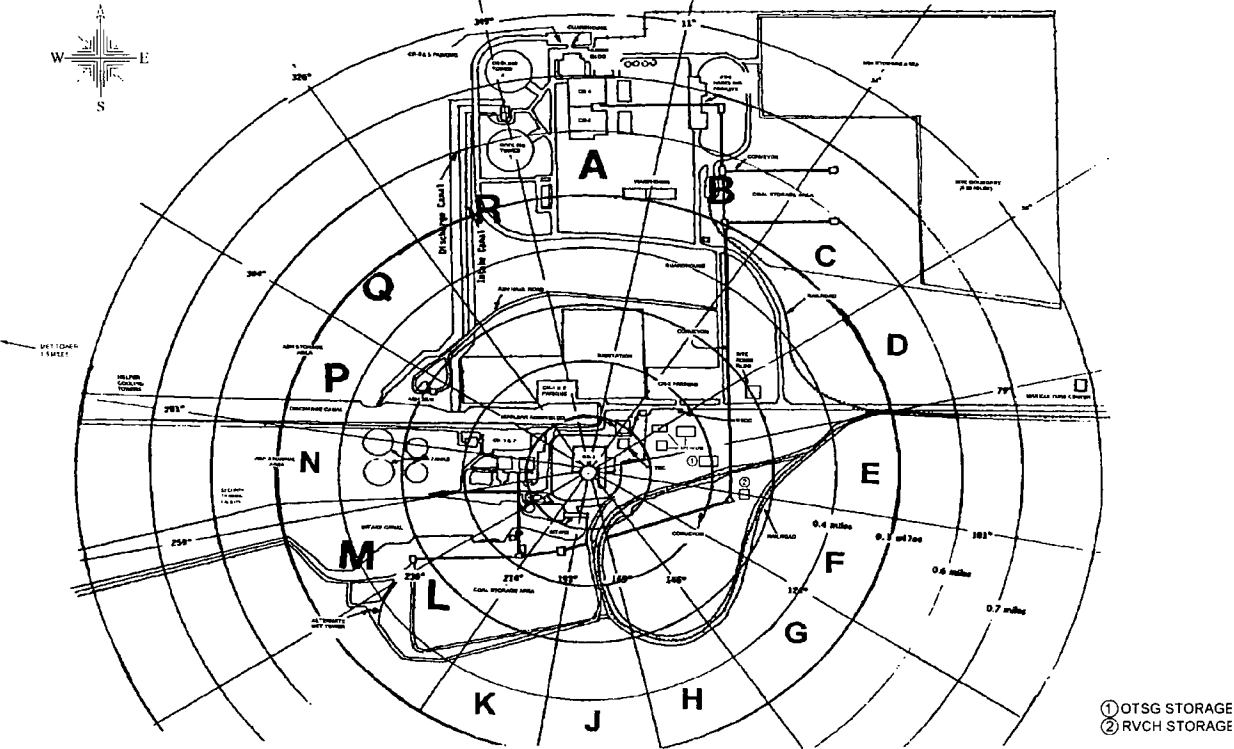
EVACUATION PLANNING GUIDE (Cont'd)

4.0 CONTACTS FOR PERSONNEL ASSEMBLY

SECTOR	AREA	CONTACT
A	Units 4 & 5	Units 4 & 5 Control Room
B / C	Nuclear Administration Building	Public Address System
B / C	North Coal Yard	Units 4 & 5 Control Room
D / E	CR3 Warehouse Area Site Administration Building	Nuclear Security
D / E	Mariculture Center	Nuclear Security
E / F / G / H	Coal Train Yard	Units 4 & 5 Control Room
J / K / L	South Coal Yard	Units 1 & 2 Control Room
N	Units 1 & 2	Units 1 & 2 Control Room
N	Security Training Building	Nuclear Security

EVACUATION PLANNING GUIDE (Cont'd)

ENCLOSURE 2
Page 7 of 7



GUIDELINES FOR PROTECTIVE ACTION RECOMMENDATIONS FOR NON-ESSENTIAL ENERGY COMPLEX PERSONNEL AND GENERAL POPULATION [NOCS 1128, 1592]

PLANT CONDITIONS / OFFSITE DOSE ESTIMATES	RECOMMENDED ACTIONS
<p>1. CONDITION: GENERAL EMERGENCY DECLARED. <u>NO APPARENT CORE DAMAGE.</u></p> <p><u>CORE DAMAGE INDICATIONS:</u> a. RCS pressure vs. temperature in Region 1 or 2 (REFER TO EOP-07); or b. RM-G29/30 reading < 100 R/hr; or c. RCS chemistry results.</p>	<p align="center">Evacuate Zone 1 (See Notes 1 and 2)</p> <p><u>Note 1:</u> Relocate/evacuate population in any zone affected by ground contamination after plume passage.</p> <p>Relocate/evacuate population in Zones 2 & 3 at any time projected dose from actual release is ≥ 1.0 REM TEDE or 5.0 REM Thyroid CDE in either zone.</p> <p><u>Note 2:</u> Sheltering should be recommended for the following conditions for those areas that cannot be evacuated before plume arrival:</p> <ul style="list-style-type: none"> • Core damage is in progress and, • Containment failure or a controlled release is imminent and, • The release duration is known to be less than 2 hours. <p>Known impediments to evacuation should also be considered in the decision to evacuate or shelter.</p> <p>CONSIDER issuance of Potassium Iodide (KI).</p>
<p>2. CONDITION: GENERAL EMERGENCY DECLARED. CLAD DAMAGE/GAS GAP RELEASE (<u>NO CORE MELT</u>).</p> <p><u>CORE DAMAGE INDICATIONS:</u> a. RCS pressure vs. temperature in Region 3 (REFER TO EOP-07); or b. Core uncovered for 15-30 minutes; or c. RM-G29/30 reading of 100-75,000 R/hr (RB spray off) OR 100-25,000 R/hr (RB spray on); or d. RCS chemistry results.</p> <p>OR: * Dose at the 0.83 mile Site Boundary is projected to be: a) TEDE: ≥ 1.0 Rem b) Thyroid CDE: ≥ 5.0 Rem</p> <p>* PARs within the first hour of an event should be based on PLANT CONDITIONS ONLY until the Dose Assessment Team is operational.</p>	<p align="center">Evacuate Zone 1 (See Note 2)</p> <p><u>Note 2:</u> Sheltering should be recommended for the following conditions for those areas that cannot be evacuated before plume arrival:</p> <ul style="list-style-type: none"> • Core damage is in progress and, • Containment failure or a controlled release is imminent and, • The release duration is known to be less than 2 hours. <p>Known impediments to evacuation should also be considered in the decision to evacuate or shelter.</p> <p align="center">Shelter Zones 2 & 3 (See Note 1)</p> <p><u>Note 1:</u> Relocate/evacuate population in any zone affected by ground contamination after plume passage.</p> <p>Relocate/evacuate population in Zones 2 & 3 at any time projected dose from actual release is ≥ 1.0 REM TEDE or 5.0 REM Thyroid CDE in either zone.</p> <p>CONSIDER issuance of Potassium Iodide (KI).</p>

(Continued on next page)

GUIDELINES FOR PROTECTIVE ACTION RECOMMENDATIONS FOR NON-ESSENTIAL ENERGY COMPLEX PERSONNEL AND GENERAL POPULATION [NOCS 1128, 1592]

PLANT CONDITIONS / OFFSITE DOSE ESTIMATES	RECOMMENDED ACTIONS
<p>3. CONDITION: GENERAL EMERGENCY DECLARED. CORE MELT OCCURRING OR LIKELY.</p> <p><u>CORE DAMAGE INDICATIONS:</u> a. RCS pressure vs. temperature in the Severe Accident Region (REFER TO EOP-07); or b. Core uncovered for > 30 minutes; or c. RM-G29/30 reading > 75,000 R/hr (RB spray off) or > 25,000 R/hr (RB spray on).</p> <p>WITH: NO projected containment failure and NO release underway.</p>	<p style="text-align: center;">Evacuate Zone 1 (See Note 2)</p> <p><u>Note 2:</u> Sheltering should be recommended for the following conditions for those areas that cannot be evacuated before plume arrival:</p> <ul style="list-style-type: none"> Core damage is in progress and, Containment failure or a controlled release is imminent and, The release duration is known to be less than 2 hours. <p>Known impediments to evacuation should also be considered in the decision to evacuate or shelter.</p> <p style="text-align: center;">Shelter Zones 2 & 3 (See Note 1)</p> <p><u>Note 1:</u> Relocate/evacuate population in any zone affected by ground contamination after plume passage.</p> <p>Relocate/evacuate population in Zones 2 & 3 at any time projected dose from actual release is ≥ 1.0 REM TEDE or 5.0 REM Thyroid CDE in either zone.</p> <p>CONSIDER issuance of Potassium Iodide (KI).</p>
<p>4. CONDITION: GENERAL EMERGENCY DECLARED. CORE MELT OCCURRING OR LIKELY.</p> <p><u>CORE DAMAGE INDICATIONS:</u> a. RCS pressure vs. temperature in the Severe Accident Region (REFER TO EOP-07); or b. Core uncovered for > 30 minutes; or c. RM-G29/30 reading > 75,000 R/hr (RB spray off) or > 25,000 R/hr (RB spray on).</p> <p>WITH: Projected containment failure and/or release underway.</p>	<p style="text-align: center;">Evacuate Zones 1 and 2 and 3 (See Notes 2 and 3)</p> <p><u>Note 2:</u> Sheltering should be recommended for the following conditions for those areas that cannot be evacuated before plume arrival:</p> <ul style="list-style-type: none"> Core damage is in progress and, Containment failure or a controlled release is imminent and, The release duration is known to be less than 2 hours. <p>Known impediments to evacuation should also be considered in the decision to evacuate or shelter.</p> <p><u>Note 3:</u> IF projected dose from an actual release is >1.0 REM TEDE or 5.0 REM Thyroid beyond 10 miles, THEN RECOMMEND evacuation to State and Local government by distance in miles, OR by subdivision and geographic boundaries.</p> <p>CONSIDER issuance of Potassium Iodide (KI).</p>

<u>ZONE DESCRIPTIONS</u>	<u>EVACUATION TIME ESTIMATES:</u> Represents the longest elapsed time required for 90% of the population within a Region to evacuate from that Region, including consideration of mobilization times, time of year, week and day; weather conditions; and of estimated shadow evacuations from other regions within the EPZ and from the Shadow Region. The times noted below, do not consider Special Event or Roadway Impact scenarios included in development of the Evacuation Time Estimates.
Zone 1: 0-5 miles 360 degrees and out to 10 miles in Gulf	Zone 1: 2 hours, 15 minutes (Refer to Table 7-1, Crystal River Nuclear Plant Development of Evacuation Time Estimates, Revision 1, dated November 2012)
Zones 2 / 3: 5-10 miles in Citrus & Levy Counties	Zones 1, 2, and 3: 2 hours, 30 minutes (Refer to Table 7-1, Crystal River Nuclear Plant Development of Evacuation Time Estimates, Revision 1, dated November 2012)

GUIDELINES FOR PROTECTIVE ACTION RECOMMENDATIONS FOR NON-ESSENTIAL ENERGY COMPLEX PERSONNEL AND GENERAL POPULATION

GUIDELINES FOR PE EMERGENCY WORKER EXPOSURE

CONDITION	DOSE LIMIT (REM TEDE)	GUIDANCE
1. Emergency conditions NOT requiring actions to prevent serious injury or protect valuable property.	5	Emergency worker exposure should NOT exceed 5 REM TEDE.
2. Emergency conditions requiring actions to prevent serious injury or protect valuable property.	10	Exposure greater than 5 REM TEDE should receive approval of the Emergency Coordinator. Appropriate controls for emergency workers include time limitations and respirators.
3. Emergency conditions requiring lifesaving actions or actions to protect large populations.	25	Exposure greater than 5 REM TEDE should receive approval of the Emergency Coordinator. Appropriate controls for emergency workers include time limitations, respirators, and thyroid blocking.
4. Emergency conditions requiring lifesaving actions or actions to protect large populations.	> 25	Exposure greater than 5 REM TEDE receive approval of the Emergency Coordinator. Exposure at this level should be to volunteers who are healthy, above the age of 45, have an understanding of the health risks involved, and, preferably, be those whose normal duties have trained them for such missions. Appropriate controls for emergency workers include time limitations, respirators, and thyroid blocking.

NOTE: Reference for this table is Table 2.2 in the Manual of Protective Action Guides and Protective Actions for Nuclear Incidents (EPA 400-R/92-001).

NOTE: The dose limits listed above are in addition to any annual occupational dose already received.

EAL DESCRIPTIONS FOR FLORIDA NUCLEAR PLANT EMERGENCY NOTIFICATION FORM

ABNORMAL RADIATION LEVELS / RADIOLOGICAL EFFLUENTS	1.1	Release of <i>gaseous</i> radioactivity exceeds the Unusual Event threshold
	1.2	Release of <i>gaseous</i> radioactivity exceeds the Alert threshold
	1.3	Site boundary dose from airborne radioactivity > 100 mREM total dose or 500 mREM thyroid dose
	1.4	Site boundary dose from airborne radioactivity > 1000 mREM total dose or 5000 mREM thyroid dose
	1.5	Release of <i>liquid</i> radioactivity exceeds the Unusual Event threshold
	1.6	Release of <i>liquid</i> radioactivity exceeds the Alert threshold
	1.7	Unexpected increase in radiation levels within the Plant NOT impeding necessary access to Plant systems
	1.8	Unexpected increase in radiation levels within the Plant impeding necessary access to Plant systems
	1.9	An uncontrolled water level decrease in spent fuel pool or fuel transfer canal with fuel remaining covered
	1.10	Damage to irradiated fuel or loss of water level resulting in uncovering irradiated fuel outside the reactor vessel
NATURAL / MAN-MADE HAZARDS AND EC JUDGMENT	2.1	Earthquake detected by seismic instrumentation and sensed by Control Room personnel
	2.2	Earthquake at a magnitude greater than the limit for continued Plant operation
	2.3	Flooding due to natural phenomena NOT affecting Plant vital equipment
	2.4	Flooding due to natural phenomena affecting Plant vital equipment
	2.5	The Plant is within a Hurricane Warning area
	2.6	Tornado within the Protected Area
	2.7	Tornado or High Winds or windborne object(s) strike within Protected Area and results in significant damage to structures or equipment
	2.8	Accidental Aircraft or vehicle crash within the Protected Area damaging vital structures or equipment
	2.9	Accidental Aircraft or vehicle strikes Plant and results in significant damage to structures or equipment
	2.10	Toxic or flammable gases within or potentially affecting the Protected Area
	2.11	Toxic or flammable gases within the Plant affecting the safe operation of the Plant or the ability to shutdown the Plant
	2.12	Explosion or catastrophic failure of pressurized equipment within the Protected Area
	2.13	Explosion or catastrophic failure of pressurized equipment resulting in damage to vital structures or equipment
	2.14	Fire within the Protected Area that could affect Plant vital equipment
	2.15	Fire affecting the operability of Plant vital equipment
	2.16	Evacuation of Control Room is required and Plant control is established
	2.17	Evacuation of Control Room is required and Plant control CANNOT be established
	2.18	Security Event which indicates a potential degradation in the level of safety of the Plant
	2.19	Security Event in the Owner Controlled Area
	2.20	Security Event in the Protected Area
	2.21	Security Event resulting in loss of physical control of the facility to intruders.
	2.22	Internal flooding affecting areas containing Plant vital equipment
	2.23	Internal flooding affecting Plant vital equipment
	2.24	Conditions exist indicating a potential degradation of the level of safety of the Plant
	2.25	Conditions exist indicating potential or actual substantial degradation of the level of safety of the Plant
	2.26	Conditions exist indicating actual or likely major failures of Plant functions needed for the protection of the public
	2.27	Actual or imminent substantial core degradation with potential loss of containment integrity

EAL DESCRIPTIONS FOR FLORIDA NUCLEAR PLANT EMERGENCY NOTIFICATION FORM (Continued)

SYSTEM MALFUNCTION	3.1	Unplanned loss of all in-Plant or all offsite communication capability
	3.2	Failure of instrumentation to complete an automatic reactor shutdown when required and manual reactor shutdown was successful
	3.3	Failure of instrumentation to complete an automatic reactor shutdown when required and manual reactor shutdown was NOT successful
	3.4	Failure to complete an automatic reactor shutdown and manual reactor shutdown was NOT successful with indications of an extreme challenge of the ability to cool the Reactor core
	3.5	Inability to shutdown the Plant to comply with Technical Specification limits
	3.6	Unplanned loss of Control Room alarms
	3.7	Unplanned loss of Control Room alarms with a significant Plant status change in progress
	3.8	Inability to monitor a significant Plant status change in progress
	3.9	Chemistry sample indicates fuel clad degradation
	3.10	Turbine failure results in casing penetration or damage to main generator seals
	3.11	Turbine failure generated projectiles cause significant damage to Plant structures or vital equipment
	3.12	Reactor Coolant System leakage
	3.13	Complete loss of core heat removal capability
	3.14	Inadvertent Plant startup
	3.15	Complete loss of core cooling functions during refueling and cold shutdown conditions
	3.16	Loss of water level in the reactor vessel resulting in uncovering fuel
LOSS OF POWER	4.1	Loss of Plant electrical power from all offsite sources
	4.2	AC power capability reduced to a single source
	4.3	Loss of all AC power
	4.4	Loss of all AC power for greater than 4 hours
	4.5	Loss of all AC power during Cold Shutdown or Refueling conditions
	4.6	Loss of all vital Plant batteries during <i>operational</i> conditions
	4.7	Loss of all vital Plant batteries during <i>shutdown</i> conditions
FISSION PRODUCT BARRIERS	5.1	Loss of Fuel Clad
	5.2	Potential Loss of Fuel Clad
	6.1	Loss of Reactor Coolant System
	6.2	Potential Loss of Reactor Coolant System
	7.1	Loss of Containment
	7.2	Potential Loss of Containment

EMERGENCY RESPONSE FACILITY ACTIVATION SCENARIOS

[NOCS 100521, 100533]

Scenario No.	Scenario Title	Applicability
1	Notification Error	Retraction of any activation message sent in error
2	Unusual Event – ERO Standby	Unusual Event declared. Notify ERO to assume a heightened state of awareness in anticipation of emergency escalation.
3	Discretionary – TSC/OSC	At the discretion of the Emergency Coordinator, activate the following facilities: <ul style="list-style-type: none"> • Technical Support Center • Operational Support Center
4	Discretionary – TSC/OSC/EOF/ENC	At the discretion of the Emergency Coordinator, activate the following facilities: <ul style="list-style-type: none"> • Technical Support Center • Operational Support Center • Emergency Operations Facility • Emergency News Center
5	<div>NOTE: Refer to Scenario 8 if activation of remote facilities is required.</div> Alert	Alert declared. Activate the following facilities: <ul style="list-style-type: none"> • Technical Support Center • Operational Support Center • Emergency Operations Facility • Emergency News Center
6	<div>NOTE: Refer to Scenario 9 if activation of remote facilities is required.</div> Site Area Emergency	Site Area Emergency declared. Activate the following facilities: <ul style="list-style-type: none"> • Technical Support Center • Operational Support Center • Emergency Operations Facility • Emergency News Center

EMERGENCY RESPONSE FACILITY ACTIVATION SCENARIOS

[NOCS 100521, 100533]

Scenario No.	Scenario Title	Applicability
7	NOTE: Refer to Scenario 10 if activation of remote facilities is required.	General Emergency declared. Activate the following facilities: <ul style="list-style-type: none"> • Technical Support Center • Operational Support Center • Emergency Operations Facility • Emergency News Center
	General Emergency	
8	Alert (Remote Facilities)	Alert declared. Activate the following facilities: <ul style="list-style-type: none"> • Remote Technical Support Center • Remote Operational Support Center • Emergency Operations Facility • Emergency News Center
9	Site Area Emergency (Remote Facilities)	Site Area Emergency declared. Activate the following facilities: <ul style="list-style-type: none"> • Remote Technical Support Center • Remote Operational Support Center • Emergency Operations Facility • Emergency News Center
10	General Emergency (Remote Facilities)	General Emergency declared. Activate the following facilities: <ul style="list-style-type: none"> • Remote Technical Support Center • Remote Operational Support Center • Emergency Operations Facility • Emergency News Center
11	Fire Brigade Support to SAB	Event requiring off-shift Fire Brigade support to report to the Site Admin Building. (Example: Large-area fire)
12	Fire Brigade Support to EOF	Event requiring off-shift Fire Brigade support to report to the Emergency Operations Facility. (Example: Large-area fire)
13	Event Termination	Plant conditions no longer require ERO to stand by or to report as determined by Emergency Coordinator or EOF Director.

COMMUNICATION WITH NRC MANAGEMENT DURING AN EVENT

Communication with the NRC Executive Team Director

During an incident that is serious enough to potentially require onsite or offsite protective actions, or that involves a significant security event, it is likely that the NRC Executive Team (ET) Director (NRC Chairman or designated Commissioner) will desire to speak periodically with the licensee's management representative.

The ET Director receives information from the NRC staff responding to the incident. However, the ET Director may wish to receive a periodic executive summary from the licensee's management representative before passing it on to other stakeholders such as other Federal agencies, Congress, or the White House. Generally, it is not necessary for the ET Director to be briefed on the detailed sequence of events, but rather on key issues for which the NRC may be able to provide assistance.

Some questions that the ET Director is likely to ask include:

- What are the licensee's current top priorities for the station?
- Are their significant uncertainties about any aspect of the event (e.g., is the situation improving or degrading)?
- Does the licensee need help from the NRC or other Federal agencies?
- Is the licensee having any communication or staffing problems?

The primary responsibilities of the licensee during an event is to mitigate the accident, secure the facility, classify the event, and make notification and protective action recommendations to State and local officials. Meeting those primary responsibilities takes precedence over discussions with ET Director regarding the event. If taking time to talk to the ET Director would interfere with those primary responsibilities, the NRC expects that the licensee's designated manager will direct a subordinate to take the call. If this is not feasible, the NRC will inform the licensee when the ET Director would subsequently like to speak with the licensee's designated representative.

Communication of Security-Related Information

The Security Bridge is placed on the same conferencing system that hosts other NRC communications bridges such as the Emergency Notification System and the Health Physics Network. During a security-related incident, the NRC Safeguards Team will continuously monitor the Security Bridge so that the licensee can readily re-establish communication for situational updates or for other important security-related communications. Following the initial discussions and evaluation, the Safeguards Team will coordinate periodic, scheduled update conversations so that licensee personnel can return to other essential duties between scheduled updates to the NRC.

The Security Bridge is recorded, but it is not a secure line and is not approved for routine discussions involving classified or Safeguards Information (SGI). The NRC Resident Inspector's secure telephone should be used for discussing and transmitting such information unless extraordinary conditions exist, such as an ongoing attack.

The type of information of interest to the Safeguards Team includes:

- Has the facility sustained significant damage (including the central and secondary alarm stations), damage to the physical security features or security force, or loss of licensed materials?
- What are the sources and status of offsite emergency assistance (e.g., local law enforcement, State, Federal (especially Federal Bureau of Investigation), National Guard)?
- Is additional Federal assistance required (e.g., personnel, material, communications)?
- What compensatory measures have been implemented (e.g., temporary barriers, relocation of responders)?

FLORIDA NUCLEAR PLANT EMERGENCY NOTIFICATION FORM

1. THIS IS CRYSTAL RIVER UNIT 3. A. ☐ This Is A Drill B. ☐ This Is An Emergency
 ENSURE: ☐ STATE ☐ CITRUS ☐ LEVY ☐ RADIATION CONTROL-ORLANDO (M-F ONLY) ARE ON LINE.
 I HAVE A(N) ☐ UNUSUAL EVENT ☐ ALERT ☐ SITE AREA EMERGENCY ☐ GENERAL EMERGENCY MESSAGE.

2. A. Date: ____/____/____ B. Contact Time: _____ C. Reported By: (Name) _____
 D. Message Number: _____ E. Reported From: ☐ Control Room ☐ TSC ☐ EOF
 F. ☐ Initial / New Classification OR ☐ Update

3. SITE: A. ☒ CR UNIT 3 B. ☐ SL UNIT 1 C. ☐ SL UNIT 2 D. ☐ TP UNIT 3 E. ☐ TP UNIT 4

4. **EMERGENCY CLASSIFICATION:** A. ☐ Notification Of Unusual Event B. ☐ Alert
 C. ☐ Site Area Emergency D. ☐ General Emergency

5. A. ☐ **EMERGENCY DECLARATION:** B. ☐ **EMERGENCY TERMINATION:** Date: ____/____/____ Time: _____

6. **REASON FOR EMERGENCY DECLARATION:** A. ☐ EAL Number(s): _____ OR B. ☐ Description: _____

7. **ADDITIONAL INFORMATION OR UPDATE:** A. ☐ None OR B. ☐ Description: _____

8. **WEATHER DATA:** A. Wind direction from _____ degrees B. Downwind Sectors affected _____

9. **RELEASE STATUS:** A. ☐ None (Go to Item 11) B. ☐ In Progress C. ☐ Has occurred, but stopped (Go to Item 11)

10. **RELEASE SIGNIFICANCE CATEGORY: (at the Site Boundary)**

- A. ☐ Under evaluation B. ☐ Release is within Normal Operating Limits
 C. ☐ Non-Significant (Fraction of PAG Range) D. ☐ Protective Action Guide range
 E. ☐ Liquid release (no actions required)

11. **UTILITY RECOMMENDED PROTECTIVE ACTIONS FOR THE PUBLIC:**

- A. ☐ No utility recommended actions at this time. B. ☐ Utility recommends the following protective actions:
 EVACUATE ZONES: _____
 SHELTER ZONES: _____
 AND consider issuance of Potassium Iodide (KI).

If form is completed in the Control Room, go to item 15. If completed in the TSC or EOF, CONTINUE with item 12.

12. **PLANT CONDITIONS:**

- A. Reactor Shutdown? ☐ YES ☐ NO B. Core Adequately Cooled? ☐ YES ☐ NO
 C. Containment Intact? ☐ YES ☐ NO D. Core Condition: ☐ Stable ☐ Degrading

13. **WEATHER DATA:** A. Wind Speed _____ MPH (m/sec x 2.24 = MPH) B. Stability Class _____

14. **ADDITIONAL RELEASE INFORMATION:** A. ☐ Not Applicable (Go to Item 15)

Distance	Projected Thyroid Dose (CDE) for _____ Hour(s)	Projected Total Dose (TEDE) for _____ Hour(s)
1 Mile (Site Boundary)	B. _____ mrem	C. _____ mrem
2 Miles	D. _____ mrem	E. _____ mrem
5 Miles	F. _____ mrem	G. _____ mrem
10 Miles	H. _____ mrem	I. _____ mrem

15. **MESSAGE RECEIVED BY:** (Name) _____ Date ____/____/____ Time _____

THIS IS CRYSTAL RIVER UNIT 3. ☐ This Is A Drill ☐ This Is An Emergency END OF MESSAGE.

☐ Form FAXED

EC / EOFD INITIALS: _____

**CONDENSED INSTRUCTIONS FOR COMPLETION OF THE
FLORIDA NUCLEAR PLANT EMERGENCY NOTIFICATION FORM
(FOR CONTROL ROOM USE ONLY)**

The purpose of these instructions is to provide succinct guidance for the completion of the Florida Nuclear Plant Emergency Notification Form in the **Control Room only**. Its use assumes that the user is familiar with the form and the more detailed instructions found elsewhere in Attachment 2 and will refer to those instructions if needed.

- Item 1 – CHECK "This is a Drill" OR "This is an Emergency" as appropriate. CHECK the applicable classification box.
- Item 2.A – ENTER today's date.
- Item 2.B – ENTER time of contact with SWO, Citrus County, and Levy County.
- Item 2.C – ENTER name of person making notification. Typically, this is the CNO or the SM.
- Item 2.D – ENTER the sequential message number.
- Item 2.E – CHECK "Control Room".
- Item 2.F – CHECK "Initial / New Classification" unless the notification is for the update of an existing classification. IF this is an update notification, THEN CHECK "Update".
- Item 3 – No action. Pre-selected for CR3.
- Item 4 – CHECK the emergency classification being declared.
- Item 5 – CHECK "Emergency Declaration" and ENTER the date and time of the declaration. IF terminating an emergency, THEN REFER to detailed guidance in Attachment 2.
- Item 6.A – ENTER the applicable EAL number(s).
- Item 6.B – Not needed when contacting SWO. May be used when notifying NRC via ENS.
- Item 7.A – IF no additional information or update is needed, THEN CHECK "None"
- Item 7.B – CHECK "Description" to provide additional information. Examples include:
- Conditions briefly warranting a higher classification but no longer exist.
 - Conditions independently warranting a lower or equal classification. An example would be a fire in the Protected Area during a Site Area Emergency or General Emergency.
- Item 8.A – ENTER 33' wind direction from the primary tower IF available. Alternate sources are the 175' primary tower and the 33' alternate tower.
- Item 8.B – ENTER a minimum of 3 downwind sectors from the table below:

DEGREES	SECTORS	DEGREES	SECTORS	DEGREES	SECTORS
349-11 (349-371)	H J K	102-123 (462-483)	N P Q	214-236	B C D
12-33 (372-393)	J K L	124-146 (484-506)	P Q R	237-258	C D E
34-56 (394-416)	K L M	147-168 (507-528)	Q R A	259-281	D E F
57-78 (417-438)	L M N	169-191 (529-540)	R A B	282-303	E F G
79-101 (439-461)	M N P	192-213	A B C	304-326	F G H
				327-348	G H J

NOTE: A release is **any** of the following:

- Exceeding the **warning** setpoint of an effluent monitor (e.g. RM-A2) as a direct result of the emergency initiating event condition.
- Radioactivity detected by environmental monitoring.
- OTSG tube rupture > 10 gpm with either: (1) prolonged steaming from the affected OTSG, **OR** (2) an unisolable steam leak outside RB from the affected OTSG.
- Radioactivity escaping unmonitored from the plant.

- Item 9.A – IF a release is **NOT** occurring, **THEN** CHECK "None" **AND** GO TO Item 11.
- Item 9.B – IF a release is occurring, **THEN** CHECK "In Progress" **AND** GO TO Item 10.
- Item 9.C – IF a release occurred but has terminated, CHECK "Has occurred, but stopped" **AND** GO TO Item 11.
- Item 10.A – IF core condition or release status cannot be determined, **THEN** CHECK "Under evaluation".
- Item 10.B – IF the release is monitored by RM-A1 or RM-A2 **AND** the low range gas channel is below its high alarm setpoint, **THEN** CHECK "Release is within Normal Operating Limits".
- Item 10.C – REFER to Attachment 2 for instructions.
- Item 10.D – REFER to Attachment 2 for instructions.
- Item 10.E – IF a liquid release exceeding limits is occurring, **THEN** CHECK "Liquid release (no actions required)".
- Item 11.A – IF no protective action recommendations are necessary, **THEN** CHECK "No utility recommended actions at this time".
- Item 11.B – IF protective action recommendations are necessary, **THEN** CHECK "Utility recommends the following protective actions:" **AND** REFER to Enclosure 3.

GO TO Item 15.

- Item 15 – ENTER name of person receiving notification and date / time **AND** CHECK "This is a Drill" **OR** "This is an Emergency" as appropriate.

**FLORIDA NUCLEAR PLANT EMERGENCY NOTIFICATION FORM
ASSOCIATED INFORMATION AND PROTOCOL**

1.0 GENERAL INFORMATION AND PROTOCOL

1. When communicating information to State and Risk Counties, **ENUNCIATE** properly, **READ** off the information by line number, **TRANSMIT** numbers digit by digit, **AVOID** sound alike action statements, **SPELL** difficult words, as appropriate, **USE** three word phrases for descriptions / narratives, and do **NOT** use technical jargon. Be prepared to answer questions from the State and Risk Counties.
2. If the emergency is terminated or reclassified before all contacts are made, or if the emergency is the result of an Emergency Action Level(s) indicating a higher classification that after a brief period is downgraded to a lower classification, **PERFORM** the following:
 - **STATE** the current emergency classification
 - **STATE** the highest classification status and when it was achieved
 - **STATE** the period of time that the higher classification existed and the mitigating conditions that caused the emergency classification to be downgraded.
3. In long-lasting events caused by natural phenomena, regular update notifications to the State and Counties can be suspended or the frequency reduced (4 hours, per shift, etc.) if both the following criteria are met:
 - State and Risk Counties agree to the suspension or reduction in frequency.
 - There is **NO** significant change in Plant status.

**FLORIDA NUCLEAR PLANT EMERGENCY NOTIFICATION FORM
ASSOCIATED INFORMATION AND PROTOCOL**

1.0 GENERAL INFORMATION AND PROTOCOL (Cont'd)

4. If during a notification, a change in classification occurs, **COMPLETE** the current notification in progress and within 15 minutes **PROVIDE** the State and Risk Counties with an update notification **OR PERFORM** the following as appropriate. **REFER TO** initial notification protocols for when a classification is briefly met:
 - If a higher classification is met:
 - **SUSPEND** notification of the lower classification.
 - **INFORM** off-site agencies to stand-by for classification upgrade.
 - **TRANSMIT** the higher classification verbally **AND FAX** the lower classification form to the agencies.
 - **COMPLETE** a new form with the upgraded classification.
 - If a lower classification is met:
 - **COMPLETE** the current communication in progress.
 - **INFORM** off-site agencies to stand-by for classification downgrade.
5. **COMPLETE** items 12, 13, and 14 when the EOF is operational. **READ** the form information as part of the emergency notification.
6. After the EOF Director or designee approves the **FLORIDA NUCLEAR PLANT EMERGENCY NOTIFICATION FORM**, any information added to or any changes to existing information requires re-approval before transmittal off-site.
7. To correct an error on the form, **DRAW** a single line through the error, **ENTER** the correct information, and initial and date.
8. **USE** the completion time of the last notification transmittal (Item 15) as the start time of the 60-minute clock for update notifications.
9. If the **FLORIDA NUCLEAR PLANT EMERGENCY NOTIFICATION FORM** is used for the initial notification from the Control Room, **RECORD** the name of the Headquarters Operations Officer and Event Notification Number on Attachment 3, Reactor Plant Event Notification Worksheet or the Control Room logbook. Do **NOT** write any NRC-type information on the **FLORIDA NUCLEAR PLANT EMERGENCY NOTIFICATION FORM**.
10. **IF** abbreviations / acronyms are used on the **FLORIDA NUCLEAR PLANT EMERGENCY NOTIFICATION FORM**, **THEN** state what the abbreviation /acronym stand for when verbally communicating to the State and Risk Counties.

**FLORIDA NUCLEAR PLANT EMERGENCY NOTIFICATION FORM
ASSOCIATED INFORMATION AND PROTOCOL**

1.0 GENERAL INFORMATION AND PROTOCOL (Cont'd)

11. In the event where situations affect the entire State of Florida (hurricane, terrorist threat, etc.) and multiple notifications are being received at SWO, and the Duty Officer **CANNOT** take the notification from CR3, PROVIDE at least the emergency classification level and time of declaration and ask for a more suitable time to callback with the remainder of the information. If PARs are being recommended or changed during a similar event, INFORM SWO within 15 minutes of the recommendation or change. Ensure the Risk Counties are provided a separate notification using SHRD or Commercial telephone.
12. When EAL number(s) are used on the form, either have the Duty Officer CONFIRM the paraphrased EAL or state the paraphrased EAL using Enclosure 4 to PROVIDE confirmation of offsite agencies understanding of the event.

**FLORIDA NUCLEAR PLANT EMERGENCY NOTIFICATION FORM
ASSOCIATED INFORMATION AND PROTOCOL**

1.2 Initial Notification [NOCS 100521]

1. NOTIFY State Watch Office. This also notifies Citrus and Levy counties and the Department of Health, Bureau of Radiation Control (DHBRC)-Orlando. ENSURE offsite agencies are on-line by checking each box as station roll call is completed. If offsite agencies do **NOT** respond to roll call, separate notifications using Commercial telephones are required to Citrus (746-2555) and Levy County (1-352-486-5212 or 1-352-486-5111 after hours). SWO will contact DHBRC. If information is **NOT** available, do **NOT** delay notification to State Watch Office. Item 2.B of the form is the official time for the 15 minute notification time limit and update notifications and is considered completed when the roll call is completed and the emergency classification has been announced. If the roll call cannot be completed due to lack of response from an offsite agency, the classification announcement should not be delayed.
2. USE one of the following communications networks listed by priority:
 - STATE Hot Ringdown (SHRD) - Station 120 or 121
 - Commercial Telephone System - 1-850-413-9911 or 1-800-320-0519 or 1-850-413-9900
 - Florida Emergency Management Network (EMnet)
 - Portable Satellite Phone (Located in TSC cabinet ONLY)
3. When making the initial notification of an emergency condition to SWO, REPORT the current emergency classification declared at the time the notification is made. If before initial notification or since the previous notification conditions were briefly met for a higher classification, EXPLAIN in Additional Information or Update section using guidance from item 7 on Attachment 1.
4. Once communications is established with the SWO Duty Officer and the station roll call is complete, READ the message in its entirety, REPEAT information **AND** ANSWER questions as requested
5. After the notification is completed, FAX the FLORIDA NUCLEAR PLANT EMERGENCY NOTIFICATION FORM by using Group 1 from the FAX machine. Group 1 consists of SWO, Citrus County EOC, Levy County EOC, Department of Health, Bureau of Radiation Control (DHBRC)-Orlando, and Progress Energy Emergency Response Facilities.

**FLORIDA NUCLEAR PLANT EMERGENCY NOTIFICATION FORM
AND ASSOCIATED INFORMATION AND PROTOCOL**

1.3 Update Notification

1. UPDATE SWO every 60 minutes after initial notification and upgrades of emergency classification.
2. The use of the FLORIDA NUCLEAR PLANT EMERGENCY NOTIFICATION FORM is required for:
 - b. Initial notification that an emergency condition exists (Item 4)
 - c. Any change in emergency classification (Item 4)
 - d. Any change in Protective Action Recommendations (Item 11)
 - e. Termination of an emergency classification (Item 5B)
3. Other updated information **NOT** meeting the above criteria does **NOT** require the use of the FLORIDA NUCLEAR PLANT EMERGENCY NOTIFICATION FORM.
4. The 60 minute update notification is still required with a statement there is **NO** change from last update, unless the SWO agrees to less frequent updates.
5. If the update notification will be delayed because of current Plant conditions and Control Room activities, INFORM the SWO Duty Officer.

FLORIDA NUCLEAR PLANT EMERGENCY NOTIFICATION FORM
ASSOCIATED INFORMATION AND PROTOCOL

2.0 GUIDANCE FOR COMPLETING THE FLORIDA NUCLEAR PLANT EMERGENCY
NOTIFICATION FORM

1. CHECK Item "A" for a drill **OR** Item "B" for an emergency and the applicable classification box.

NOTE: Items 2.A, 2.A, and 2.C are completed at the time contact is made with the SWO and the Risk Counties.
--

2.
 - A. ENTER the date (MM/DD/YY) contact is made with the State Watch Office and the Risk Counties.
 - B. ENTER the time (24-hour clock) contact is made with the State Watch Office and the Risk Counties. This time must be within 15 minutes of Item 5 for initial and upgrade notifications and within 60 minutes of Item 15 from the previous notification message form for update notifications.
 - C. ENTER the name of the person making the notification.
 - D. ENTER message number (beginning with #1 and following through sequentially in the TSC and EOF).
 - E. CHECK the facility location box from which the notification is made. If the notification is made from the Remote TSC, CHECK the TSC box.
 - F. CHECK whether notification is a new classification or an hourly update when classification or PARs have **NOT** changed.
3. ENSURE the CR3 box is checked and report to the State Watch Office or the Risk County during notification.
4. CHECK the appropriate emergency classification box corresponding to the current Plant conditions. REFER TO Item 7 guidance for when conditions briefly exist for a higher classification.
5. CHECK Item "A" and ENTER the declaration date (MM/DD/YY) and the time (24 hour clock) of the current emergency classification. CHECK Item "B" if the emergency is terminated or when the transition from the "Emergency Phase" to the "Recovery Phase" has taken place and ENTER the date (MM/DD/YY) and the time (24-hour clock) of emergency termination. Termination notification messages do **NOT** require Items 6 through 14 to be completed; however, ENTER the bases for the termination in Item 7. If classifying and terminating an emergency in the same notification message CHECK both Item "A" and Item "B," ENTER the declaration date (MM/DD/YY) and time (24-hour clock) in Item 5 **AND** COMPLETE Item 6 to PROVIDE EAL information. Items 7 through 14 can be skipped.

FLORIDA NUCLEAR PLANT EMERGENCY NOTIFICATION FORM
ASSOCIATED INFORMATION AND PROTOCOL

2.0 GUIDANCE FOR COMPLETING THE FLORIDA NUCLEAR PLANT EMERGENCY
NOTIFICATION FORM (Cont'd)

CAUTION

When completed during a Security threat, the description should **NOT** contain Safeguards Information.

6. CHECK Item "A" **AND** ENTER the EAL Number corresponding to the EAL table **or** EAL Numbers if using the FPB Matrix **OR** CHECK Item "B" and ENTER a short description of the current event in layman's terms to indicate the accident condition Emergency Action Level (paraphrased) using Enclosure 4 or the status of the Fission Product Barriers used to declare the event (e.g., Loss of Reactor Coolant System Barrier, Potential Loss of Fuel Clad Barrier, etc.) from the FPB Matrix. Each EAL has one number (e.g., 2.13) therefore do **NOT** use any EAL sub-numbers on the form. When the classification is upgraded, include all applicable FPB EAL numbers, **NOT** just the EAL number causing the upgrade. Do **NOT** use the enclosure title (e.g., FPB Matrix, System Malfunction, etc.) as a description of the emergency. This information should remain the same throughout update messages unless there is a classification change. Avoid using Plant-specific acronyms or abbreviations.

CAUTION

When completed during a Security threat, the description should **NOT** contain Safeguards Information.

7. CHECK Item "A" for **NO** additional information or UPDATE **OR** CHECK Item "B" and ENTER 1) additional significant events, including if conditions briefly existed for a higher emergency classification but **NO** longer exist, or 2) conditions that would have independently warranted declaration of an equal or lower classification (e.g., a fire within the Protected Area during a SITE AREA **OR** GENERAL EMERGENCY). CONSIDER including emergency response actions underway, any requests for offsite assistance, the bases for termination of the emergency, and facility activation status. AVOID using Plant-specific acronyms or abbreviations. [NOCS 96024].

FLORIDA NUCLEAR PLANT EMERGENCY NOTIFICATION FORM
ASSOCIATED INFORMATION AND PROTOCOL

2.0 GUIDANCE FOR COMPLETING THE FLORIDA NUCLEAR PLANT EMERGENCY
NOTIFICATION FORM (Cont'd)

NOTE: The preferred source of meteorological data is the 33' Primary Tower (MMP-5). Alternate sources are the 175' Primary Tower and the 33' Alternate Tower (MMP-1).

If the wind direction or wind speed recorders are **NOT** in service, the appropriate meter may be observed for a brief period (approximately 30 seconds) to obtain an estimate.

8. ENTER the wind direction in degrees in Item "A." ENTER a minimum of 3 downwind sectors from the Sectors Affected table below in Item "B." The downwind sectors confirm wind direction because of potential confusion with degrees "from" versus degrees "to."

Sectors Affected

DEGREES	SECTORS	DEGREES	SECTORS	DEGREES	SECTORS
349-11 (349-371)	H J K	102-123 (462-483)	N P Q	214-236	B C D
12-33 (372-393)	J K L	124-146 (484-506)	P Q R	237-258	C D E
34-56 (394-416)	K L M	147-168 (507-528)	Q R A	259-281	D E F
57-78 (417-438)	L M N	169-191 (529-540)	R A B	282-303	E F G
79-101 (439-461)	M N P	192-213	A B C	304-326	F G H
				327-348	G H J

9. CHECK Item "A" if there are **NO** indications of a release and go to Item 11. CHECK Item "B" if a release is occurring, even though it may be less than normal operating limits. CHECK Item "C" if a release has occurred but stopped and go to Item 11. (REFER TO release definition).
10. CHECK applicable Release Significance Category box based on the table on page 12 of this attachment, **OR** CHECK Item "E" if it is a liquid effluent release exceeding limits. If the PAG category is selected, INFORM the Emergency Coordinator that EM-202, Enclosure 1, Emergency Classification Table should be consulted for applicable EALs. Item "A" should be selected only if core condition or release status **CANNOT** be determined.

**FLORIDA NUCLEAR PLANT EMERGENCY NOTIFICATION FORM
ASSOCIATED INFORMATION AND PROTOCOL**

2.0 GUIDANCE FOR COMPLETING THE FLORIDA NUCLEAR PLANT EMERGENCY NOTIFICATION FORM (Cont'd)

11. CHECK Item "A" if **NO** Protective Actions Recommendations (PARs) are necessary. **IF** Item "A" is checked, do **NOT** check Item "B" as this is a protective action recommendation. CHECK Item "B" if PARs are necessary **AND ENTER** the Zone designation(s) for evacuation and shelter. If Item A is checked, Item B does **NOT** need completing.

NOTES: 1. If the form is completed in the Main Control Room, completion of Items 12-14 is not required. If the form is completed in the TSC, completion of Items 12-15 is required.

2. The Accident Assessment Coordinator **PROVIDES** information for Item 12 for all classification levels **OR** this information (A, B, and C) may be obtained from the Critical Safety Function Status Board.

12. CHECK the appropriate status boxes for Item "A" Reactor Shutdown, Item "B" Core Adequately Cooled, Item "C" Containment Intact, and "D" Core Condition based on current Plant conditions.

NOTE: The Radiation Controls Coordinator **PROVIDES** information for Item 13 for all classification levels. This item information may be obtained from a current dose assessment printout or the status board.

13. ENTER the wind speed in mph ($mph = m/sec \times 2.24$) in Item "A." ENTER the Stability Class in Item "B" based on the Sigma Theta, Wind Range, or Delta T from table below.

Stability Class Determination

Sigma Theta (Degrees)	Wind Range (Degrees)	Delta T (Degrees)	Stability Class
≥ 22.5	≥ 135	≤ -1.46	A (Most Dispersed Plume)
< 22.5 to 17.5	134 to 105	-1.45 to -1.31	B
< 17.5 to 12.5	104 to 75	-1.30 to -1.16	C
< 12.5 to 7.5	74 to 45	-1.15 to -0.39	D
< 7.5 to 3.8	44 to 23	-0.38 to 1.15	E
< 3.8 to 2.1	22 to 13	1.16 to 3.07	F
< 2.1	≤ 12	≥ 3.08	G (most concentrated plume)

FLORIDA NUCLEAR PLANT EMERGENCY NOTIFICATION FORM
ASSOCIATED INFORMATION AND PROTOCOL

2.0 GUIDANCE FOR COMPLETING THE FLORIDA NUCLEAR PLANT EMERGENCY
NOTIFICATION FORM (Cont'd)

NOTE: The Radiation Controls Coordinator only completes Item 14 if a release is occurring or occurred, but stopped. Otherwise, this item may be "N/A." This item information may be obtained from a current dose assessment printout or the status board.

14. CHECK Item "A" (**NOT** Applicable) if no release **AND GO TO** Item 15. If a RASCAL dose projection is available, ENTER the calculation duration in the blanks in the headings of the CDE and TEDE columns (normally 6 hrs.). ENTER the projected thyroid (CDE) and Total Dose (TEDE) for each distance location in Items "B through I".

NOTE: Item 15 is completed after the message has been read to the offsite agencies.

15. ENTER the name of the SWO Duty Officer or individual receiving the notification. ENTER the date (MM/DD/YY) and time (24 hour clock) provided by the SWO Duty Officer or individual receiving the notification.
- CHECK the Form FAXED box when the action (FAX, email, copies distributed to positions, etc.) is completed.
 - ENSURE the Emergency Coordinator initials the Form before it is communicated to the SWO.

FLORIDA NUCLEAR PLANT EMERGENCY NOTIFICATION FORM ASSOCIATED INFORMATION AND PROTOCOL

3.0 RELEASE SIGNIFICANCE CATEGORIES

RELEASE STATUS	RELEASE SIGNIFICANCE CATEGORY	FLORIDA NUCLEAR PLANT EMERGENCY NOTIFICATION FORM REFERENCE
NO release	NR	9.A
Release in progress	<NOL NS	10.B 10.C

The Release Significance Category in CR3's permanently defueled condition is limited to No Release (NR), Less Than Normal Operating Limits (<NOL) and Non-Significant (NS). RASCAL projections show fuel damaged underwater is insufficient to cause a release that would approach Protective Action Guideline (PAG) levels. Additionally, calculation F13-0002 concludes that the surface temperature of the cladding in the spent fuel pools will not exceed the failure temperature for zirconium following a total loss of water from the pools. Calculation N13-0002 conclusion notes doses for hypothetical cladding failure releases from the spent fuel pools that are well under PAG levels and gamma shine dose rates at the Exclusion Area Boundary from drained pools that are at or below detectable limits for typical Health Physics instrumentation.

NR: NO RELEASE

This category indicates **NO** release is occurring. This category is appropriate regardless of fuel status, if there are **NO** indications of a release (e.g., unexplained abnormal radiation levels in Auxiliary Building, on the berm, or in the field). If a release occurred but has now stopped, MAINTAIN the appropriate category below until field doses have dissipated.

<NOL: RELEASE WITHIN NORMAL OPERATING LIMITS (ITS/ODCM)

This category indicates releases that are monitored by RM-A1 or RM-A2. These releases are within normal operating limits if the normal-range is below its high alarm set-point. Do **NOT** make this selection for releases **NOT** monitored by RM-A1 or RM-A2 unless they have been evaluated per the ODCM.

NS: NON-SIGNIFICANT (FRACTION OF PROTECTIVE ACTION GUIDELINE VALUES)

This category indicates releases exceeding the RM-A1 or RM-A2 high alarm set-point or releases that are unmonitored.

PAG: AT OR NEAR PROTECTIVE ACTION GUIDELINE VALUES

This category is no longer applicable at CR-3.

REACTOR PLANT EVENT NOTIFICATION WORKSHEET

[illegible]

ADDITIONAL INFORMATION

NOTIFICATION TIME

[illegible]

REACTOR PLANT EVENT NOTIFICATION WORKSHEET (Cont'd)**NRC Operations Center Notification Protocols**

NOTE: The **initial** NRC notification may be performed using the information from Items 4 through 7 and Item 11 of the FLORIDA NUCLEAR PLANT EMERGENCY NOTIFICATION FORM, in order to expedite notification from the Control Room. Use the form for subsequent notifications, unless continuous communication is established. Do **NOT** use EAL number(s) from Item 6 and instead use the paraphrased EAL from Enclosure 4 or provide a status of the Fission Product Barriers.

NOTIFY the NRC as soon as practicable after the State of Florida, but **NO** later than sixty minutes from declaration of an emergency condition.

NOTE: The NRC automatically records communications on the NRC Event Notification System (ENS).

USE the ENS telephone as primary means of communication and Commercial telephones as secondary means of communication. The ENS number is located on a sticker affixed to the telephone. The Commercial numbers are located on the REACTOR PLANT EVENT NOTIFICATION WORKSHEET.

ENSURE the appropriate sections of the REACTOR PLANT EVENT NOTIFICATION WORKSHEET are completed and SM / EC approval has been granted before making the notification.

The communicator making the notification ensures the person receiving the report has an adequate understanding of the event and the related safety significance to ensure appropriate NRC response.

Include insight if known to the following: (information source)

- Is there any change to the classification of the event? If so, what is the reason? (Accident Assessment Coordinator)
- What is the ongoing / imminent damage to the facility, including affected equipment and safety features? (Accident Assessment Coordinator or Repairs Coordinator)
- Have toxic or radiological releases occurred or been projected, including changes in the release rate? If so, what are the projected on-site and off-site releases, and what is the basis of assessment? (Radiation Controls Coordinator)
- What are the health effect / consequences to on-site / off-site people? How many on-site / off-site people are / will be affected and to what extent? (Radiation Controls Coordinator)
- Is the event under control? When was control established or what is the planned action to bring the event under control? What is the mitigative action underway or planned? (Accident Assessment Coordinator)
- What on-site protective measures have been taken or planned? (Florida Nuclear Plant Emergency Notification Form)
- What off-site protective actions have been recommended to State / County officials? (Florida Nuclear Plant Emergency Notification Form)
- What is the status of State / County / other Federal agencies responses, if known? (EOF Staff)
- If applicable, what is the status of public information activities, such as siren, broadcast, or press releases? Has the Emergency News Center been activated? (ENC Staff)

RESPOND to any request for additional information that you can answer; otherwise, state that the information is **NOT** yet available and will be provided in a follow-up message. Any questions asked by the NRC and the associated responses given should be documented in writing and attached to the REACTOR PLANT EVENT NOTIFICATION WORKSHEET.

NOTE: For Alert or higher classifications, the Headquarters Operations Officer will be attempting to patch the Region II Administrator and other Region II personnel into the call concurrent with recording your message. You may be interrupted by patches and / or requested to repeat information, and you should comply with these requests. If the Regional Administrator or deputy has **NOT** been patched in by the time you have completed your message, the Headquarters Operations Officer will probably request additional information.

Upon declaration of an Alert or higher, the NRC Operations Center will most likely request the communicator stay on the line. If the notification originates from the Control Room, tell the NRC you are signing-off ENS. If requested to maintain an open communications line, notify the SM / EC to provide an alternative communicator or take other action.

REPORT any lower classification(s) declared before the initial notification to ensure the NRC is aware of previous Plant conditions and implementation of the E-Plan.

Upon arrival of the NRC Site Response Team and with the concurrence of or at the request of the Headquarters Operations Officer, face-to-face communication begins between the PE NRC Liaison and the lead NRC representative at the TSC. This information includes emergency classification changes, Protective Action Recommendations changes, and the non-emergency reporting requirements including invoking 10CFR50.54 (x) (y).

REACTOR PLANT EVENT NOTIFICATION WORKSHEET (Cont'd)**Guidance for Completing the Reactor Plant Event Notification Worksheet**

If an open communications channel is established, routine use of the form is **NOT** required, provided that verified changes in Plant / equipment status are communicated to the NRC verbally and a summary of the communications with the NRC is maintained in the log.

NOTE: The following items are completed at the time of the notification.

- Print the first and last name of the Headquarters Operations Officer (HOO) in the NRC Operations Center Communicator space provided.
- Print the Event Notification number (EN #) provided by the HOO in the space provided.
- Enter the notification time (24 hour clock) provided by the HOO when communication is established.
- Provide the Call Back numbers as applicable.

NOTE: The following items are completed before the notification.

- Enter the first and last name of the person making the notification in the "Name of Caller" space.
- Enter the "Event Time and Zone (24 hour clock and Eastern Time)," "Event Date (MM/DD/YY)," "Power / Mode Before," and "Power / Mode After."
- Enter the "Mode of Operation Until Corrected (numeric)" and "Estimated Restart Date (MM/DD/YY)" at the bottom of page 1.

Event Classifications Section

- Check the applicable block for the current emergency classification.

1-Hour, 4-Hour, and 8-Hour Non-Emergency Sections

- Check all blocks that apply and are separate reportability items from the reason CR3 has declared an emergency condition. The determination of these items is the responsibility of the TSC Accident Assessment Team Operations Support Representative when the TSC is operational.

Event Description Section (additional space is provided on page 2 of form)

- Provide a clear and concise description of the event. Avoid using Plant-specific acronyms or abbreviations.
- Discuss each reportable event, as necessary.
- Report the failure of significant components.
- Include those Plant specific systems or components, which were available to perform the same function as any system or component that failed during the event.
- Include information which will promote understanding of the report, such as any extenuating circumstances (good or bad) or any related generic concerns within the industry.
- If the "Other" block was checked in the Event Classifications Section, provide amplifying information to explain this choice.

Notifications Section

- Check the appropriate box based on the notifications made before the notification to the NRC Operations Center. All are normally checked "Yes", except "Media / Press Release" for the initial notification.
- "Other Govt Agencies" is Department of Health – Bureau of Radiation Control during a declared emergency.

Questions Posed by the Headquarters Operations Officer Section

- Be prepared to answer these questions based on the event and provide explanations in the "Description" section as applicable.
- Check appropriate box for "Additional Information on Back."

Radiological Releases Subsection

- Check or fill-in applicable items based on information from the Radiation Controls Coordinator, logs, SWO notification forms, and status boards and provide specific details / explanations in "Description" section.

RCS or SG Tube Leak Subsection

- Check or fill-in applicable items based on information from the Accident Assessment Coordinator, logs, SWO notification forms, and status boards and provide specific details / explanations in "Description" section.
- After the Emergency Coordinator or designee approves the REACTOR PLANT EVENT NOTIFICATION WORKSHEET, any information added to or any changes to existing information requires re-approval before transmittal off-site unless continuous communication is established where the form is **NOT** required.
- To correct an error on the form, draw a single line through the error, enter the correct information, and initial and date.
- Obtain SM / EC approval of the NRC form before transmittal of the information unless continuous communication is established when the form is **NOT** required.

EMERGENCY NOTIFICATION FOR UNITS 1/2 & 4/5

USE Enclosure 2, Evacuation Planning Guide to determine Protective Action Recommendations for Energy Complex personnel. (NONE for Unusual Event or Alert)

Unit 1/2 (extension 2120 or 563-4454) Contact _____ Time _____

Unit 4/5 (extension 8-245-5283 or 352-501-5283) Contact _____ Time _____

GIVE THE FOLLOWING INFORMATION TO THE FOSSIL UNITS:

1. Your name and position: _____
2. State that CR3 is in a(n) ☐ Emergency ☐ Drill
3. State CR3 has declared a(n) ☐ Unusual Event ☐ Alert ☐ Site Area Emergency ☐ General Emergency
4. Briefly explain Plant conditions using basic facts: _____

5. STATE if conditions are:
☐ "IMPROVING" (Plant conditions are improving in the direction of a lower emergency classification or termination of the event)
☐ "STABLE" (Plant conditions are **NOT** degrading and the emergency is under control)
☐ "DEGRADING" (Plant conditions continue to degrade and it is evident that the situation will worsen or a higher classification is imminent)
6. STATE one of the following based on Plant conditions:
☐ "NO RADIOACTIVE MATERIAL HAS BEEN RELEASED."
☐ "RADIOACTIVE MATERIAL IS BEING RELEASED AT LOW LEVELS" (when NO fuel is damaged)
☐ "RADIOACTIVE MATERIAL IS BEING RELEASED."
7. STATE one of the following based on declared emergency:
☐ (Unusual Event or Alert) "NO ASSEMBLY OR EVACUATION IS NECESSARY AT THIS TIME."
(Unless Security has determined actions are required in a security event.)
☐ (Site Area Emergency; see Enclosure 2) "BEGIN STANDARD ASSEMBLY AND ACCOUNTABILITY. REFER TO THE CRYSTAL RIVER COAL PLANT SITE ACCOUNTABILITY/EVACUATION MANUAL. ONCE ACCOUNTABILITY IS COMPLETE, NOTIFY CR3 SECURITY AT EXTENSION 3258 OR 795-5078, AND STANDBY FOR FURTHER INSTRUCTIONS."
☐ (General Emergency, **NO** release and release **NOT** likely within 3 hrs; see Enclosure 2) "BEGIN STANDARD ASSEMBLY AND ACCOUNTABILITY. REFER TO THE CRYSTAL RIVER COAL PLANT SITE ACCOUNTABILITY/EVACUATION MANUAL. ONCE ACCOUNTABILITY IS COMPLETE, NOTIFY CR3 SECURITY AT EXTENSION 3258 OR 795-5078, AND EVACUATE NON-ESSENTIAL PERSONNEL. STANDBY FOR FURTHER INSTRUCTION."
☐ (General Emergency, release has occurred or is imminent AND the release duration projected to be less than 2 hours; see Enclosure 2) "ALL PERSONNEL TAKE SHELTER IN CLOSEST BUILDING. STANDBY FOR FURTHER INSTRUCTIONS."
☐ (General Emergency, release has occurred or is likely to occur within 3 hours AND the release duration is unknown; see Enclosure 2) "SECURE THE PLANT AND EVACUATE.", "DO **NOT** PERFORM ASSEMBLY."
8. If time permits and you feel qualified, ask for questions.
9. STATE: "WE WILL KEEP YOU INFORMED."

INITIATION OF THE EMERGENCY RESPONSE DATA SYSTEM (ERDS)

1. The ERDS activation application may be launched by one of the following methods:

- OPEN the DAE window on the Desktop.
 - SELECT the Shortcuts tab.
 - TYPE "ERDS" into the search box and CLICK "Search."
 - CLICK "ERDS Shortcuts Nuclear CR3 (RUN)."
 - CLICK "Run Application."

N/A ☐ ☐

OR

- CLICK the Start Button.
 - CLICK "All Programs."
 - SELECT "PI System."
 - SELECT "PI ProcessBook."
 - SELECT "File", "Open."
 - Navigate to: P:\Corp\NGG PI Displays\Qualified\CR3_QPIM.PIW
 - DOUBLE-CLICK to start.
 - CLICK the "OPS" tab.
 - DOUBLE-CLICK "ERDS Activation."

N/A ☐ ☐

- NOTES:**
1. The ERDS window will display a series of messages such as "Waiting for Connect" and "Waiting for Accept". Once a connection with the NRC has been established, the message will indicate "Transmitting". If connection is broken ERDS will attempt to reconnect automatically and the same series of messages will be displayed. ☐
 2. A "wait" period of approximately one (1) minute is required before an ERDS reconnect attempt will be successful. ☐
 3. After ERDS is transmitting data, buttons at the bottom of the activation screen may be used to close the window or transition to the ERDS Data sheet to view the data..... ☐

2. SELECT the "Click to Activate" button on the ERDS Status Control Screen. ☐
3. SELECT "Yes" to activate ERDS..... ☐

INITIATION OF THE EMERGENCY RESPONSE DATA SYSTEM (ERDS) (Cont'd)

NOTE: NCS should be contacted if either the Mode or ERDS Status lights remain yellow for a period exceeding five (5) minutes.

4. VERIFY the following:
 - a. The light beside the Mode selection transitions from red to green. ☐
 - b. The ERDS status transitions to "Transmitting Data" with the initiation time and date stamp with a green indicating light. ☐
 - c. The "Messages Sent" parameter begins to increment within a minute of the transition to the "Transmitting Data" status (indicating data sets are being sent to the NRC.) ☐
5. IF either Mode or ERDS Status lights remain yellow for a period exceeding 5 minutes, **THEN PERFORM** the following N/A ☐ ☐
 - a. SELECT the "Click to Deactivate" button ☐
 - b. DECLARE ERDS to be inoperable ☐
 - c. NOTIFY NIT ☐
6. INFORM SM/CRS that the ERDS transmission has been activated..... ☐

NOTE: Closing the ProcessBook display does **NOT** terminate the connection with the NRC. Termination will only occur if the NRC disconnects or if the "Click to Deactivate" button on the display is selected.

7. **WHEN** informed by the NRC that data transmission is no longer required, **THEN** TERMINATE the connection as follows:
 - a. **IF** the NRC Operations Center has terminated the connection, **THEN VERIFY** that "Disconnected" is displayed in the status window N/A ☐ ☐
 - b. **IF** CR3 will terminate the connection, **THEN PERFORM** the following: N/A ☐ ☐
 - 1) SELECT the "Click to Deactivate" button. ☐
 - 2) SELECT "Yes" to reaffirm ERDS deactivation. ☐
 - 3) VERIFY that "Disconnected" is displayed in the status window. ☐
8. INFORM SM/CRS that the ERDS transmission has been terminated..... ☐

SUMMARY OF CHANGES
Rev. 102 (PRR 664303)

NOTE

Writers and Reviewers: Changes to this procedure may impact EIPs listed below.

EM-202	EAL Bases Manual
Section 3.0	Section 3.1
Enclosure 1	Attachment 1

Ensure DRRs are initiated as needed.

EM-202 Section	CHANGE	REASON, REFERENCES
Page 7, Step 24	Revise Definition of OWNER CONTROLLED AREA to read: "The area of land (approximately 4738 acres) that is owned, leased, or otherwise controlled by DEF, situated between the mouths of the Withlacoochee and Crystal Rivers and bounded to the north by woodlands, to the east by Highway 19, to the south by medium to dense woodlands and to the west by marshlands and the Gulf of Mexico. The OWNER CONTROLLED AREA is indicated in Figure 2-3 of the FSAR and encompasses both the PROTECTED AREA and the SITE BOUNDARY."	This corrects the definition of OWNER CONTROLLED AREA to agree with the FSAR
Page 9, Step 35	Delete "Also referred to as the Owner Controlled Area" from definition of SITE BOUNDARY.	Correct incorrect definition; The OWNER CONTROLLED AREA and the SITE BOUNDARY are not the same.
Page 14, New Step 3. With renumbering of following steps.	Add new Limit and Precaution: "All emergency declarations shall be made within 15 minutes following information becoming available to Control Room personnel that conditions have reached an EAL threshold based upon VALID indications, reports or conditions. The expectation is that emergency classifications are to be made as soon as conditions are present for the classification, but within 15 minutes in all cases. The 15 minute time period allows adequate time to assess, classify and declare events."	This step provides further clarification concerning the already existing 15 minute requirement to 'assess, classify and declare' EAL conditions. This addition institutes no new requirements.



R
Reference
Use

CRYSTAL RIVER UNIT 3

PLANT OPERATING MANUAL

EMERGENCY PLAN IMPLEMENTING PROCEDURE

EM-206

EMERGENCY RESPONSE ORGANIZATION NOTIFICATION

REVISION 110

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1.0 PURPOSE

1. To provide instructions for various methods of notification to Emergency Response Organization (ERO) personnel designated to report to the Technical Support Center / Operational Support Center (TSC/OSC), the Emergency Operations Facility (EOF), the Emergency News Center (ENC) and as needed, the Remote Technical Support Center (RTSC), during declared Plant emergencies. Methods for notifying Emergency Response Teams are also part of this procedure.
2. To identify locations of the following materials:
 - Emergency Response Personnel Roster
 - Off-Site Support Directory (Local, State, Federal and Private Sector)
 - Emergency Facility Telephone Directory
 - Violent Weather Committee/Volunteer phone directory
3. To provide instructions to obtain Emergency Response Team Rosters from the PassPort Personnel Qualification Data system (PQD).
4. This procedure is an Emergency Plan Implementing Procedure. Any revisions must be carefully considered for Emergency Plan impact.

2.0 REFERENCES

2.1 Developmental References

1. 10 CFR 50.47, Emergency Plans
2. 10 CFR 50, Appendix E, Emergency Planning and Preparedness for Production and Utilization Facilities
3. NUREG-0654, Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants
4. CR3 Radiological Emergency Response Plan
5. Emergency Planning Staff Guide (EPSG)-025, Maintaining ERO Personnel in Everbridge (ERONS-1)
6. EPSG-026, Maintaining ERO Personnel in CodeRED (ERONS-2)
7. AI-4000, Conduct of Emergency Preparedness and Schedule for Radiological Emergency Response Plan Maintenance
8. **[R1]** NOCS001954
9. **[R2]** NOCS009819
10. **[R3]** NOCS100521
11. **[R4]** NOCS100533

3.0 DEFINITIONS

1. **Activate:** To provide notification to ERO personnel of the need to respond to the TSC/OSC, EOF, ENC, or RTSC for staffing and operation.
2. **Aware:** Notification software application used by EverBridge.
3. **ERONS-1:** Primary Emergency Response Notification System in use at CR3. The system vendor is EverBridge; a company that hosts the software and website that comprise this system.
4. **ERONS-2:** Back-up Emergency Response Notification System in use at CR3. The brand name of the product, "CodeRED", which is made available through the company, Emergency Communications Network (ECN), hosts the software through the CodeRED website.
5. **Group:** Set of defined personnel to be notified.
6. **Interactive Voice Response (IVR):** An option that can be used in the notification of ERO personnel using EverBridge (ERONS-1). The system provides a series of prompts for an individual to respond to via telephone. Once the responses are validated by EverBridge and the correct emergency notification scenario is provided, the notification will be transmitted as directed.
7. **Live EverBridge Operator:** An option that can be used in the notification of ERO personnel using EverBridge (ERONS-1). Using a telephone, CR3 requests an EverBridge Operator activate the ERO. The EverBridge Operator will request member identification and scenario information from the CR3 caller to initiate the notification process.
8. **Operational:** The minimum functions and communication links are established, required equipment is in proper working order, and the TSC Emergency Coordinator or EOF Director has assumed responsibility and authority for the emergency condition.
9. **Password Card:** Document which contains the site specific member IDs and passwords required to activate the ERO using the EverBridge notification system.
10. **Scenario:** Collection of message combinations used to notify the ERO. A group of messages sent to the ERO to activate in an emergency.

4.0 RESPONSIBILITIES

4.1 Emergency Coordinator

1. The Emergency Coordinator (EC) is responsible for determining:
 - When the ERO is to be notified
 - Which facilities are to be activated, unless the decision is made by the EOF Director
 - The preferred method of notification:
 - LAN/Computer
 - Interactive Voice Response (IVR)
 - Live EverBridge Operator
 - The emergency notification scenario title and number to be provided as part of the notification
2. The EC is responsible for notifying CR3 Security to activate emergency facilities (TSC/OSC, EOF, Remote TSC/OSC, etc.) during the declared emergency condition at CR3. **[R3]**

4.2 Emergency Preparedness Staff

1. The Emergency Preparedness Staff is responsible for the interface with the ERONS vendors and providing maintenance and oversight of the ERONS systems.
2. The Emergency Preparedness Staff provides data entry, verification, and generation of emergency team rosters and directories. **[R1]**
3. The Emergency Preparedness Staff is responsible for developing and maintaining the scenarios and content of pre-scripted messages.
4. The Emergency Preparedness Staff ensures the Emergency Response Personnel Roster and the Off-Site Support Directory are reviewed, updated and distributed quarterly in accordance with Subsection 9.3, Emergency Response Team Rosters, of this procedure. **[R1]**

4.3 Security Personnel

1. Security personnel are responsible for activating ERONS as directed by the EC in accordance with this procedure, unless the event is related to a security condition.
2. **IF** Security is unable to activate ERONS due to the nature of the event (i.e., security events, large area fire, etc.), **THEN** Operations will perform the necessary ERO notifications. **[R3]**

5.0 PREREQUISITES

1. An emergency requiring activation of the ERO.
2. A drill, exercise or functional test is being conducted which involves notification of the ERO.

6.0 PRECAUTIONS, LIMITATIONS, AND NOTES

NOTES:

1. ERONS-1 is used to describe the ERO notification system provided by EverBridge.
2. ERONS-2 is used to describe the ERO notification system provided by the Emergency Communications Network product CodeRED.
3. Consequently, the terms ERONS-1 and EverBridge are interchangeable, as are the terms ERONS-2 and CodeRED.

1. ERONS-1 (EverBridge), is the primary method of ERO notification and should be used if available. It uses pre-programmed messages to contact pre-established ERO personnel groups. These messages cannot be modified without the permission of the Emergency Preparedness Staff.
2. ERONS-2 is the back-up to ERONS-1.
3. A LAN or wireless internet connection is required only if notification is made via the EverBridge website. It is not needed if IVR or a Live EverBridge Operator is used.
4. IF notification occurs using a Live EverBridge Operator, **THEN** the Operator will ask a series of questions concerning the notification. These questions may vary from the script provided in Attachment 4, ERONS-1 - Using the Live EverBridge Operator to Activate the ERO. However, the intent and the critical responses will remain consistent.
5. Passwords will not be provided in this procedure to ensure the information cannot be accessed inappropriately. Instead, passwords are provided to responsible personnel.
6. The EC should indicate the preferred method of notification. The ERONS-1 options are:
 - LAN Computer Activation
 - EverBridge IVR Telephone Activation
 - Live EverBridge Operator Telephone Activation
7. Acronyms and abbreviations will be spoken as words by the IVR. Listen closely to ensure the correct option is selected.

6.0 Precautions, Limitations, and Notes (Cont'd)

8. Once the TSC or EOF is operational, the TSC EC or EOF Director determines the number of additional personnel needed to cope with the emergency and ensures appropriate calls are made for additional emergency support personnel.
 - Any properly trained personnel may utilize applicable portions of this procedure to call-out Emergency Team members.
9. Certain events (i.e., Security events, large area fire, etc.) may preclude the EC or designee from being able to formally notify Security to activate the ERO.
 - In such an event, if it is apparent to Security that the ERO should be activated, Security should activate the ERO per the provisions of this procedure without notification from the EC or designee. **[R3]**
10. Certain events (i.e., Security events, large area fire, etc.) may preclude Security from being able to activate the ERO.
 - ERONS-1 and ERONS-2 can be activated from any telephone and/or from any computer (or other device) with internet access.
 - In such an event, Security or Operations should direct personnel to initiate the ERO activation from the most appropriate location.
 - Members of the CR3 EP staff can also initiate ERO activation from any location with a telephone or internet-capable device. **[R3]**
11. Certain events (i.e., Security events, large area fire, natural disasters, etc.) may require activation of the Remote Technical Support Center (RTSC) located in the Emergency Operations Facility (EOF) on W. Venable St. in Crystal River, instead of the on-site Technical Support Center (TSC).
12. ERONS may not be activated for all Security events. The decision to activate ERONS is made by the EC and the Security Shift Supervisor (SSS) on-duty.
13. In the event that ERONS-1 and ERONS-2 are both inoperative/unavailable, the "Weekly ERO On-Call List" should be used to call the individuals whose names are listed as being on-call for that week.
 - There are typically ten (10) names on the list which makes up the minimum staffing for the TSC and EOF.
 - The list is updated weekly by EP staff and is posted on the CR3 Emergency Preparedness website as a link titled, "Weekly ERO On-Call List" under the heading "Emergency Preparedness Information." The address for the link is:

<http://nggweb/cr3emergencypreparedness/out/eof%20&%20tsc%20weekly%20on-call%20list.pdf>

The link can be saved and made readily available to PC users who may be required to initiate ERO call-in.

7.0 SPECIAL TOOLS AND EQUIPMENT

- 1. Working telephone.
- 2. Computer (or other device) with internet access.

8.0 ACCEPTANCE CRITERIA

None

9.0 INSTRUCTIONS

9.1 Instructions for Notifying the ERO [R3][R4]

CAUTION

The Scenario Title must correspond to the Scenario Number provided by the EC, otherwise the incorrect notification will be activated. **Scenario numbers are provided in Attachment 1.**

- 1. The EC, or a designee will direct CR3 Security to activate the ERO. The ERONS Scenario number will be provided to Security by the EC. Scenario numbers are listed in Attachment 1. IF Security is unable to perform this function, THEN Operations should perform the activation..... ☐

NOTE: Activation of the ERO is a time critical process. Operations and/or Security personnel must perform these duties in a most expeditious manner.

- 2. WHEN requested by the EC or a designee to activate the ERO, THEN IMMEDIATELY ACTIVATE ERONS in accordance with Steps 9.2.1 through 9.2.2, as appropriate. ☐
- 3. WHEN notified to activate the ERO, THEN Security should CHECK, and if needed, UNLOCK the entrance doors to the TSC/OSC, unless TSC/OSC personnel are being sent to the RTSC..... ☐

9.2 ERO Notification Methods [R3][R4]

9.2.1 ERO Activation Using ERONS-1 (EverBridge)

- NOTES:**
1. The terms ERONS-1 and EverBridge (or EverBridge notification system) are synonymous.
 2. ERONS-1 is the primary ERO notification method and should be used if available.
 3. Based on the nature of the emergency condition, the EC will determine the appropriate ERONS-1 "Scenario Number" to use.
 - In the event that ERONS-1 is unavailable, the corresponding ERONS-2 "Scenario" should be used.
 - In the event that both ERONS-1 and ERONS-2 are unavailable, manual calling of the on-call ERO is initiated in accordance with step 9.4.2 of this procedure.

1. **IF** ERONS-1 is available, **THEN CONTINUE** to Step 9.2.1.3 and/or the Emergency Response Organization Notification System Activation Guidelines..... N/A ☐ ☐
2. **IF** ERONS-1 is unavailable or directed by the EC to use ERONS-2 to activate the ERO, **THEN CONTINUE** to Step 9.2.2 and/or the Emergency Response Organization Notification System Activation Guidelines to activate ERONS-2 N/A ☐ ☐
3. **IF** ERONS-1 website is locked, **THEN INITIATE** system using alternate notification methods described in this procedure (IVR or Live Operator) or immediately transition to ERONS-2..... N/A ☐ ☐
4. **REFER** to Attachment 2 to activate the ERO using a **LAN Computer**.
5. **REFER** to Attachment 3 to activate the ERO using the **EverBridge IVR Telephone Activation**.
6. **REFER** to Attachment 4 to activate the ERO using **Live EverBridge Operator Telephone Activation**.

9.2.2 ERO Activation Using ERONS-2 (CodeRED)

- NOTES:**
1. Detailed instructions (including phone numbers, PINs, Scenario ID Numbers, Launch Codes, generic user log in and password, etc.) for ERONS-2 activation are located in Emergency Response Organization Notification System Activation Guidelines. These guidelines are maintained by Emergency Preparedness and are distributed for ready access to authorized CR3 Security and Operations personnel.
 2. Attachment 5 and Attachment 6 detail two (2) separate methods of launching ERONS-2 Scenarios. Attachment 5 is the preferred method and Attachment 6 is the alternate method.
 3. Step 9.2.3 is used following completion of either Attachment 5 or Attachment 6, assuming internet availability.

1. IF ERONS-2 is available, **THEN CONTINUE** to step 9.2.2.3 and/or the Emergency Response Organization Notification System Activation Guidelines..... N/A ☐ ☐
2. IF ERONS-2 is unavailable, **THEN CONTINUE** to Step 9.4.2 and/or the Emergency Response Organization Notification System Activation Guidelines to activate the ERO..... N/A ☐ ☐
3. **REFER** to Attachment 5 to activate the ERO using the **Internet Launch Process**
4. **REFER** to Attachment 6 to activate the ERO using the **IVR Launch Process**

9.2.3 ERONS-2 Scenario Launch Verification Process (Assumes internet availability)

1. LOG IN to the ERONS-2 website..... ☐
2. From "Start Page", CLICK ON "Quick Statistics"..... ☐
3. CLICK ON magnifying glass to the left of "Launch #"..... ☐
4. VIEW "Contacts" to see records called and disposition..... ☐
5. SELECT "Messages" icon to play voice file and view text and email messages..... ☐
6. REFRESH the screen and REVIEW results of the launch to determine if call, texts, and emails were successfully launched..... ☐

9.3 ERO Emergency Response Team Rosters [R2]

1. Emergency Response Teams consist of the Emergency Sampling Team (EST), Radiation Monitoring Team (RMT), HP Responders, the Emergency Repair Team (ERT), and the Fire Brigade.
2. Current hard copies of the ERO Emergency Response Team rosters are located in the Control Room and in the Operational Support Center.

9.4 Location of Emergency Rosters and Phone Directories [R2]

1. Emergency rosters and phone directories identify current ERO members and outside emergency contacts.
 - Hard copies of the emergency rosters and phone directories are reviewed quarterly and updated as needed in accordance with Emergency Preparedness Staff Guideline-005 (EPSG-005).
2. In the event that ERONS-1 and ERONS-2 are both inoperative/unavailable, the "Weekly ERO On-Call List" should be used to call the individuals whose names are listed as being on-call for that week. The following links can be used to access emergency rosters and phone directories:
 - **Weekly ERO On-Call List**
(<N:\NGGWeb\CR3\Departments\Emergency Preparedness\out\eof & tsc weekly on-call list.pdf>)
 - **Emergency Response Personnel Roster**
(N:\NGGWeb\CR3\Departments\Emergency Preparedness\out\emergency_response_directory.pdf)
 - **ERO Emergency Roster by Last Name**
(N:\NGGWeb\CR3\Departments\Emergency Preparedness\out\responders_lastname.pdf)
 - **Emergency Response Facility Telephone Directory**
(N:\NGGWeb\CR3\Departments\Emergency Preparedness\out\facility_directory.pdf)
 - **Off-Site Support Directory**
(N:\NGGWeb\CR3\Departments\Emergency Preparedness\out\offsite_directory.pdf)
3. The emergency rosters and phone directories are also maintained on the CR3 Emergency Preparedness Web page.

9.5 Viewing Individual and Team Qualifications on the PC Screen [R2]

1. OPEN PQD from a Network computer on Duke Energy web
(<http://webapp/ptn-pp-rpt/>) or from
Start>All Programs>DAE>Shortcuts Tab>Search for "Passport"
>Select Passport Information Web Portal and Run Application.. ☐
2. SELECT "Personnel Qualifications" from the left hand column..... ☐
3. SELECT "ERO" from the left hand column..... ☐
4. SELECT "ERO Emergency Response Team by Team by Duty
Area" from the "Personnel Qualifications/ERO" heading/"Prompted
Reports" tab ☐
5. CLICK on the desired emergency team Duty Area in the "map" tab
on the left, **OR**..... N/A ☐ ☐
6. SEARCH for a specific Duty Area by number or key word or phrase
using the "binocular" search button, **OR**..... N/A ☐ ☐
7. SEARCH for an individual by name using the "binocular" search
button. N/A ☐ ☐

9.6 Printing Individual and Team Qualifications [R2]

1. SELECT the "print" icon button on the tool bar to print the entire
report, **OR** N/A ☐ ☐
2. IDENTIFY the page number(s) of the report that is required for
printing. N/A ☐ ☐
3. PRINT by selecting "File" then "Print" from the Windows menu tool bar. ☐
4. SELECT "Pages" **AND** ENTER the page numbers desired. ☐
5. SELECT "OK" ☐

10.0 RECORDS

No Records are generated by this procedure.

ATTACHMENT 1
Sheet 1 of 2

CR3 Emergency Notification Scenarios
[R3] [R4]

SCENARIO NO.	SCENARIO TITLE	APPLICABILITY
1.	Notification Error	Retraction of any activation message sent in error
2.	Unusual Event – ERO Standby	Unusual Event declared. Notify ERO to assume a heightened state of awareness in anticipation of emergency escalation.
3.	Discretionary – TSC/OSC	At the discretion of the EC, activate the following facilities: <ul style="list-style-type: none"> • Technical Support Center • Operational Support Center
4.	Discretionary – TSC/OSC/EOF/ENC	At the discretion of the EC, activate the following facilities: <ul style="list-style-type: none"> • Technical Support Center • Operational Support Center • Emergency Operations Facility • Emergency News Center
5.	Alert (Refer to Scenario 8 if activation of remote facilities is required.)	Alert declared. Activate the following facilities: <ul style="list-style-type: none"> • Technical Support Center • Operational Support Center • Emergency Operations Facility • Emergency News Center
6.	Site Area Emergency (Refer to Scenario 9 if activation of remote facilities is required)	Site Area Emergency declared. Activate the following facilities: <ul style="list-style-type: none"> • Technical Support Center • Operational Support Center • Emergency Operations Facility • Emergency News Center

ATTACHMENT 1
Sheet 2 of 2

SCENARIO NO.	SCENARIO TITLE	APPLICABILITY
7.	General Emergency (Refer to Scenario 10 if activation of remote facilities is required)	General Emergency declared. Activate the following facilities: <ul style="list-style-type: none"> • Technical Support Center • Operational Support Center • Emergency Operations Facility • Emergency News Center
8.	Alert (Remote Facilities)	Alert declared. Activate the following facilities: <ul style="list-style-type: none"> • Remote Technical Support Center • Remote Operational Support Center • Emergency Operations Facility • Emergency News Center
9.	Site Area Emergency (Remote Facilities)	Site Area Emergency declared. Activate the following facilities: <ul style="list-style-type: none"> • Remote Technical Support Center • Remote Operational Support Center • Emergency Operations Facility • Emergency News Center
10.	General Emergency (Remote Facilities)	General Emergency declared. Activate the following facilities: <ul style="list-style-type: none"> • Remote Technical Support Center • Remote Operational Support Center • Emergency Operations Facility • Emergency News Center
11.	Fire Brigade Support to SAB	Event requiring off-shift Fire Brigade support to report to the Site Administration Building. (Example: Large-area fire)
12.	Fire Brigade Support to EOF	Event requiring off-shift Fire Brigade support to report to the EOF. (Example: Large-area fire)
13.	Event Termination	Plant conditions no longer require ERO to stand by or to report as determined by EC or EOF Director.

ATTACHMENT 2

Sheet 1 of 1

ERONS-1 - Using a LAN Computer to Activate the ERO

NOTE: This method is used to activate the ERO using the EverBridge website and any available LAN computer.

- 1) **LOG** onto the Emergency Response Organization Notification System, EverBridge using one of the following options:
 - a. Go to the internet and type "www.everbridge.net".
 - b. **IF** using a Windows 7 Desktop, **THEN SELECT** Start>All Programs>DAE>Shortcuts Tab>Search EverBridge>Select EverBridge and Run Application.
- 2) **TYPE** the "CR3activation" (not case sensitive) in the "Member ID" field of the initial login screen.
- 3) **ENTER** site specific Password from the "Password Card."
- 4) **SELECT "GO" OR PRESS "Enter"** on the keyboard.
- 5) **SELECT "Scenario Manager"** from left side of the screen.
- 6) **SELECT "Send Scenario" under "Scenario Manager."**
- 7) **LOCATE AND CONFIRM** the "Scenario Number" and "Scenario Title" provided by the SEC on the "Send Scenarios" screen, use the "Previous" and "Next" cursors to scroll through the scenario list as needed.
- 8) **CLICK** the desired "Scenario Title" in EverBridge once you have located and confirmed that the "Scenario Number" and "Scenario Title" provided by the SEC are in alignment.

NOTE: A satellite dish animation will appear on the screen to indicate transmission of the message.

- 9) **SELECT "Send Message"** at the bottom of the "list unscheduled messages" screen.

ATTACHMENT 3

Sheet 1 of 1

ERONS-1 - Using the EverBridge Interactive Voice Response to Activate the ERO

NOTE: The following steps can be used to activate EverBridge mass communications system via telephone. The automated system will require the following information to activate and ask for responses to the following queries.

- 1) **DIAL** EverBridge at 9-1-888-440-4911
- 2) **LISTEN** to the IVR command **AND FOLLOW** the instructions:
 - a) *"Please enter your Member ID followed by the '#' sign."*
 - i) **ENTER** "132528221" "#"
 - b) *"Please enter your Password followed by the '#' sign."*
 - i) **ENTER** site specific password. See Password Card for site password.

CAUTION

Upon completion of the following steps, activation of the ERO will occur.

- 3) To launch a broadcast scenario now, **PRESS** the number "3".
- 4) To select your scenario by number, **PRESS** the number "1".
- 5) *"Please enter your scenario number followed by the '#' sign."*
 - a) For example; **"10" "#"**.
- 6) Voice will state title of the scenario. **VERIFY** this is the correct entry.
- 7) To select this scenario, **PRESS** "#" key, otherwise press "**".
- 8) "To launch this scenario now, **PRESS** the number "1"."
- 9) **END** call

ERONS-1 - Using the Live EverBridge Operator to Activate the ERO

NOTE: The following steps can be used to activate the EverBridge mass communications system via telephone and the Live EverBridge Operator.

- 1.) **CALL** the live EverBridge operator at 9-1-877-220-4911. You will hear, *"Thank you, an EverBridge Operator will be with you momentarily."*

NOTE: The EverBridge Operator may use variations of the questions below.

- 2.) **QUESTION:** The agent will ask for your **Organization Name:**
ANSWER: **SEE PASSWORD INFORMATION**
- 3.) **QUESTION:** The agent will ask for your **Member ID:**
ANSWER: **SEE PASSWORD INFORMATION**
- 4.) **QUESTION:** For authentication purposes, the agent will ask you your **Hint**
Question: *"What is your city of birth?"*
ANSWER: **SEE PASSWORD INFORMATION**
- 5.) **QUESTION:** The agent should then ask, *"How may I help you?"*

NOTE: Ensure that the scenario number provided by the EC and scenario name listed in this procedure are in alignment.

- ANSWER:** **"I WOULD LIKE TO SEND AN EMERGENCY SCENARIO USING THE FOLLOWING SCENARIO NUMBER:"** Provide the Live EverBridge Operator with the scenario number that has been provided to you by the SEC.
- 6.) **QUESTION:** The Live EverBridge Operator will then **CONFIRM** the Scenario Number (and Scenario Name) provided, *"Is this the correct Scenario Number?"*
ANSWER: IF the Scenario Number and Name are correct – **"YES."**
IF the scenario number and name are incorrect – **"NO."**
Provide the Live EverBridge Operator with the correct scenario number that has been provided to you by the SEC before proceeding.
- 7.) **QUESTION:** The Live EverBridge Operator will then confirm, *"Would you like to send the notification now?"*
ANSWER: **"SEND NOTIFICATION NOW."** The Live EverBridge Operator will then provide you with the Message Broadcast ID number for tracking purposes.

ATTACHMENT 5

Sheet 1 of 1

ERONS-2 - Using the Internet Launch Process to Activate the ERO

1. LOG onto the Emergency Response Organization Notification System, Code Red using one of the following options:
 - a. GO TO the internet and type
 "<https://login.coderedweb.com>" ☐
 - b. IF using a Windows 7 Desktop, **THEN** SELECT
 Start>All Programs>DAE>Shortcuts Tab>Search Code
 Red>Select Code Red and Run Application..... ☐
2. LOG IN to the ERONS-2 website. ☐
3. From the "Quick Launch" panel, SELECT desired Scenario from
 dropdown menu. ☐
4. SELECT "Launch". ☐
5. ENTER "Launch Code" (xxxx) into the pop-up ☐
6. SELECT "Launch Now". ☐
7. GO TO Step 9.2.3. ☐

ERONS-2 - Using the IVR Launch Process to Activate the ERO

1. DIAL the Primary phone number (use Alternates if necessary)..... ☐

Primary: 1-888-xxx-xxxx

Alternates: 1-800-xxx-xxxx or 1-888-xxx-xxxx

2. FOLLOW the "instructions and prompts" as they are given **AND** PERFORM the following actions:

NOTE: If there is delay before entering any number, the system may state, "We did not get a valid entry." The system will then ask for the entry again.

- a. "Please enter your access PIN Number."
 - ENTER access PIN Number "xxxxx" on the telephone key pad. ☐
 - b. "Welcome to the IVR; please enter your Scenario ID to start the launch process."
 - ENTER Scenario ID on the telephone key pad..... ☐
 - c. "Scenario ID "x" has "x" email, "x" text message, "x" phone call. To continue with the launch of this Scenario press "1."
 - PRESS "1" on the telephone key pad. ☐
 - d. "Job Number "xxxxx" has approximately "xxx" records to be called."
 - ENTER Launch Code "xxxxx" on the telephone key pad (do not press the pound key) ☐
 - e. "A voice file exists and has been approved. Enter your Launch Code to initiate contacts, or press the pound key to re-record the voice file."
 - PRESS "1" on the telephone key pad to ensure auto recall is enabled ☐
 - f. "Your approval code has been accepted. To automatically re-launch to non-connects when the connection rate is less than 60%, press 1. Press any other key to launch without an auto recall."
 - HANG UP the phone to exit. ☐
 - g. "Contacts for Scenario ID "x" have been initiated. To start another launch, enter the Scenario ID, press the pound key to select a Scenario, or press the star key to record a message for a future launch. To exit, simply, hang up."
 - HANG UP the phone to exit. ☐
3. GO TO Step 9.2.3 and COMPLETE if internet is available. ☐

**SUMMARY OF CHANGES
PRR 610438**

- NOTES:** 1. Writers, Reviewers, and Procedure Sponsors: Ensure that any changes to this procedure that affect information contained in ERF posters, Enclosures, briefing cards, guidelines, etc. are made to those items as well.
2. Writers, Reviewers, and Procedure Sponsors: Changes to certain parts of this procedure may impact other EIPs. Ensure appropriate PRRs are initiated as needed.

Section/Step	Changes and Reason
<p>Note: The purpose of this Procedure Revision is to remove CR3 from Fleet procedure EMG-NGGC-0005. All revisions documented below were made to incorporate applicable information from EMG-NGGC-0005, unless otherwise noted.</p> <p>None of the changes listed below reduce the effectiveness of this procedure or the CR3 Radiological Emergency Response Plan.</p>	
Throughout	Changed revision number to 110. Removed reference to SSRO as this title will be changing.
1.0	Editorial changes throughout section.
2.1.5	Delete reference to EMG-NGGC-0004 and replace with reference to EPSG-025
2.1.6	Delete reference to EMG-NGGC-0005 and replace with reference to EPSG-026
2.1.7	New reference to AI-4000, Conduct of Emergency Preparedness and Schedule for Radiological Emergency Response Plan Maintenance Renumber References accordingly.
3.0.2	Add Definition for "Aware." Incorporated from EMG-NGGC-0005.
3.0.5	Add Definition for "Group." Incorporated from EMG-NGGC-0005.
3.0.6	Add Definition for "Interactive Voice Response (IVR)." Incorporated from EMG-NGGC-0005.
3.0.7	Add Definition for "Live EverBridge Operator." Incorporated from EMG-NGGC-0005.
3.0.9	Add Definition for "Password Card." Incorporated from EMG-NGGC-0005.
3.0.10	Add Definition for "Scenario." Incorporated from EMG-NGGC-0005.

Section/Step	Changes and Reason
4.0	Revise Section 4.1 to include subsections describing the responsibilities of the Emergency Coordinator (4.1), Security Personnel (4.2), and Emergency Preparedness Staff (4.3) incorporating information from EMG-NGGC-0005.
4.1	New Subsection. Add description of responsibilities for the EC from EMG-NGGC-0005 to existing description.
4.2	New Subsection. Add description of responsibilities for Security Personnel from EMG-NGGC-0005 to existing description.
4.3	New Subsection. Add description of responsibilities for the EP Staff from EMG-NGGC-0005 to existing description.
5.0	Add Prerequisites from EMG-NGGC-0005.
6.0	Notes 1, 2 and 3: Editorial changes. Because this is a CR3 procedure, there is no need to use the term, "At CR3."
6.0.1	Remove reference to EMG-NGGC-0005 and incorporate descriptive language from EMG-NGGC-0005.
6.0.2	Remove reference to EMG-NGGC-0005.
6.0.3	New Item. Add language describing LAN from EMG-NGGC-0005.
6.0.4	New Item. Add language describing notification using a Live EverBridge Operator from EMG-NGGC-0005.
6.0.5	New Item. Add language describing passwords from EMG-NGGC-0005.
6.0.6	New item, Add language describing preferred method of notification as indicated by EC from EMG-NGGC-0005.
6.0.7	New item. Add language describing acronyms and abbreviations spoken by the IVR from EMG-NGGC-0005.
6.0.8	Editorial change. Use acronym "EC." All steps impacted by new steps are renumbered.
6.0.8 First Bullet	Editorial change.
6.0.9	Editorial change. Use acronym "ERO."
6.0.10 First Bullet	Delete "can be activated from any computer (or other device with internet access)" following "ERONS-1." ERONS-1 and ERONS-2 can both be activated using telephone or computer (or other device) with internet access. As written, the procedure does not make it apparent that ERONS-1 can be

Section/Step	Changes and Reason
	activated using telephone.
6.0.10 Third Bullet	Revise bullet to indicate that EP staff can initiate ERO activation anywhere telephone or an internet-capable device is available.
7.0	Editorial changes.
9.1	Add "Caution" note prior to Step 9.1.1. This note is identical to a Caution note contained in EMG-NGGC-0005.
9.1.1	Change "typically notifies" to "will direct". Scenario numbers are provided in Attachment 1" as new third sentence. These changes ensure consistency with EMG-NGGC-0005.
9.1.2	Add "Steps" before "9.2.1 through 9.2.3...".
9.2.1	Change section title from "ERONS Activation Protocol" to "ERONS Activation Using ERONS-1 (EverBridge)"
9.2.1.1	Note 1: Remove reference to EMG-NGGC-0005.
9.2.1.1	Note 3: Editorial change – use of acronyms.
9.2.1.1	Note 3, 2 nd Bullet: Change step "6.0.8" to "9.4.2."
9.2.1 Step 1	Remove reference to EMG-NGGC-0005 and instead direct reader to Step 9.2.1.3
9.2.1 Step 2	Add "or directed by the EC to use ERONS-2 to activate the ERO." Delete "follow the applicable steps of this procedure" and replace with "Step 9.2.2."
9.2.1	Add Steps 3 – 6 using information from Steps 9.3 through 9.6 of EMG-NGGC-0005.
9.2.2	Notes preceding section. Note 2: Revise Steps 9.2.2 and 9.2.3 to Attachment 5 and 6, respectively. Note 3: Change Step 9.2.4 to 9.2.3 and update Steps 9.2.2 and 9.2.3 to Attachment 5 and 6, respectively.
9.2.2	Change Section title from "ERONS-2 (Internet Launch Process) (Preferred Method)" to "ERO Activation Using ERONS-2 (CodeRED)" and add instructions for use of ERONS-2 or alternate method if ERONS-2 is unavailable.
9.2.2	Existing information relocated to Attachments 5 (Internet Launch Process) and 6 (IVR Launch Process)

Section/Step	Changes and Reason
9.2.2	Deleted Step 9.2.2.1 Note 4 that listed ERONS-2 Scenario ID numbers and descriptions as the EC will provide the appropriate information.
9.2.4 (old)	Renumbered to 9.2.3
9.4.1 2 nd Bullet	Delete reference to EMG-NGGC-0005
9.4.2	Replace "In the event that ERONS-1 and ERONS-2 are unavailable" with "In the event that ERONS-1 and ERONS-2 are both inoperative/unavailable, the "Weekly ERO On-Call List" should be used to call the individuals whose names are listed as being on-call for that week." Add "Weekly ERO On-Call List" (hyperlinked) to the bulleted documents.
9.5.1	Replace "START-PROGRAMS-Business Apps-PassPort Production-PassPort Information Web Portal" with "Start>All Programs>DAE>Shortcuts Tab>Search Passport>Select Passport Information Web Portal and Run Application."
Attachment 1	Add EMG-NGGC-0005, Attachment 2
Attachment 2	Add EMG-NGGC-0005, Attachment 5
Attachment 3	Add EMG-NGGC-0005, Attachment 6
Attachment 4	Add EMG-NGGC-0005, Attachment 7
Attachment 5	New Attachment. Information moved from old step 9.2.2 Added new Step 1 to clarify options for connecting to Code Red.
Attachment 6	New Attachment. Information moved from old step 9.2.3



R
Reference
Use

CRYSTAL RIVER UNIT 3
PLANT SECURITY PROCEDURE

EM-211

DUTIES OF THE CR3 NUCLEAR SECURITY ORGANIZATION

REVISION 28

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1.0 PURPOSE

1. This procedure is an Emergency Plan implementing procedure.
2. This procedure provides guidance to the CR3 Nuclear Security Organization in the event of a radiological or other Plant emergency situation.
3. Any revisions must be carefully considered for Emergency Plan impact

2.0 REFERENCES

2.1 Implementing References

1. CR3-PSP, Duke Energy Florida – Crystal River Unit 3 (CR3) Nuclear Plant Physical Security Plan, Security Training and Qualification Plan, And Safeguards Contingency Plan (SECURITY PLAN)
2. CR3 Radiological Emergency Response Plan (RERP)
3. NRC Bulletin 2005-02, "Emergency Preparedness and Response Actions for Security-based Events"
4. SEC-NGGC-2120, "Use, Storage, and Protection of Safeguards and other Limited Access Information"
5. SEC-NGGC-2141, "Fitness for Duty Unscheduled Work Call Outs"
6. SEC-92166, "Site Access Controls"
7. SEC-92147, "Reporting Of Safeguards And Fitness-For-Duty Events"
8. EM-102, "Operation of the Technical Support Center"
9. EM-205, "Personnel Emergency Responsibilities Regarding Discovery, Assembly, Evacuation and Accountability within the Protected Area"
10. EM-206, "Emergency Plan Roster Notification"
11. EM-911, "Security Threats"
12. SS-206, "Security Safeguard Contingency Events"
13. SS-212, "Defensive Strategy Procedure"
14. [R1] NOCS 014050
15. 10 CFR 73.71, "Reporting of Safeguard Events"

3.0 DEFINITIONS

1. **Accountability:** The process of identifying personnel remaining inside the Protected Area (PA) and ascertaining the names of missing individuals. Accountability is normally performed via the use of card readers and the Plant Security Computer System (PSCS) during a Site Area or General Emergency, when a site evacuation has been called, or anytime accountability is requested by the Emergency Coordinator. In the event card readers and/or the PSCS are unavailable, exiting personnel can be logged off site manually by Security personnel posted at the exit portal(s), which may include the retrieval of badges of exiting personnel, or attendance can be taken at the Main Assembly Area. Depending on the nature of the event, Protected Area vehicle and/or personnel gates may be utilized to expedite personnel egress from the PA.
2. **Authorized Personnel:** Those individuals whose entrance to the CR3 PA during emergencies has been approved by the Emergency Coordinator (EC), and coordinated with the Manager- Nuclear Plant Security or designated representative in the Technical Support Center/Operations Support Center (TSC/OSC).
3. **Emergency Classification Levels**
 - a. **Unusual Event:** Events are in process or have occurred which indicate a potential degradation of the level of safety of the Plant or indicate a Security threat to facility protection has been initiated. No releases of radioactive material requiring off-site response or monitoring are expected unless further degradation of safety systems occurs.

This classification brings the operating staff to a state of readiness if escalation to a more severe action level classification occurs
 - b. **Alert:** Events are in process or have occurred which involve an actual or potentially substantial degradation of the level of safety of the Plant or a security event that involves probable life threatening risk to site personnel or damage to site equipment because of hostile action. Any releases are expected to be limited to small fractions of the EPA Protective Action Guideline exposure levels.

The TSC/OSC is staffed and assembly and accountability are performed at Local Assembly Areas. The EOF is also staffed at an Alert.
 - c. **Site Area Emergency:** Events are in process or have occurred which involve actual or likely major failures of Plant functions needed for the protection of the public or hostile actions that result in intentional damage or malicious acts; (1) toward site personnel or equipment that could lead to likely failure of or; (2) that prevent effective access to equipment needed for the protection of the public. Any releases are not expected to result in exposure levels which exceed EPA Protective Action Guideline exposure levels beyond the site boundary.

The TSC/OSC and EOF are staffed and radiation monitoring teams may be dispatched. PA evacuation and Accountability is performed.

SECTION 3.0, DEFINITIONS (CONT'D)

- d. **General Emergency:** Events are in process or have occurred which involve actual or imminent substantial core degradation or melting with potential for loss of containment integrity or hostile action that results in an actual loss of physical control of the facility. Release can be reasonably expected to exceed EPA Protective Action Guideline exposure levels off-site for more than the immediate site area.

This classification initiates predetermined protective actions for the public, provides continuous assessment of information from on-site and off-site measurements, initiates additional measures indicated by the event, and provides current information and consultation with off-site authorities and the public. The Emergency Coordinator (EC) may decide to evacuate the Energy Complex.

4. **Emergency Response Organization Notification System (ERONS):**

The total of the primary, back-up and alternate systems / methods available to activate the ERO in the event of a Plant emergency. The primary system is ERONS-1 and is capable of sending voice and text messages to ERO members based on user commands to the system. ERONS-2 has similar capabilities as the primary system and is the back-up system should ERONS-1 be unavailable. In the event that both ERONS-1 and -2 are unavailable, a process for manually calling ERO members would be used.

5. **Hostile Action:** An act toward a Nuclear Power Plant or its personnel that includes the use of violent force to destroy equipment, take hostages, and/or intimidate the licensee to achieve an end. This includes attack by air, land, or water using guns, explosives, projectiles, vehicles, or other devices used to deliver destructive force. Other acts that satisfy the overall intent may be included.

"Hostile Action" should not be construed to include acts of civil disobedience or felonious acts that are not part of a concerted attack on the Nuclear Power Plant. Non-terrorism- based EAL's should be used to address such activities (e.g., violent acts between individuals in the owner controlled area.

6. **Hostile Force:** One or more individuals who are engaged in a determined assault, overtly or by stealth and deception, equipped with suitable weapons capable of killing, maiming, or causing destruction.
7. **Missing Individual:** An unaccounted for person remaining in the PA following an evacuation or when the EC requests accountability, and is not in, or dispatched from the Control Room, TSC/OSC or Nuclear Security Operations Center (NSOC).
8. **Security Condition:** Any Security event as listed in the approved security contingency plan that constitutes a threat/compromise to site security, threat/risk to site personnel, or a potential degradation to the level of safety of the plant. A Security Condition does not involve a Hostile Action.

SECTION 3.0, DEFINITIONS (CONT'D)

9. **Security Event:** Any incident representing an attempted, threatened, or actual breach of the security system or reduction of the operational effectiveness of that system. A Security Event can result in either a Security Condition or Hostile Action.
10. **Site- Wide Emergency Alarms**
 - a. Reactor Building Evacuation Alarm – High pitched steady tone
 - b. Auxiliary Building Evacuation Alarm – Pulsing tone
 - c. Site Evacuation Alarm – Yelping sound
 - d. Site Fire Alarm - Siren

4.0 RESPONSIBILITIES

1. **Manager- Nuclear Plant Security** controls CR3 access, performs Accountability, and interfaces with Local Law Enforcement Agencies as warranted. Provides information to the EC as required and directs the Security Force through the CR3 Security Supervisor(s) and/or the on-duty Security Shift Supervisor(s) (SSS). The Manager- Nuclear Plant Security has the authority to use the Security Organization or any other available personnel to control access to the Plant or to implement and enforce the evacuation and accountability of personnel as directed by the EC
2. **CR3 Security Specialists** report directly to the Manager- Nuclear Plant Security and individually may act as an authorized designee of the Manager- Nuclear Plant Security as needed.
3. **Security Coordinator** is a position filled by the Manager- Nuclear Plant Security or designee. The Security Coordinator is positioned in the TSC to advise and assist the EC in accordance with EM-102.
4. **Security Shift Supervisor (SSS)** controls the CR3 Security Force and implements the actions directed by the Manager- Nuclear Plant Security or designee. In the absence of the Manager- Nuclear Plant Security or designee, the SSS would act as the Security Coordinator.
5. **CR3 Security** is responsible, under the direction of the Manager-Nuclear Plant Security, for Security measures required within the CR3 PA and the Owner Controlled Area (OCA). During a Plant emergency situation, Security shall expand the day-to-day operations to include the activities required to maintain personnel safety and Plant Security under emergency conditions. If the emergency is a Security related event, the Security Coordinator on-site will provide periodic updates to the EC and Shift Supervisor. Additionally, CR3 Security controls and directs the activities required to maintain physical security of personnel and property (at the Crystal River Energy Complex and EOF), and directs the evacuation of personnel from the Energy Complex.
 - a. During Plant emergencies requiring Security response, Health Physics directives or procedures will be complied with.
 - b. During certain emergencies (i.e., Security related events, Large Area Fire). The Crystal River Energy Complex Emergency Response Coordinator may establish an Incident Command Post (ICP). In the event an ICP is established, Security Coordinators who are not assigned to the TSC or EOF may be assigned to staff the ICP to support its function and to provide liaison between CR3 Security and off-site response agencies (i.e., local law enforcement, fire/rescue, emergency medical, etc.).

5.0 PREREQUISITES

None

6.0 LIMITATIONS, PRECAUTIONS, AND NOTES

NOTE: The requirement for conducting PA Accountability is stated in 6.0 (1), however; Accountability may be requested by the TSC Emergency coordinator at anytime during an event.

1. Protected Area (PA) Accountability must be completed within thirty (30) minutes of sounding the Site Evacuation Alarm.
2. During Plant evacuations that must be conducted expeditiously (i.e. those associated with an imminent threat to CR3) consideration should be given to allow Plant personnel to exit the PA via the Primary or Alternate Vehicle Gates. Individuals' badges can be collected by Security at either of these locations so that Accountability may be performed. See Subsection 9.3, On-Site Protective Actions and Evacuation Guidelines for additional guidance.
3. As a result of a Security related event, log and note sheets must be carefully reviewed to ensure they do not contain any Safeguards Information in accordance with SEC-NGGC-2120, Use, Storage, and Protection of Safeguards and other Limited Access Information.
4. During Security related events, discretion must be used in discussing/communicating information that may contain Safeguards. The provisions of SEC-NGGC-2120 must be followed at all times regardless of conditions/events.
5. During Security related events, consideration must be given with regard to establishing and maintaining crime scene integrity.
6. If a Security related Condition or Hostile Action should occur, refer to SS-206, SS-212 and/or the CR3 Safeguards Contingency Plan.

7.0 SPECIAL TOOLS AND EQUIPMENT

None

8.0 ACCEPTANCE CRITERIA

None

9.0 INSTRUCTIONS

NOTE: These INSTRUCTIONS are to be FOLLOWED by the Security Coordinator whether that position is being filled by the Manager- Nuclear Security or a designee.

9.1 Unusual Events

1. No formal requirements are levied upon Security once notified that an Unusual Event has been declared. The Unusual Event classification is designed to bring the Plant staff to a state of readiness in the event of an escalation to a more severe emergency level classification.
2. REFER to Attachments 1 and 2 for "Suggested Actions" upon notification that an Unusual Event condition has been declared.

9.2 Alerts, Site Area Emergencies and General Emergencies

1. REFER to Attachments 1 and 2 for "Suggested Actions" upon notification that an Alert, Site Area Emergency or General Emergency condition has been declared.

9.3 On-Site Protective Actions and Evacuation Guidelines

1. Per the provisions of EM-911, "Security Threats", CR3 Security may be directed by the Shift Supervisor (SS) to take actions associated with personnel evacuation of the Protected Area and/or Owner Controlled Area (OCA).
2. Imminent threat warnings are divided into three (3) specific categories as follows:
 - a. Informational: > 30 minute warning
 - b. Urgent: 5- 30 minute warning
 - c. Immediate: <5 minute warning

It is the responsibility of the SS (with possible assistance from Security and /or other sources as applicable) to determine the appropriate response.

Subsection 9.3, On-Site Protective Actions and Evacuation Guidelines (Cont'd)

3. EM-911, "Security Threats", outlines protective actions and associated pre-scripted PA announcements for the NSM to utilize. Since PA/OCA evacuation and accountability are responsibility of the Security Force during an imminent threat scenario, all Security personnel must be aware of the measures they may need to implement depending on the imminent threat warning issued by the NSM as follows:
- Informational: > 30 minute warning
 - **IF** during an outage or other period of higher than normal Plant population, Security will consider opening Visitor Gate (AG-16) to expedite egress, will continue use of the normal Exit Turnstiles, and will perform accountability.
 - **IF** utilizing the Exit Turnstiles, Security will instruct evacuees to walk through the exit portal radiation monitors (exiting personnel DO NOT need to "stand and count") and instruct the SAS Operator to NOT lock out the Exit Turnstiles during this time.
 - **IF** during non-outage time, egress can be through the Exit Turnstiles only. (Exiting personnel DO NOT need to "stand and count" and the SAS Operator DOES NOT need to lock-out the Exit Turnstiles during this time.)
 - The NSM may instruct Security to activate the Remote TSC (at EOF) and the EOF.
 - Following accountability, the NSM may consider instructing Security to send TSC/OSC and EOF staff to the Remote TSC (at EOF) and evacuate non-essential personnel from the OCA.
 - **IF** during hours of darkness, Security will consider extinguishing all exterior lights under their control.

Subsection 9.3, On-Site Protective Actions and Evacuation Guidelines (Cont'd)

Step 9.3.3 (Cont'd)

- Urgent: 5-30 minute warning
 - **IF** < 15 minutes before threat arrival or during an outage or other period of higher than normal Plant population, Security will consider opening Visitor Gate (AG-16) and/or utilize the Exit Turnstiles and/or the Vehicle Gate as necessary for rapid egress and will perform accountability.
 - **IF** utilizing Exit Turnstiles, Security will instruct evacuees to walk through the exit portal radiation monitors (exiting personnel DO NOT need to "stand and count") and instruct the SAS Operator to NOT lock out the Exit Turnstiles during this time.
 - **IF** > 15 minutes or during non-outage time, egress can be through AG-16 and the Exit Turnstiles (exiting personnel DO NOT need to "stand and count" and the SAS Operator DOES NOT need to lock-out the Exit Turnstiles during this time.)
 - The NSM may instruct Security to activate the Remote TSC (at EOF) and the EOF.
 - If during hours of darkness, Security will consider extinguishing all exterior lights under their control.
- Immediate: <5 minute warning
 - The NSM will notify Security to expedite PA evacuation and to perform accountability. In addition to utilizing the Exit Turnstiles and AG-16, Security may consider opening the Vehicle Gate and collecting badges of exiting personnel.
 - If during hours of darkness, Security will consider extinguishing all exterior lights under their control.

9.4 Security Force

1. The Security Force should be advised to increase their level of alertness and attention to duty upon notification that an Unusual Event condition has been declared.
2. During declared Alerts, Site Area Emergencies and General Emergencies, the Security Force will be directed by the SSS, who will receive direction from the Security Coordinator.
3. During occurrences requiring response by any CR3 Emergency Response Team (Fire, Medical, etc.), Security personnel dispatched to the scene will report to the appropriate Team Leader to assist with scene access control and/or perform other duties as requested.
4. In the event Security is directed to activate the Technical Support Center (TSC) during off-hours, ensure the Access Control Point (ACP) is notified and appropriately staffed in order to process incoming personnel in an expeditious manner.
5. In the event Security is directed to activate the Emergency Operations Facility (EOF), and /or the Remote Technical Support Center (RTSC), ensure the ACP is notified and directed to conduct turn-around of any personnel who may need to be re-directed to the EOF and/or RTSC.
6. FOLLOW the provisions of SEC-NGGC-2141, Fitness For Duty Unscheduled Work Call Outs, and SEC-92166, Site Access Controls, for those Plant employees who have been contacted to report to the Plant.

10.0 RECORDS

1. Checklists that are completed during actual emergencies are kept for the life of the plant.

SUGGESTED NOTES

Below are the items that should be logged by the Security Coordinator in the TSC:

1. Notification of any change in Emergency conditions from the Control Room.
2. Assumption of duty (Security Coordinator)
3. Transfer of command from the Control Room to the TSC
4. Transfer of command from the TSC to the EOF.
5. Pertinent items regarding updates from the EC.
6. Information on injuries or casualties.
7. Accountability
8. Any notes desired by the Security Coordinator or designee.
9. Suspension of safeguards and reason why for support.
10. Evacuation report delivery.
11. Communication to shift.
12. Support and justification for decisions being made.

SECURITY COORDINATOR'S SUGGESTED ACTION CHECKLIST

- NOTES:**
1. The EC has the authority and responsibility to invoke 10CFR 50.54 (x) and (y) or Section 24 of the CR3-PSP, Duke Energy Florida – Crystal River Unit 3 (CR3) Nuclear Plant Physical Security Plan, Security Training and Qualification Plan, And Safeguards Contingency Plan (SECURITY PLAN), as applicable, for suspension of Safeguards. The Security Coordinator must determine the reason for the suspension of Safeguards and if it is to be full or partial suspension.
 2. Casualty identification is the responsibility of Security. Any information concerning Site casualties will only be transmitted to the EC.
 3. Following this Attachment through completion is strongly recommended. As designated, include the time completed on the line provided.
 4. Nuclear Security ensures emergency response personnel are notified in accordance with EM-206, Emergency Plan Roster Notification.
 5. Notification must be made in accordance with SEC-92147 when reasonable suspicion of a 1 hr. reportable event has occurred.

1.0 UNUSUAL EVENT

1. NOTIFY CR3 Security Specialists as appropriate (time)

2.0 ALERT

1. OBTAIN Security radio ☐
2. REPORT to the TSC (or RTSC if applicable) (time)
3. REFERENCE the applicable section(s) of EM-102 upon arrival at the TSC (time)
4. RECEIVE pass-along brief from the SSS on-duty (time)
5. COORDINATE PA accountability (if performed) with the SSS (time)
6. NOTIFY the SSS or designee of changing events in the TSC/OSC (time)
7. EVALUATE the need to call in additional Security personnel ☐
8. WHEN TSC/OSC is operating and the EC takes over, CONTACT **AND** INFORM SSS of the change. ASSUME command of Security (time)
9. DOCUMENT actions (See Enclosure 1 for suggested notes) ☐

SECURITY COORDINATOR'S SUGGESTED ACTION CHECKLIST (Cont'd)

- 3.0 **SITE AREA EMERGENCY** - If an Alert was not declared prior to the Site Area Emergency declaration, COMPLETE actions listed under the Alert stage (Section B) prior to continuing.
1. AFTER the EC makes the decision to evacuate all non-essential personnel, CALL for the evacuation of all non-essential Security personnel (time)
 2. INITIATE Accountability; REPORT Accountability results (with a list of missing individuals) to the EC within thirty (30) minutes (time)
 3. INFORM the SSS of the change in emergency conditions..... (time)
 4. In the event Security evacuates from the PA (10CFR50.54 (x) and (y) or Section 24 of the SECURITY PLAN are invoked for suspension of Safeguards, ENSURE the Security Coordinator has, or has access to Security keys prior to the evacuation being completed..... (time)
 5. ENSURE any remaining (essential) Security personnel are assembled in a safe location (i.e., 143' Control Complex, TSC) (time)
 6. DOCUMENT actions (See Enclosure 1 for suggested notes) ☐

SECURITY COORDINATOR'S SUGGESTED ACTION CHECKLIST (Cont'd)

- 4.0 **GENERAL EMERGENCY** - If an Alert and Site Area Emergency were not declared prior to the General Emergency declaration, REVIEW actions listed under the Alert stage (Section B) and Site Area Emergency Stage (Section C) prior to continuing
1. NOTIFY the SSS of the change in emergency conditions..... ____ (time)
 2. If order to evacuate the Energy Complex is given INFORM:
 - a. CR3 Security Specialist (as appropriate).....N/A ☐ ☐
 - b. SSS ____ time)
 3. In the event Security evacuates from the PA (10CFR50.54 (x) and (y) or Section 24 of the SECURITY PLAN are invoked for suspension of Safeguards, ENSURE the Security Coordinator has, or has access to Security keys prior to the evacuation being completed..... ____ (time)
 4. DOCUMENT actions (See Enclosure 1 for suggested notes)..... ☐

SECURITY SHIFT SUPERVISOR'S (OR DESIGNEE'S) SUGGESTED ACTION CHECKLIST

- NOTES:**
1. The EC has the authority and responsibility to invoke 10CFR50.54 (x) and (y) or Section 24 of the CR3-PSP, Duke Energy Florida – Crystal River Unit 3 (CR3) Nuclear Plant Physical Security Plan, Security Training and Qualification Plan, And Safeguards Contingency Plan (SECURITY PLAN), as applicable, for suspension of Safeguards. The SSS must determine the reason for the suspension of Safeguards and if it is full or partial suspension.
 2. Casualty identification is the responsibility of Security. Any information concerning Site casualties will only be transmitted to the EC.
 3. Following this Attachment through completion is strongly recommended. As designated, indicate the time completed on the line provided.
 4. Nuclear Security ensures emergency response personnel are notified in accordance with EM-206, Emergency Plan Roster Notification.
 5. If the Security Shift Supervisor is acting as the Security Coordinator he/she should transition to Attachment 1. The SSS designee will complete Attachment 2.

1.0 UNUSUAL EVENT

1. NOTIFY the Manager- Nuclear Plant Security or designee(s)..... (time)
2. NOTIFY Security Project Manager (PM) (time)
3. NOTIFY Security on call..... (time)
4. ADVISE the Security Force of the event (time)
5. NOTIFY personnel at the Nuclear Security Training Building (STB) and/or Site Administration Building (SAB) of the event (if applicable) (time)
6. PREPARE to cordon off affected area(s) surrounding the emergency ☐
7. CONSIDER requesting a dose rate instrument be placed in CAS by HP..... ☐
8. If directed, ACTIVATE Crystal River Energy Complex Siren System located in the Site Administrative Bldg (SAB)..... (time)

**SECURITY SHIFT SUPERVISOR'S (OR DESIGNEE'S)
SUGGESTED ACTION CHECKLIST (Cont'd)**

2.0 ALERT

1. As directed, ACTIVATE the ERO Notification System (ERONS) in accordance with EM-206..... (time)
2. NOTIFY ACP of ERO activation and ensure adequate staffing..... (time)
3. In the event of EOF and/or RTSC activation, ensure the ACP conducts turn-around for those responders that may need to be redirected to the EOF and/or RTSC..... (time)
4. NOTIFY all Security personnel to remain on assigned posts and await further instructions (time)
5. NOTIFY the Manager- Nuclear Plant Security or designee(s) of change in emergency conditions..... (time)
6. EVALUATE the need for additional Security support and advise the Superintendent, Security or designee(s) (time)
7. If directed, ACTIVATE Crystal River Energy Complex Siren System located in the Site Administrative Bldg (SAB)..... (time)

NOTE: Ensure all call-ins are directed to muster at the Nuclear Security Operations Center (NSOC) or designated alternate assembly area.

8. CALL-IN additional Security personnel as warranted..... (time)
9. ENSURE SEC-NGGC-2141 and SEC-92166 are complied with..... (time)
10. NOTIFY PM of change in emergency conditions (time)
11. PREPARE to transfer all duties to the TSC including a pass-a-long brief to the Security Coordinator in the TSC..... ☐
12. CONSIDER Security staffing of the EOF..... ☐

**SECURITY SHIFT SUPERVISOR'S (OR DESIGNEE'S)
SUGGESTED ACTION CHECKLIST (Cont'd)**

3.0 **SITE AREA EMERGENCY** - If an Alert was not declared prior to the Site Area Emergency declaration, COMPLETE actions listed under the Alert stage (Section B) prior to continuing. **[R1]**

1. As directed, ACTIVATE the ERO Notification System (ERONS), in accordance with EM-206..... (time)
2. NOTIFY ACP of ERO activation and ensure adequate staffing..... (time)
3. In the event of EOF and/or RTSC activation, ensure the ACP conducts turn-around for those responders that may need to be redirected to the EOF and/or RTSC (time)
4. CONFER with EOF Security Coordinator (if available), the EOF Director and/or EP personnel as to whether Security can provide access control at the EOF with a Security Officer(s). If not, EOF Security Coordinator (if available), the EOF Director and/or EP personnel should make arrangements with CCSO to provide access controls for the EOF (time)
5. EVACUATE the PA (upon order from the EC) including non-essential on-duty Security personnel. (Essential Security personnel should be assembled in a safe location, i.e., 143' Control Complex, TSC.)..... (time)
6. Per EM-205, DESIGNATE a Main Assembly Area Supervisor (MAAS) to be located at the Main Assembly Area (MAA) in the Site Administration Building (SAB) Auditorium (time)
7. ACTIVATE Crystal River Energy Complex Siren System located in the Site Administrative Building. (Reference SS-209)..... (time)
8. PERFORM Accountability (time)
9. NOTIFY the Security Coordinator in the TSC of accountability results within thirty (30) minutes..... (time)
10. INFORM the PM of the change in emergency conditions (time)
11. Have on-duty non-essential Security personnel REPORT to the NSOC..... ☐
12. PREVENT any unauthorized personnel from entering the PA ☐

**SECURITY SHIFT SUPERVISOR'S (OR DESIGNEE'S)
SUGGESTED ACTION CHECKLIST (Cont'd)**

13. Be PREPARED to enhance Access Control Point operations.
- a. Items needed:
- 1) List of CR3 badged personnel ☐
 - 2) List of company dignitaries ☐
 - 3) Current Energy Complex phone book (Hard copy if available) ☐
 - 4) Radios ☐
 - 5) Flashlights..... ☐
 - 6) Weapons and ammunition ☐
 - 7) Handcuffs..... ☐
 - 8) Intermediate weapons ☐
14. All movement within the PA should be made using the Protected Area map and contamination data available in the TSC (time)
15. PREPARE Security Vehicle(s) for possible departure - must have several radios..... ☐
16. DOCUMENT actions in appropriate logs and reports (See Enclosure 1 for suggested notes)..... ☐

**SECURITY SHIFT SUPERVISOR'S (OR DESIGNEE'S)
SUGGESTED ACTION CHECKLIST (Cont'd)**

- 4.0 **GENERAL EMERGENCY** - If an Alert and Site Area Emergency were not declared prior to the General Emergency declaration, REVIEW actions listed under the Alert stage (Section B) and Site Area Emergency stage (Section C) prior to continuing. **[R1]**
1. If an Energy Complex evacuation order is issued, ENSURE all non-essential (including Security) personnel evacuate per the provisions in SS-209 (time)
 2. ENSURE any remaining (essential) Security personnel are assembled in a safe location (i.e., 143' Control Complex, TSC.) (time)
 3. ACTIVATE Crystal River Energy Complex Siren System located in the Site Administrative Building. (Reference SS-209) (time)
 4. REPORT Accountability to the Security Coordinator in the TSC (SSS or designee is last to depart the PA) (time)
 5. REMOVE Facility Access Logs ☐
 6. OBTAIN a list of all CR3 badged employees..... ☐
 7. ASSEMBLE all necessary health and comfort items ☐
 8. DEPART to designated Security Assembly Point..... (time)
 9. NOTIFY TSC and EOF of your departure (time)
 10. DOCUMENT all actions in appropriate logs and reports (See Enclosure 1 for suggested notes)..... (time)
 11. NOTIFY TSC/EOF when you have set up at the alternative Security Assembly Point (time)

Summary of changes

The following changes were made in this revision (incorporates PRR 649998):

NOTE: Writers and reviewers; ensure that any changes to this procedure that affect information contained in ERF posters, Enclosures, briefing cards, guidelines, etc... are made to those items as well.

NOTE: Writers and reviewers: changes to certain parts of this procedure may impact other EIPs.

SECTION/STEP	CHANGES
Cover page	Replaced logo with new Duke Energy logo.
2.1.1; ATTACHMENT 1, note 1; & ATTACHMENT 2, note 1	Replaced security plan title with new Duke Energy title.
2.1.6, 9.4.6, & ATTACHMENT 2, step 2.0.9	Changed procedure number for SEC-NGGC-2166 to SEC-92166, new site specific procedure for Site Access Controls. (PRR 638740)
2.1.7 (new)	Added reference to SEC-92147, Reporting Of Safeguards And Fitness-For-Duty Events (PRR 649998)
2.1.16 (new)	Added reference to 10 CFR 73.71 for information regarding 1-hour security notifications for sabotage. (PRR 649998)
4.0.5, 9.3.1, & 9.3.2	Changed Nuclear Shift Manager to Shift Supervisor and NSM to SS, to match DTO organization titles.
Enclosure 1	Added more suggested notes that should be logged by the Security Coordinator in the TSC, as suggested by Security Coordinators.
ATTACHMENT 1, page 1 of 3, NOTE 5	Added direction for Security Coordinator to identify information regarding 10CFR73.71, 1-hour security notifications for sabotage and ensure the EC is aware and the ENS Communicator characterizes it properly. (PRR 649998) Added statement in "DOCUMENT" steps to "See Enclosure 1 for suggested notes".
ATTACHMENT 2, step 1.0.3 (new)	Added notification of "Security on call" at the suggestion of Security Coordinators. Added statement in "DOCUMENT" steps to "See Enclosure 1 for suggested notes".



I
Information
Use

CRYSTAL RIVER UNIT 3

PLANT OPERATING MANUAL

EM-500

**EQUIPMENT IMPORTANT TO EMERGENCY PREPAREDNESS
AND RESPONSE**

REVISION 1

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1.0 PURPOSE

1. This procedure includes a description of the plant equipment and emergency response facilities needed to implement the Crystal River 3 Radiological Emergency Response Plan and delineates compensatory measures to be used when the equipment is unavailable.

2.0 REFERENCES

1. 10 CFR 50.47(b), Emergency Plans
2. 10 CFR 50.54(q), Conditions of Licenses, Emergency Plans
3. 10 CFR 50.72, Immediate Notification Requirements for Operating Nuclear Power Reactors
4. 10 CFR 50.73, Licensee Event Report System
5. 10 CFR 50, Appendix A, General Design Criteria for Nuclear Power Plants, GDC 3, Fire Protection
6. 10 CFR 50, Appendix E, Emergency Planning and Preparedness for Production and Utilization Facilities
7. 10 CFR 50, Appendix R, Fire Protection Program for Nuclear Power Facilities Operating Prior to January 1, 1979
8. ADM0104, Work Implementation and Completion
9. Updated Final Safety Analysis Report (UFSAR)
10. INPO 10-007, Equipment Important to Emergency Response
11. NUREG-0654, Revision 1, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants"
12. NUREG-0696, "Functional Criteria for Emergency Response Facilities"
13. NUREG-0737, Clarification of TMI Action Plan Requirements
14. NUREG-1022, "Event Reporting Guidelines", 10 CFR 50.72 and 50.73
15. NUREG-1394, "Emergency Response Data System (ERDS) Implementation"
16. Offsite Dose Calculation Manual (ODCM)
17. CP-0151, External Reporting Requirements
18. RERP, Radiological Emergency Response Plan (RERP)
19. WCP0300, Work Request Initiation, Screening, Prioritization and Classification
20. EM-204A, Off-site Dose Assessment During Radiological Emergencies(Control Room Method)
21. EM-401, Set-up of the Emergency Operations Facility (Includes Set-up of the Emergency News Center).
22. HPP-409, Inventory and Availability of Emergency Supplies/Equipment
23. EM-211, Duties of the CR3 Nuclear Security Organization

24. OPS1000, Conduct of Operations During Decommissioning
25. EM-202, Duties of the Emergency Coordinator
26. EM-206, Emergency Response Organization Notification

3.0 DEFINITIONS/ABBREVIATIONS

1. **AARD:** Accident Assessment Ringdown
2. **AEF:** Alternate Emergency Facility
3. **Alternate Indication:** A backup means of monitoring a parameter or condition that should approximate the primary indication it is replacing.
4. **Category A (1) Equipment:** Equipment that provides the sole indication, or very little redundancy, for a parameter used to assess an Emergency Action Level (EAL) threshold.
5. **Category A (2) Equipment:** Equipment that provides a sole means of fulfilling an emergency response function.
6. **Category B Equipment:** Equipment that has redundant components or trains that fulfill an emergency response function or redundant indications for a parameter used to assess an Emergency Action Level (EAL) threshold.
7. **Commercial Phone system:** The Commercial phone system connects to offsite lines via transfer codes or use of outside line.
8. **Compensatory Measure:** A temporary means of mitigating the degradation or loss of an emergency response function or of maintaining the emergency response function until the equipment is restored to a fully functional condition.
9. **CR:** Control Room
10. **DARD:** Dose Assessment Ringdown System
11. **Degraded Condition:** A condition of a Structure, System, or Component (SSC) in which there has been any reduction in the qualification or functional capability. Examples include failures, malfunctions, deficiencies, deviations, and defective material and equipment. Aging, erosion, corrosion, improper operation and maintenance are examples of conditions that can reduce the capacity of a system.
12. **EMnet:** Florida Emergency Management Network
13. **Emergency Response Facility (ERF):** Facilities, buildings, and structures which are identified in the emergency plan and include systems and equipment that are used for emergency response during declared emergency plan events.
14. **ENC:** Emergency News Center
15. **EOF:** Emergency Operations Facility
16. **EP:** Emergency Preparedness (Unit or Staff)
17. **EPZ:** Emergency Planning Zone

18. **Equipment Important to Emergency Response (EIER):** Systems, structures and components, as well as essential tools and equipment, are necessary to implement the emergency plan. The level of detail used in tracking these items should be sufficient to allow the user to identify any loss or degradation of function that supports the emergency plan.
- a. Essential tools and equipment include, but are not limited to, such items as facility computer links to the plant computer, dedicated telephone lines, hand-held radiation survey meters, and air samplers.
 - b. In contrast, non-essential tools and equipment are those items which, although useful, would not result in a loss of function or diminish the emergency response capability and are not considered equipment important to emergency response.
19. **ERDS:** Emergency Response Data System
20. **ERO:** Emergency Response Organization
21. **Operable / Operability:** As defined in the plant Technical Specifications.
22. **OSC:** Operational Support Center
23. **PAX:** Public Address Exchange System
24. **PE Telephone System:** Consists of equipment utilized to contact on-site extensions. The system is used to communication to on-site specific locations.
25. **SGI:** Safeguards Information
26. **SHRD:** State Hot Ring Down System
27. **Timely Restoration:** Actions taken by site personnel to return degraded or out-of-service equipment to service commensurate with the significance of the associated emergency response function.
28. **TRM:** Technical Requirements Manual
29. **TSC:** Technical Support Center

4.0 RESPONSIBILITIES

4.1 Engineering

Responsible for ensuring that Engineering support is provided in the planning and execution of work on equipment essential to the ERO.

4.2 Radiation Control

Responsible for implementing the program that tests and inventories Radiological Emergency Kits, and Environmental Survey Vehicles in accordance with HPP-409, Inventory and Availability of Emergency Supplies/Equipment.

4.3 Maintenance

Responsible for ensuring that Maintenance support is provided for the following:
Testing and maintaining the on-site EIER in a timely manner

4.4 Operations

Responsible for ensuring that applicable actions, including identification, tracking, and compensatory measures, are taken when EP equipment or emergency response facilities are degraded or removed from service.

4.5 Outage and Scheduling

Responsible for ensuring that O&S support is provided for work on EP-related equipment within the scope of the work management program and that work is appropriately prioritized and scheduled (including corrective and preventive maintenance and testing).

4.6 Nuclear Plant Security

Responsible for ensuring that Security support is provided for testing and maintaining operability of the following:

- Security Fences
- Security Camera Systems
- Security Computers
- Security Communications

4.7 Digital Process Systems

Responsible for ensuring that Engineering support is provided for all process computers related to EIER

4.8 Emergency Preparedness (EP)

Responsible for maintaining oversight of EP facilities and equipment; having an awareness of the operational status of equipment essential to the ERO; and for ensuring that work and change-related processes include appropriate screening requirements to identify impacts on the EP program.

4.9 Licensing/Regulatory Programs

Responsible for providing guidance on compliance with the plant licensing basis and related reportability issues.

4.10 Telecommunications

Responsible for ensuring that Telecommunications support is provided for the communications equipment classified as EIER.

4.11 Chemistry and Environmental

Responsible for maintaining oversight and availability of lab analysis equipment for DEI and Count Room instrumentation; and for ensuring compensatory action are completed for equipment unavailability.

5.0 PREREQUISITES

When conducting a planned loss of an EIER ensure required redundant components are available and any applicable compensatory actions are in place prior to removing the EIER from service.

6.0 PRECAUTIONS, LIMITATIONS, AND NOTES

The Emergency Response Facilities, i.e., Control Room, Technical Support Center/Operational Support Center (TSC/OSC), Nuclear Security Operations Center (NSOC), Emergency Operations Facility (EOF), and the Emergency News Center (ENC), are described in the Emergency Response Plan (RERP) and supporting plant emergency procedures. All emergency facilities, including the AEF, must be maintained in a state of readiness and contain equipment required to respond to an emergency. Due to the broad scope of EP functions conducted from the emergency facilities, the loss of an ERF can have a significant impact on emergency plan implementation. Restoration of nonfunctional or degraded ERF's requires prompt management attention, and degraded or nonfunctioning equipment associated with these facilities will be restored in a timely manner.

7.0 SPECIAL TOOLS AND EQUIPMENT

None

8.0 ACCEPTANCE CRITERIA

None

9.0 INSTRUCTIONS

9.1 General Information

1. CR-3 is required to follow and maintain an emergency plan that meets the standards of 10 CFR 50.47(b) and 10CFR 50, Appendix E. Equipment required to meet these regulations must be capable of functioning at all times. If there is a loss of function, compensatory measures must be taken to restore the function, until the equipment is repaired.
2. Regulations that govern EP equipment (i.e., 10 CFR 50.47(b); 10 CFR 50, Appendix E; NUREG-0654; and NUREG-0696) may require more timely restoration than technical specification or other administrative controls and therefore, may require a higher priority work order.
3. There are specific reportability requirements in 10 CFR 50.72 for the loss of equipment important to EP. If there is a loss of function of equipment important to EP, the Supervisor-Licensing/Regulatory Programs (or designee) and Supervisor-Emergency Preparedness (or designee) will review the requirements, evaluate the loss of equipment, and make a determination regarding reportability.
4. The EP staff should be informed of the planned removal from service of equipment important to EP in order to ensure contingency plans are in place to satisfy the function while the equipment is out of service.
5. Attachment 2 includes a list of equipment important to emergency response, compensatory measures, the bases for the equipment, and the name of the group responsible for the equipment.
6. Attachment 1 provides flowchart guidance for a planned or unplanned loss of EP equipment.
7. Details of security systems and other equipment important to EP are considered safeguards information and are not described in this procedure. Instead, they are described in the Security Plan and supporting security procedures.

9.2 Planned or Unplanned loss of an EIER

Note

Use Attachment 1 as an aid to implement the Loss of EIER Process.

1. If an EIER listed in Attachment 2 is to be removed from service or is discovered to be inoperable **Then**,
 - a. Inform the Shift Supervisor and duty EP Manager
 - b. Refer to Attachment 2 to determine EIER Category and redundant components as appropriate:
 - 1) Insure redundant components or indications are available to assure ERF or emergency plan function is not impacted.
 - c. If redundancy has been lost or an emergency plan function is impacted upgrade category and priority of restoration.
 - d. EP Duty Manager determines impact on ERO and communicates compensatory actions to applicable ERO as needed.
 - e. Shift Supervisor evaluates reportability in accordance with CP-151 External Reporting Requirements
 - f. Implement compensatory actions as shown in Attachment 2.

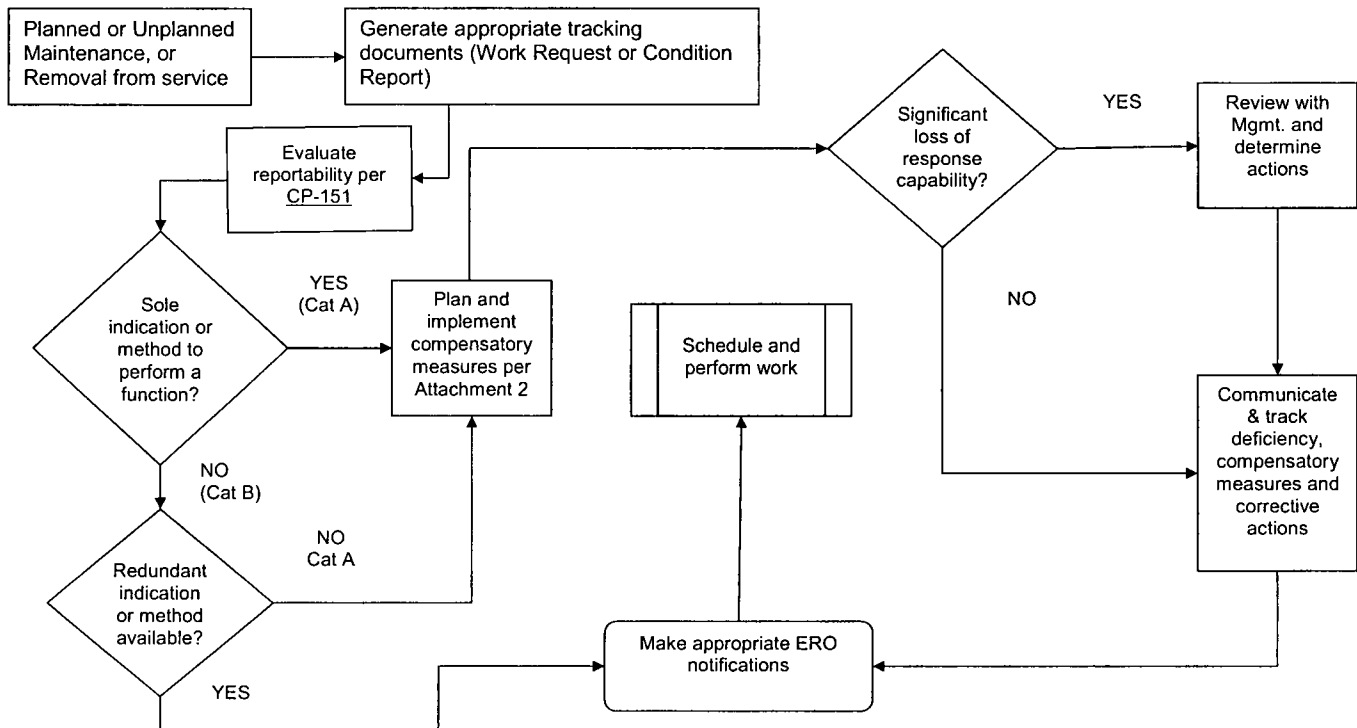
9.3 Reportability Determination Guidance

Refer to CP-151 External Reporting Requirements for reportability determination when an unplanned loss of an EIER occurs. Reportability for loss of emergency preparedness capabilities is defined in NUREG-1022, Revision 2, Event Reporting Guidelines, as "Any event that results in a major loss of emergency assessment capability, offsite response capability, or offsite communications capability (e.g., significant portion of Control Room indication, Emergency Notification System, or offsite notification system)."

10.0 RECORDS

None

Planned or Unplanned Loss of Equipment Important to EP



EIER list and Compensatory Actions

Equipment	Category	Basis /EAL	Compensatory Action
State Hot Ring Down System (SHRD)	B	NUREG-0654 (II.F) NUREG-0696	Use alternate communications equipment in accordance with <u>EM-202</u> Duties of the Emergency Coordinator to make notifications via Commercial phone system or EMnet.
Florida Emergency Management Network (EMnet)	B	NUREG-0654 (II.F) NUREG-0696	Use alternate communications equipment such as commercial phone systems, SHRD system, or cellular phones
Public Address Exchange System (PAX)	B	NUREG-0654 (II.F) NUREG-0696	Use alternate communication system such as PE telephone system, handheld radios, cellular telephones
Commercial phone system	B	NUREG-0654 (II.F) NUREG-0696	Use alternate communication system such as cellular phone, satellite phones, handheld radios, PAX system
PE Telephone system	B	NUREG-0654 (II.F) NUREG-0696	Use alternate communication systems such as cellular phones, or commercial telephone system
FTS-2001 Phone system including: Emergency Notification System (ENS), Health Physics Network (HPN), Reactor Safety Counterpart Link (RSCL), Protective Measures Counterpart Link (PMCL), Management Counterpart Link (MCL)	B	NUREG-0654 (II.F) NUREG-0696	Use commercial phone system as an alternate communication system.
Portable UHF Radios	B	NUREG-0654 (II.F) NUREG-0696	Use alternate communication system such as PE Telephone system, cellular telephones, PAX extensions

Equipment	Category	Basis /EAL	Compensatory Action
Accident Assessment Ringdown (AARD)	B	NUREG-0654 (II.F) NUREG-0696	Use PE telephone system, cellular telephones, handheld radios, PAX extensions, or satellite phones
Dose Assessment Ringdown System (DARD)	B	NUREG-0654 (II.F) NUREG-0696	Use PE telephone system, cellular telephones, handheld radios, PAX extensions, or satellite phones
Satellite Phones	B	NUREG-0654 (II.F) NUREG-0696	Use PE telephone system, cellular telephones, handheld radios, PAX extensions, or commercial; phone system.
State Law Enforcement Radio System (SLERS), Citrus County 800 MHz radio system	B		Use cellular phones or commercial phones systems.
Crystal River Energy Complex Sirens	A (2)		Use alternate notification system such as PAX notifications, Security sweeps of affected areas, notifications to Units 1/2 and 4/5 Control Rooms
Off Site Siren Notification System	B		Notify Citrus EOC to implement pre-planned alternative notification strategies
Plant Integrated Computer System(PICS) and OSI/PI	B	NUREG 0696 (4.7)	1. Manually collect data and communicate to specific ERF as needed.
Emergency Response Data System (ERDS)	B	10 CFR 50.47(b)(9); 10 CFR 50, Appendix E (IV.E.2); NUREG-0696 (1.3.5; 6)	2. Verbally transmit data to the NRC using the following communication lines: <ul style="list-style-type: none"> • ENS • Commercial telephones

Equipment	Category	Basis /EAL	Compensatory Action
Safety Parameter Display System (SPDS)	A (2)	NUREG-0696 (1.3.4; 2.9; 4.7; 4.8; 5) NUREG 0737, Supplement 1	Manually acquire SPDS data and communicate this information as needed to various ERF
Dose Assessment Software (RASCAL)	B	10 CFR 50.47(b) (9); 10 CFR 50, Appendix E (IV.E.2); NUREG-0654 (II.I.9); NUREG-0696 (4.8).	Relocate to another Duke Energy computer and perform dose assessment via accessing the RASCAL program. If Rascal program is unavailable perform offsite dose assessment in accordance with <u>EM-204A</u> Off-site Dose Assessment During Radiological Emergencies (Control Room Method)
TSC Emergency Diesel Generator and Transfer Switch. (MEDG-1, MEXS-2)	B	NUREG-0696 (2.6; 4.2); NUREG-0737 (II.B.2); GDC-19; GL-91-014	If ERO is activated and a loss of normal power occurs consider relocating the TSC to either the Alternate or Remote TSC location. This decision should be based on existing event conditions; coordinated with the Radiation Controls Coordinator; and approved by the EC.
TSC Ventilation System	A (2)	NUREG-0696 (2.6; 4.2); NUREG-0737 (II.B.2); GDC-19; GL-91-014	If ERO is activated, consider relocating the TSC to either the Alternate or the Remote TSC location. This decision should be based on existing event conditions; coordinated with the Radiation Controls Coordinator; and approved by the EC
ERONS 1 and ERONS 2 - ERO notification systems	B		Use redundant system if one of the ERONS fail or are not available. If both systems are not available, ERO notifications can be performed manually using commercial telephone systems.

Equipment	Category	Basis /EAL	Compensatory Action
Meteorological Monitoring System (MET Tower) (MPP-3)	B		Use data from the alternate meteorological tower (MPP-1).
EOF facility including emergency power and ventilation equipment	B		Emergency Diesel generator: Provide portable temporary power source or consider selecting an alternate location if normal power is lost to EOF. EOF Ventilation: Use portable ventilation equipment and open doors, or consider alternate location if habitability is not sustainable
Environmental Survey Vehicles	B		Use available Duke Energy vehicles
Assembly Areas: NAB, NSOC, PAB, Rusty Bldg, SAB, Shops	B		Designate an alternate assembly area if a particular assembly area is not available.
Access Control Point (ACP) Equipment:			
a. Back-up diesel-generator	B		Ensure normal power supply available; provide temporary back up power supply for planned outage.
b. ACP Readers	B		Use phone verification

Equipment	Category	Basis /EAL	Compensatory Action
Access Control Point (ACP) Equipment (Continued): c. Patriot Barriers (PSPG) and ACP Wedges GAT-PSVG-OC- 2A, GAT-PSVG-OC-2C, GAT- PSVG-OC-5A, GAT-PSVG-OC- 7A, GAT-PSVG_OC-8A, GAT- PSVG-OC-2B, GAT-PSVG-OC- 2D, GAT_PSVG-OC-5B, GAT- PSVG-OC-7B, GAT-PSVG-OC- 8B, GAT_PSPG-OC-1, GAT- PSPG-OC-2, GAT-PSPG-OC-3, GAT-PSPG-OC-4, GAT-PSVG-9	B		Take actions in accordance with SS0208 Compensatory Measures (SGI).
NSOC Turnstiles Egress (Minimum of 1 required) DOR-AG21A, DOR-AG21A	B		Take actions in accordance with <u>EM-211</u> Duties of the CR3 Nuclear Security Organization
NSOC Egress Portal Monitors (Minimum of 1 required)	B		Set up manual frisking stations at the direction of Health Physics.
NSOC Turnstiles Ingress (Minimum of 2 required) DOR-AG25A, DOR-AG25B, DOR-AG24A, DOR-AG24B	B		Take actions in accordance with SS0208 Compensatory Measures (SGI).

Equipment	Category	Basis /EAL	Compensatory Action
Search Train Equipment: ED-PSED-1, ED-PSED-2, ED-PSED-3, ED-PSED-4, MD-PSMD-1, MD-PSMD-2, MD-PSMD-3, MD-PSMD-4, XRA-PSPX-1, XRA-PSPX-2	B		Take actions in accordance with SS0208 Compensatory Measures (SGI).
ALL Security Readers	B		Take actions in accordance with SS0208 Compensatory Measures (SGI).
Primary Gates and Barriers GAT-PSVG-1, GAT-PSVG-5	B		Take actions in accordance with SS0208 Compensatory Measures (SGI).
Plant Security Computer (PSCS) CPU-PSCS-3C, CPU-PSCS-1S, CS-PSCS-1	A (2)		Take actions in accordance with SS0208 Compensatory Measures (SGI).
Security Printers: PRT-PSLP-1, PRT-PSLP-2 (1 of 2 required)	B		Use redundant equipment
Computer work station SAS/CAS 1 of 2 required	B		Use redundant equipment
RM-A1 Reactor Building Purge Exhaust	A (1)	1.1, 1.2, 1.3, 1.4	Use Sample analysis, or field survey to evaluate EAL
RM-A2 Auxiliary and Fuel Handling Building Exhaust Duct monitor	A (1)	1.1, 1.2, 1.3, 1.4	Use Sample analysis, or field survey to evaluate EAL

Equipment	Category	Basis /EAL	Compensatory Action
RM-L2 SW/RW Plant Discharge monitor	A (1)	1.5, 1.6	Use grab sample analysis to evaluate EAL
RM-L7 Station Drain Tank Discharge monitor	A (1)	1.5, 1.6	Use grab sample analysis to evaluate EAL
RM-G1 Control Room area radiation monitor	A (1)	1.8	Use local area survey data to evaluate EAL
RM-G3 Auxiliary Building Sample Room	A (1)	1.7, 1.8	Use local area survey data to evaluate EAL
RM-G4 RCA Entrance Corridor	A (1)	1.7, 1.8	Use local area survey data to evaluate EAL
RM-G5 Gas Decay Tank Area	A (1)	1.7, 1.8	Use local area survey data to evaluate EAL
RM-G9 Auxiliary Building near the Personnel Access Hatch	A (1)	1.7, 1.8	Use local area survey data to evaluate EAL
RM-G10 Makeup Pump Area	A (1)	1.7, 1.8	Use local area survey data to evaluate EAL
RM-G14 Fuel Storage Pool area monitor	A (1)	1.7	Use local area survey data to evaluate EAL
RM-G15 Fuel Handling Bridge Auxiliary Building	A (1)	1.10	Use local area survey data to evaluate EAL
RM-G16 Fuel Handling Bridge Reactor Building	A (1)	1.10	Use local area survey data to evaluate EAL
RM-G17 Reactor Building Near Personnel Hatch	A (1)	1.7, 1.8	Use local area survey data to evaluate EAL

Equipment	Category	Basis /EAL	Compensatory Action
RM-G29, RM-G30 Reactor Building Hi Range Radiation Monitors	B	5.1, 6.1, 7.2	Use redundant instrument if available, otherwise use local field surveys to evaluate EAL
Reactor Coolant System Leakage instrumentation as listed on Attachment 3	B	3.12	Calculate RCS leakage using alternate instrumentation as specified in the manual method in accordance with SP-317 RC System Water Inventory Balance
Radio-Chem Lab analysis equipment for DEI samples 1 of 3 detectors required	B	3.9, 5.1	Use redundant analysis equipment to process samples for DEI determination, Use RM-G29 or 30 reading or ICC curves for Fuel Clad integrity determinations
Nuclear Instrumentation NI-1, NI-2, NI-3, NI-4, NI-14, NI-15	B	3.14	Use redundant instrumentation to evaluate the EAL
RCS Temperature indication – RC-171-TR, RC-172-TR with 8 inputs each (IM-9H-TE, IM-5G-TE, IM-6C-TE, IM-9E-TE, IM-13G, IM-10O, IM-3L, IM-6O, IM-7F, IM-2G, IM-10C, IM-11G, IM-10M, IM-13L, IM-4N, IM-6L) (Indications also available on SPDS)	B	3.13, 3.15, 3.16, 4.4, 7.2	Use indications on redundant instrument panel or SPDS to evaluate EAL.
DH-2-TE1, DH-2-TE2 DHHE-1A (1B) Outlet Temperature	B	3.15	Use redundant temperature indications to evaluate EAL
Seismic Instrumentation-(SI-1-MAT, SI-1-MAS, SI-1-MR, SI-2-MAT, SI-2-MR, SI-3-MAT, SI-3-MR)	B	2.1, 2.2	Use redundant instrumentation if available, otherwise contact the US Geological Survey at 303-273-8500 to obtain data to evaluate EAL

Equipment	Category	Basis /EAL	Compensatory Action
Reactor Building Pressure-BS-90-PI, BS-91-PI	B	7.1, 7.2	Use redundant instrumentation to evaluate EAL
Reactor Building Sump Level, WD-303-LI, WD-304-LI	B	7.1, 7.2	Use redundant instrumentation to evaluate EAL
Reactor Building Hydrogen Monitor, WS-10-CE, WS-11-CE	B	7.2	Use redundant instrumentation or Hydrogen analysis data from Reactor Building atmosphere sample to evaluate EAL
Pressurizer Level: RC-1-LT1, RC-1-LT2, and RC-1-LT3	B	6.2	Use redundant instrumentation to evaluate EAL
Pressurizer Relief Safety Valve Acoustic Elements: RC-160-ME1, RC-160-ME2, RC-160-ME3	B	6.2	Use alternate indications such as Pressurizer Code Safety Valve Temperature and RCDT level to determine valve position to evaluate EAL
RC Wide Range T-Cold Temperature: RC-5A-TE2, RC-5A-TE4, RC-5B-TE2, RC-5B-TE4	B	6.2	Use redundant instrumentation to evaluate EAL
RC Wide Range Pressure: RC-3A-PT3, RC-3A-PT4, RC-3B-PT3	B	6.2, 7.2	Use redundant instrumentation to evaluate EAL
Pressurizer Code Safety Valve Temperature: RC-17-TE1, RC-17-TE2, and RC-17-TE3	B	6.2	Use alternate indications such as RCDT level and acoustic elements to determine valve positions to evaluate EAL

Reactor Coolant System Leakage Instrumentation

Description	Recall/Computer Point	Description	Recall/Computer Point
RCDT Pressure	U3RECL-68	T-Hot (A loop)	U3R226
RCDT Temperature	U3RECL-69	T-Hot (A loop)	U3R227
RCDT Level	U3X368	T-Hot (B loop)	U3R228
MUT Pressure	U3X401	T-Hot (B loop)	U3R229
MUT Temperature	U3X208	T-Cold (A loop)	U3R214
MUT Level	U3X359	T-Cold (A loop)	U3R215
PZR Temperature	U3R203	T-Cold (B loop)	U3R216
PZR Level	U3R874	T-Cold (B loop)	U3R217
RC Pressure (A loop)	U3R222	RCP-1A CBO Flow	U3X922
RC Pressure (A loop)	U3R223	RCP-1B CBO Flow	U3X923
RC Pressure (B loop)	U3R224	RCP-1C CBO Flow	U3X924
RC Pressure (B loop)	U3R225	RCP-1D CBO Flow	U3X925

Summary of Changes

PRR 00616624

SECTION/STEP	CHANGE
Throughout	Revision 01 of EM-500 incorporates information from EMG-NGGC-007, Equipment Important to Emergency Preparedness and Response, and incorporates various human factor changes and formatting changes.
Title page	Changed logo to Duke Energy logo (editorial)
Table of Contents & Section 4.0	Changed titles of sections to the department versus the supervisor or manager of the department, due to changing titles. (editorial)
2.0 References	Changed fleet references to site-specific procedures for ADM0104, WCP0300, & OPS1000. (editorial). Removed references to fleet procedures EMG-NGGC-0004, EMG-NGGC-0005, and EMG-NGGC-0007 that no longer are used or apply to CR3. Added new procedure EM-206, Emergency Response Organization Notification
Note at 3.0	Deleted note for reference to EMG-NGGC-0007 that no longer applies at CR3
3.0	Added definition for Alternate Indication, as it applies to backup indication for monitoring from EMG-NGGC-0007). Added definitions for Degraded Condition and Timely Resolution from EMG-NGGC-0007. Deleted ERFIS definition as this does not apply to CR3. Added definition for SGI (safeguards information) as it is used in Attachment 2 but not spelled out.
New 3.0.18	Expanded definition of Equipment Important to Emergency Response (EIER) from EMG-NGGC-0007.
Old section 7.0, Attachment 2	Created attachment and moved EIER information in its entirety from section 7.0 and reformatted for human factoring. Clarified relocation area(s) for recommendation for Remote or Alternate TSC (PRR 616624). Corrected title for Radiation Controls Coordinator per request of RP dept.
9.1	Incorporated General Information items from EMG-NGGC-0007
9.1.6	Added the word "flowchart" to better define the guidance in Attachment 1. (editorial)
Section 9.2 (old 9.1.2 & 9.1.3)	Combined instructions for "Planned" and "Unplanned" Loss of Equipment Important to EP, for human factoring.
9.2.1.a & e.	Changed the title of Shift Manager to Shift Supervisor for consistency with other EM procedures
9.2 and 9.3	Corrected sub-section and step numbering throughout section 9.0, Instructions, and updated table of contents.
Attachment 1 and old Attachment 2	Revised flowchart and incorporated two attachments into one for "Planned" and "Unplanned" Loss of Equipment Important to EP, for human factoring.
Attachment 3	Created new Attachment to better capture for human factoring, the equipment list for Reactor Coolant System Leakage Instrumentation (moved in its entirety from old section 7.15.16).

Revision 17

Effective Date _____

EMERGENCY ACTION LEVEL BASES MANUAL

PROGRESS ENERGY

CRYSTAL RIVER UNIT 3

APPROVED BY: Manual Owner

(SIGNATURE ON FILE)

DATE: _____

RESPONSIBLE UNIT:
Emergency Preparedness

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1.0 PURPOSE

This manual provides basis information for the Emergency Action Levels (EALs) contained in the Radiological Emergency Response Plan and implementing procedures. For each EAL, specific assumptions and background information are listed along with rationale explaining why the condition requires the declaration of an emergency.

Any revision to this manual must be carefully considered for impact on the Radiological Emergency Response Plan.

This manual also provides administrative control guidance for distribution and revision.

2.0 REFERENCES

2.1 DEVELOPMENTAL REFERENCES

- 2.1.1 NEI 97-03, Draft Final Revision 3, October 1998 (formerly NUMARC/NESP-007), Methodology for Development of Emergency Action Levels
- 2.2.2 Improved Technical Specifications
- 2.2.3 PRO-NGGC-204, Procedure Review and Approval
- 2.2.4 Radiological Emergency Response Plan (RERP)
- 2.2.5 REG-NGGC-0010, 10 CFR 50.59 Reviews
- 2.2.6 NRC Regulatory Issue Summary 2003-18, Use of NEI 99-01, "Methodology for Development of Emergency Action Levels," Revision 4, Dated January 2003.
- 2.2.7 NEI 99-01, "Methodology for Development of Emergency Action Levels," Revision 5, Dated February 2008
- 2.2.8 NCR 67029 assignment 24 documents calculation of Fission Product Barrier Matrix 5.1 sample line dose rate indication of coolant activity.
- 2.2.9 NRC Bulletin 2005-02, "Emergency Preparedness and Response Actions for Security-based Events".
- 2.2.10 EMG-NGGC-0010, Emergency Plan Change Screening and Evaluation 10 CFR 50.54(q)(3)
- 2.2.11 EMG-NGGC-1000, Fleet Conduct of Emergency Preparedness
- 2.2.12 Gilbert/Commonwealth Evaluation, "Internal Flooding of Power Plant Buildings", FCS-9852, October 12, 1988
- 2.2.13 Engineering Evaluation EC 86189

3.0 PERSONNEL INDOCTRINATION

3.1 DEFINITIONS

- 3.1.1 **AIRCRAFT:** Aircraft smaller than an AIRLINER.

- 3.1.1.1 **AIRLINER:** A large aircraft with the potential for causing significant damage to the Plant. (The NRC notification should designate aircraft vs. airliner.)
- 3.1.2 **BOMB:** An explosive device suspected of having sufficient force to damage Plant systems or structures. (See EXPLOSION.)
- 3.1.3 **CIVIL DISTURBANCE:** A group of persons violently protesting station operations or activities at the site. A civil disturbance is considered violent when force has been used in an attempt to injure site personnel or damage Plant property.
- 3.1.4 **COMMITTED DOSE EQUIVALENT (CDE):** Dose to an organ (e.g., thyroid) due to the intake of radioactive materials.
- 3.1.5 **CREDIBLE SITE-SPECIFIC SECURITY THREAT NOTIFICATION** – A threat specifically to CR3 confirmed and validated by Site Security or received over the Emergency Notification System (ENS) from the (Nuclear Regulatory Commission) NRC. Notification may be received from recognized law enforcement or governmental agencies (e.g. Federal Bureau of Investigation (FBI), Florida Department of Law Enforcement (FDLE), Division of Emergency Management (DEM), NRC.)
- 3.1.6 **EXPLOSION:** A rapid, violent, unconfined combustion, or a catastrophic failure of pressurized equipment that imparts energy of sufficient force to potentially damage permanent structures, systems, or components.
- 3.1.7 **EXTORTION:** An attempt to cause an action at CR3 by threat of force. Bomb threats that are unsubstantiated are NOT included in this definition.
- 3.1.8 **FIRE:** Combustion characterized by heat and light. Sources of smoke such as slipping drive belts or **overheated** electrical equipment do not constitute fires. Observation of flame is preferred but is NOT required if large quantities of smoke and heat are observed.
- 3.1.9 **HOSTAGE:** A person or object held as leverage against the station to ensure that demands will be met by CR3.
- 3.1.10 **HOSTILE ACTION:** An act toward a nuclear power Plant or its personnel that includes the use of violent force to destroy equipment, take hostages, and/or intimidate the licensee to achieve an end. This includes attack by air, land, or water using guns, explosives, projectiles, vehicles, or other devices used to deliver destructive force. Other acts that satisfy the destructive intent may be included. Hostile action should not be construed to include acts of civil disobedience or felonious acts that are not part of a concerted attack on the nuclear power Plant. Non-terrorism-based EALs should be used address such activities (e.g., violent acts between individuals in the OWNER CONTROLLED AREA).
- 3.1.11 **HOSTILE FORCE:** One or more individuals who are engaged in a determined assault, overtly or by stealth and deception, equipped with suitable weapons capable of killing, maiming, or causing destruction.
- 3.1.12 **IDLH LEVEL:** Level of toxic gas Immediately Dangerous to Life or Health.

- 3.1.13 **INTRUSION/INTRUDER:** Suspected hostile individual (outsider) present in the Protected Area without authorization. An intruder also includes a badged employee (insider) attempting to commit or providing assistance to others in committing sabotage. These activities may occur while the insider is either physically inside or outside the Protected Area. Upon identification, the insider's authorization is immediately revoked by Site Security.
- 3.1.14 **MODES:** The ITS based designator of Plant status based on Reactivity, Temperature and RCS status and includes operating modes 1 through 6 and defueled (no mode) as applicable. The term "MODES:ALL" applies to MODES 1-6 and defueled (no mode).
- 3.1.15 **OWNER-CONTROLLED AREA:** The area of land (approximately 4738 acres) that is owned, leased, or otherwise controlled by DEF, situated between the mouths of the Withlacoochee and Crystal Rivers and bounded to the north by woodlands, to the east by Highway 19, to the south by medium to dense woodlands and to the west by marshlands and the Gulf of Mexico. The OWNER CONTROLLED AREA is indicated in Figure 2-3 of the FSAR and encompasses both the PROTECTED AREA and the SITE BOUNDARY.
- 3.1.16 **PROTECTED AREA:** All areas within the CR3 security perimeter fence that require badged authorization for entry.
- 3.1.17 **RCS BARRIER:** The RCS primary side and its connections up to and including the pressurizer safety and relief valves, and other connections up to and including the primary isolation valves. An isolable leak in an interfacing or connecting system that contains reactor coolant (MU, DH, SF, WD, etc.) is NOT an "RCS leak."
- 3.1.18 **SABOTAGE:** Deliberate damage, mis-alignment, or mis-operation of Plant equipment with the intent to render the equipment unavailable. Equipment found tampered with or damaged due to malicious mischief may NOT meet the definition of SABOTAGE until this determination is made by Site Security.
- 3.1.19 **SAFE SHUTDOWN EQUIPMENT:** Equipment necessary to achieve and maintain the reactor subcritical with controlled decay heat removal to bring the Plant to the ITS applicable shutdown condition/mode.
- 3.1.20 **SECURITY CONDITION:** Any Security Event as listed in the approved security contingency plan that constitutes a threat/compromise to site security, threat/risk to site personnel, or a potential degradation to the level of safety of the plant. A SECURITY CONDITION does not involve a HOSTILE ACTION.
- 3.1.21 **SIGNIFICANT TRANSIENT:** An UNPLANNED event involving one or more of the following:
- (1) Automatic turbine trip at >25% reactor thermal power
 - (2) Electrical load rejection >25% full electrical load
 - (3) Plant runback
 - (4) Reactor trip
 - (5) Safety injection system actuation
 - (6) >10% thermal power oscillations
 - (7) Loss of decay heat removal in Mode 4 ("Significant Transient" is NOT used in any Mode 5 or 6 EALs.)

- 3.1.22 **SITE BOUNDARY:** That area, including the PROTECTED AREA, that extends 4400 feet or 0.83 miles in a circle around the Reactor Building
- 3.1.23 **STRIKE ACTION:** Is a work stoppage within the PROTECTED AREA by a body of workers to enforce compliance with demands made. The strike actions must threaten to interrupt normal Plant operations.
- 3.1.24 **TOTAL EFFECTIVE DOSE EQUIVALENT (TEDE):** The sum of external dose (DDE) and the equivalent amount of whole body dose due to individual organ uptakes.
- 3.1.25 **UNPLANNED:** An event or action is UNPLANNED if it is NOT the expected result of normal operations, testing, or maintenance. Events that result in corrective or mitigative actions being taken in accordance with abnormal or emergency procedures are UNPLANNED.
- NOTE:** With specific regard to radioactive releases, a release of radioactivity is UNPLANNED if the release is NOT authorized by a Release Permit or exceeds the conditions (e.g., minimum dilution flow, maximum discharge flow, alarm setpoints, etc.) on the applicable permit.
- 3.1.26 **VALID:** An indication or report or condition is considered VALID when it is conclusively verified by (1) an instrument channel check, or (2) indications on related or redundant indicators, or (3) by direct observation by Plant personnel, such that doubt related to the indicator's operability, the condition's existence, or the report's accuracy is removed. Implicit in this definition is the need for timely assessment (e.g., within 15 minutes).
- 3.1.27 **VISIBLE DAMAGE:** Damage to equipment or structure that is readily observable without measurements, testing, or analyses. Damage is sufficient to cause concern regarding the continued operability or reliability of affected safety structure, system, or component. Example system/component damage includes: deformation due to heat or impact, denting, penetration, rupture, cracking, paint blistering due to fire. Example structure damage includes exposed and/or broken rebar, failed supports/pipe hangers, etc. Surface blemishing (e.g., paint chipping, scratches, concrete spalling) should NOT be included.
- 3.1.28 **VITAL AREA:** Any area, normally within the PROTECTED AREA, that contains equipment, systems, components, or material, the failure, destruction, or release of which could directly or indirectly endanger the public health and safety by exposure to radiation.
- 3.2 RESPONSIBILITIES**
- 3.2.1 The Emergency Planning Coordinator (EPC) has the responsibility for interpretation and maintenance of this manual.
- 3.2.2 The Emergency Coordinator has the responsibility to use this manual as necessary to classify emergency conditions and identify to the EPC corrections, clarifications, or the need for additional information.
- 3.2.3 Document Services has the responsibility to control issue and distribution of this manual.

4.0 INSTRUCTIONS

4.1 USE OF THE MANUAL

- 4.1.1 LOCATE the desired EAL basis in Attachment 1 using the EAL number in the upper right corner or the title of the Fission Product Barrier.
- 4.1.2 IF a transient event condition is corrected before a declaration is made, AND analyses of the event is NOT required to determine whether further Plant damage occurred while corrective actions were being taken, THEN a declaration is NOT warranted but the event is reported and notification made to the NRC Operations Center via ENS within one hour of the event, AND ENSURE the Emergency Preparedness staff is notified to NOTIFY the State and Local Governments on the next working day (e.g., the PORV (RCV-10) develops a leak or fails open with a leak rate of >25 gpm and the block valve (RCV-11) is closed and successfully isolates the leak to less than the EAL threshold)

4.2 MAINTENANCE OF THE MANUAL

- 4.2.1 MAINTAIN controlled copies of this manual in the Main Control Room, Technical Support Center (TSC), Emergency Operations Facility (EOF), and the Simulator Control Room.
- 4.2.2 IDENTIFY potential revisions to the manual to the EPC and document in a Document Revision Request (DRR).
- 4.2.3 DETERMINE if the changes decrease the effectiveness of the RERP by completing REG-NGGC-0010 (10 CFR 50.54(q)).
- 4.2.4 ENSURE changes comply with the requirements of EMG-NGGC-0010, Emergency Plan Change Screening and Evaluation 10 CFR 50.54(q)(3) and EMG-NGGC-1000, Fleet Conduct of Emergency Preparedness.
- 4.2.5 REVISE EM-202 as necessary and issue concurrently with the EAL Bases Manual.

ATTACHMENT 1

PROGRESS ENERGY

CRYSTAL RIVER UNIT 3

EMERGENCY ACTION LEVEL BASES

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FISSION PRODUCT BARRIER MATRIX BASIS

The Fission Product Barrier Matrix determines an emergency classification by assessing the status of fuel cladding, the Reactor Coolant System, and Containment. For each barrier, the matrix provides a list of symptoms of loss and a list of symptoms of potential loss. If one or more of the loss symptoms exists, the barrier is considered lost. If NO loss symptoms are present, but one or more of the potential loss symptoms exists, the barrier is considered potentially lost. Emergency classification based on barrier status is shown below.

GENERAL EMERGENCY:

- Loss of all three barriers
- Loss of two of three barriers with a potential loss of the third

SITE AREA EMERGENCY:

- Loss of any two barriers
- Loss of any barrier with potential loss of the other two
- Loss of any barrier with potential loss of another
- Potential loss of any two barriers

ALERT:

- Loss or potential loss of fuel clad
- Loss or potential loss of RCS

UNUSUAL EVENT:

- Loss or potential loss of containment

The Matrix simplifies the determination of the emergency classification by assigning points based on the loss or potential loss of each barrier. The sum of the points for all three barriers corresponds to an emergency classification.

Fuel Clad:	Loss = 4	Potential Loss = 3
RCS:	Loss = 4	Potential Loss = 3
Containment:	Loss = 2	Potential Loss = 1.5

>0 BUT \leq 2 Unusual Event

>2 BUT \leq 4 Alert

>4 BUT \leq 8.5 Site Area Emergency

>8.5 General Emergency

FISSION PRODUCT BARRIER MATRIX BASIS (Continued)

FUEL CLAD LOSS INDICATIONS

5.1 LOSS OF FUEL CLAD If any item is checked, barrier is lost.	
1. CORE CONDITIONS IN REGION 3 OR SEVERE ACCIDENT REGION OF ICC CURVES	
2. RCS ACTIVITY >300 $\mu\text{Ci/gm I-131}$ DOSE EQUIVALENT	
3. RM-G29 OR 30 >100 R/hr FOR 15 MINUTES OR LONGER	
4. EC DEEMS FUEL CLAD BARRIER IS LOST	

1. CORE CONDITIONS IN REGION THREE OR SEVERE ACCIDENT REGION OF INADEQUATE CORE COOLING CURVES (REFER TO EOP-07)

The initial core damage assessment curve is used to relate the observable parameters of incore temperature and RCS pressure to clad temperature. In region three or the severe accident region, elevated clad temperatures may exceed temperatures that will lead to zirc/water reactions and rapid failure of the clad will occur if NOT halted.

2. RCS ACTIVITY >300 $\mu\text{Ci/gm I}^{131}$ DOSE EQUIVALENT

This amount of coolant activity is well above that expected for iodine spikes and corresponds to about 2% to 5% fuel clad damage. This amount of clad damage indicates significant clad heating and thus the Fuel Clad Barrier is considered lost. In the absence of sample results, this coolant activity may be determined indirectly by measuring dose rates on sample lines. 100 mR/hr as measured by RM-G3 or portable instrument at two feet from the sample lines in the Nuclear Sample Room or 50 mR/hr measured by portable instrument two feet from sample lines in the PASS sample room are a conservative indication of this coolant activity.

3. RM-G29 OR 30 >100 R/HR FOR 15 MINUTES OR LONGER

Monitor readings have increased and are sustained, NOT spikes. Readings of >100 R/hr⁽¹⁾ on these monitors indicate activity in the Reactor Building above what would be expected for normal reactor coolant. The 15 minutes will aid in accounting for spikes and uneven mixing that occurs in the initial phases of an RCS leak in the RB. High initial concentrations that accumulate in the upper portion of the RB may lead to erroneous fuel damage assumptions.

4. EC DEEMS FUEL CLAD BARRIER IS LOST

Based on Emergency Coordinator judgment.

NOTE (1): Information on the selection of this value is in Attachment 2.

FISSION PRODUCT BARRIER MATRIX BASIS (Continued)

FUEL CLAD POTENTIAL LOSS INDICATIONS

5.2 POTENTIAL LOSS OF FUEL CLAD If any item is checked, barrier is potentially lost.	
1. ENTRY INTO EOP-07 BY PROCEDURAL DIRECTION	
2. CORE EXIT THERMOCOUPLES >700°F	
3. EC DEEMS FUEL CLAD BARRIER IN JEOPARDY	

1. ENTRY INTO EOP-07 BY PROCEDURAL DIRECTION

EOP-07 is the "Inadequate Core Cooling" procedure which indicates that there are superheated conditions in the core which may lead to clad degradation.

2. CORE EXIT THERMOCOUPLES >700°F

700°F is a good indicator of an extreme challenge to the ability to cool the core. Temperatures are determined using guidance in EOP-07.

3. EC DEEMS FUEL CLAD BARRIER IN JEOPARDY

Based on Emergency Coordinator judgment.

FISSION PRODUCT BARRIER MATRIX BASIS (Continued)

RCS LOSS INDICATIONS

6.1 LOSS OF REACTOR COOLANT SYSTEM If any item is checked, barrier is lost	
1. RCS LEAK OR OTSG TUBE LEAK RESULTING IN LOSS OF ADEQUATE SUBCOOLING MARGIN	
2. RM-G29 OR 30 > 10 R/hr FOR 15 MINUTES OR LONGER	
3. EC DEEMS RCS BARRIER IS LOST	

1. RCS LEAK OR OTSG TUBE LEAK RESULTING IN LOSS OF ADEQUATE SUBCOOLING MARGIN (SCM)

A loss of adequate SCM resulting from RCS leakage would indicate that the rate of leakage from the RCS is exceeding the rate of addition from the injection system. In addition, with a loss of SCM, accurate RCS inventory cannot be determined. Therefore, the RCS boundary should be considered lost any time adequate SCM is lost due to leakage, including HPI/PORV or HPI/safety valve cooling. If SCM is regained during HPI/PORV or HPI/safety valve cooling, refer to RCS Potential Loss Factor #4.

NOTE: The momentary loss of subcooling margin that occurs with some trips from reduced pressure does NOT meet the intent of the loss of SCM and loss of RCS.

2. RM-G29 OR 30 > 10 R/hr FOR 15 MINUTES OR LONGER

The reading of > 10 R/hr⁽¹⁾ is a value, which indicates the release of reactor coolant to the containment. The reading is based on RCS activity in normal operation concentrations.

3. EC DEEMS RCS BARRIER IS LOST

Based on Emergency Coordinator judgment.

NOTE (1): Information on the selection of this value is in Attachment 2.

FISSION PRODUCT BARRIER MATRIX BASIS (Continued)

RCS POTENTIAL LOSS INDICATIONS

6.2 POTENTIAL LOSS OF REACTOR COOLANT SYSTEM If any item is checked, barrier is potentially lost.	
1. RCS LEAK OR OTSG TUBE LEAK REQUIRING ONE OR MORE INJECTION VALVES	
2. RCS LEAK OR OTSG TUBE LEAK RESULTS IN ES ACTUATION ON LOW RCS PRESSURE	
3. RCS PRESSURE/TEMPERATURE RELATIONSHIP VIOLATES NDT LIMITS	
4. HPI/PORV OR HPI/SAFETY VALVE COOLING IS IN PROGRESS	
5. EC DEEMS RCS BARRIER IN JEOPARDY	

1. RCS LEAK REQUIRING ONE OR MORE INJECTION VALVES

By procedure, the HPI injection valves will be used to increase RCS inventory if pressurizer level CANNOT be maintained greater than 50 inches with letdown isolated. Thus, the use of one or more injection valves would indicate leakage in excess of the normal makeup capability and therefore a potential loss of the RCS barrier. If an injection valve is being used for normal makeup, then the use of a second valve would constitute an RCS potential loss.

OR

OTSG TUBE LEAK REQUIRING ONE OR MORE INJECTION VALVES

By procedure (EOP-06), the HPI injection valves will be used to increase RCS inventory if pressurizer level CANNOT be maintained at 200 inches during a tube leak event. Thus, the use of one or more injection valves would indicate leakage in excess of the normal makeup capability and therefore a potential loss of the RCS barrier. If an injection valve is being used for normal makeup, then the use of a second valve would constitute an RCS potential loss.

2. RCS LEAK OR OTSG TUBE LEAK RESULTS IN ES ACTUATION ON LOW RCS PRESSURE

Should the injection system fail or the operator fail to open the injection valves upon a failure of the Makeup system to maintain RCS inventory, RCS pressure will decrease to the ES actuation setpoint. This potential loss factor in addition to number one (above) will ensure that the RCS barrier will be considered potentially lost for any inability of the makeup system to maintain adequate inventory during a loss of coolant or OTSG tube leak event.

3. RCS PRESSURE TEMPERATURE RELATIONSHIP VIOLATES NDT LIMITS.

RCS conditions of high pressure accompanied by low temperature increase the potential for Reactor Coolant System brittle failure. This potential loss factor will ensure that the RCS barrier is considered potentially lost whenever the system is at risk of a non-ductile failure.

4. HPI/PORV OR HPI/SAFETY VALVE COOLING IN PROGRESS.

This method of cooling represents a failure of the OTSGs to remove heat from the core. The PORV must be opened to initiate cooling through the high pressure injection system. In effect, a self-imposed loss of coolant is established. The magnitude of this Plant condition is appropriately classified as an ALERT.

5. EC DEEMS RCS BARRIER IN JEOPARDY

Based on Emergency Coordinator judgment.

FISSION PRODUCT BARRIER MATRIX BASIS (Continued)

CONTAINMENT LOSS INDICATIONS

7.1 LOSS OF CONTAINMENT If any item is checked, barrier is lost.	
1. RAPID UNEXPLAINED RB PRESSURE DECREASE FOLLOWING INITIAL INCREASE	
2. CONTAINMENT PRESSURE OR SUMP LEVEL RESPONSE NOT CONSISTENT WITH LOCA CONDITIONS	
3. AN OTSG HAS > 10 GPM TUBE RUPTURE WITH PROLONGED STEAMING TO THE ATMOSPHERE FROM THE AFFECTED OTSG OR AN UNISOLABLE STEAM LEAK OUTSIDE RB FROM THE AFFECTED OTSG	
4. CONTAINMENT ISOLATION IS INCOMPLETE AND RELEASE PATH TO THE ENVIRONMENT EXISTS	
5. EC DEEMS CONTAINMENT BARRIER IS LOST	

1. RAPID UNEXPLAINED RB PRESSURE DECREASE FOLLOWING INITIAL INCREASE

During a loss of coolant event, RB pressure should rise to some value determined by the size of the leak and the response of the RB cooling systems. Following the initial peak, RB pressure should exhibit a steady decreasing trend. Any deviation from this should be the result of a known change in Plant status. A rapid decrease of unknown cause is therefore indicative of possible containment failure.

2. CONTAINMENT PRESSURE OR SUMP LEVEL NOT CONSISTENT WITH LOCA CONDITIONS

Sump level or containment pressure NOT increasing indicates containment bypass and a loss of containment integrity.

3. AN OTSG HAS >10 GPM TUBE RUPTURE WITH PROLONGED STEAMING TO THE ATMOSPHERE FROM AFFECTED OTSG OR AN UNISOLABLE STEAM LEAK OUTSIDE RB FROM THE AFFECTED OTSG

This condition is met by any of the following:

- a) Intermittent or continuous use of the Atmospheric Dump Valve (ADV) (such as during a Loss of Off-Site Power) on the OTSG with the > 10 gpm tube rupture.
- b) Open Main Steam Safety Valve (MSSV) on the OTSG with the > 10 gpm tube rupture that is not reseated within 15 minutes.
- c) Failure of a pipe, valve, etc. on the OTSG with the > 10 gpm tube rupture that results in a direct steam path to the environment and is not isolated within 15 minutes.

NOTE:

- Lifting of an MSSV during a Plant Trip is NOT prolonged steaming if it is reseated within 15 minutes.
- If an OTSG has been successfully isolated in accordance with EOPs, then prolonged steaming NO longer exists.
- Steaming the faulted OTSG to the condenser is NOT considered prolonged steaming to the atmosphere even though there may be minor unmonitored release pathways through vents and other normal flow paths.
- If EFP-2 is running, it is NOT considered prolonged steaming if the associated steam supply valve (MSV-55 or -56) from the faulted OTSG is closed in accordance with EOPs. There is no time frame associated with the closing of the steam supply valve. If the valve cannot be closed in accordance with EOPs, then prolonged steaming exists.

FISSION PRODUCT BARRIER MATRIX BASIS (Continued)

CONTAINMENT LOSS INDICATIONS (Continued)

4. *CONTAINMENT ISOLATION IS INCOMPLETE AND RELEASE PATH TO THE ENVIRONMENT EXISTS*

This factor should be used any time an incomplete RB isolation results in a direct path from the RB atmosphere to the environment. The conditions expected for this EAL would be a known path or a visual indication of the failure or path. Confirmation may be from elevated radiation readings in areas adjacent to the RB (e.g. Aux. Bldg., Intermediate Bldg., Berm). Entry into this EAL is NOT intended to be made solely due to the Plant's inability to meet the acceptance criteria for penetration surveillances.

5. *EC DEEMS CONTAINMENT BARRIER IS LOST*

Based on Emergency Coordinator judgment. Entry into this EAL is NOT intended to be made solely due to the Plant's inability to meet the acceptance criteria for penetration surveillances.

FISSION PRODUCT BARRIER MATRIX BASIS (Continued)

CONTAINMENT POTENTIAL LOSS INDICATIONS

7.2 POTENTIAL LOSS OF CONTAINMENT If any item is checked, barrier is potentially lost.	
1. RB PRESSURE >54 psig	
2. RB HYDROGEN CONCENTRATION >4%	
3. RB PRESSURE >30 psig WITH NO BUILDING SPRAY AVAILABLE	
4. RMG-29 OR 30 READINGS >5000 R/hr	
5. CORE CONDITIONS IN SEVERE ACCIDENT REGION OF ICC CURVES FOR >15 MINUTES	
6. EC DEEMS CONTAINMENT BARRIER IN JEOPARDY	

1. RB PRESSURE >54 psig

RB design pressure is 54.4 psig. Internal pressure greater than this value has the potential to exceed design leakage values.

2. RB HYDROGEN CONCENTRATION >4%

Hydrogen concentrations > 4% are above the lower explosive limit.

3. RB PRESSURE >30 psig WITH NO BUILDING SPRAY AVAILABLE

The RB spray actuation setpoint is 30 psig. With RB pressure above this value and NO spray available, the potential exists to exceed the RB design values.

4. RMG-29 OR 30 READINGS >5000 R/hr⁽¹⁾

This monitor reading is indicative of severe core damage conditions. Monitor readings have increased and are sustained, NOT spikes. Regardless of whether containment is challenged, this amount of activity in containment, if released, could have such severe consequences that it is prudent to treat this as a potential loss of containment, such that a General Emergency declaration is warranted.

5. CORE CONDITIONS IN SEVERE ACCIDENT REGION OF ICC CURVES FOR GREATER THAN 15 MINUTES

Core conditions in the Severe Accident Region represent imminent melt sequence which, if NOT corrected within 15 minutes, could lead to vessel failure and an increased potential for containment failure. The Emergency Coordinator should make the declaration as soon as it is determined that the restoration procedures have been, or will be ineffective.

6. EC DEEMS CONTAINMENT BARRIER IN JEOPARDY

Based on Emergency Coordinator judgment. Entry into this EAL is NOT intended to be made solely due to the Plant's inability to meet the acceptance criteria for penetration surveillances.

NOTE (1): Information on the selection of this value is in Attachment 2.

ABNORMAL RAD LEVELS / RADIOLOGICAL EFFLUENT

EAL 1.1

Gaseous Effluents

Initiating Condition:

An UNPLANNED release of gaseous radioactivity to the environment that exceeds 2 times the ODCM noble gas release setpoint for 60 minutes or longer

Emergency Action Level:

UNUSUAL EVENT	
1.1	MODES: ALL
(1 or 2)	
1.	A VALID reading on RM-A1 or RM-A2 Normal Range monitor exceeds the high alarm setpoint for 60 minutes or longer
OR	
2.	Sample analysis confirms gaseous effluent being released exceeds 5.0E-4 $\mu\text{Ci/cc}$ for 60 minutes or longer

VALID: An indication or report or condition is considered VALID when it is conclusively verified by (1) an instrument channel check, or (2) indications on related or redundant indicators, or (3) by direct observation by Plant personnel, such that doubt related to the indicator's operability, the condition's existence, or the report's accuracy is removed. Implicit in this definition is the need for timely assessment (e.g., within 15 minutes).

Basis:

Releases in excess of the high alarm setpoint or sample results in excess of 5.0E-4 $\mu\text{Ci/cc}$ continuing for 60 minutes or longer represent an uncontrolled situation and hence, a potential degradation in the level of safety. The final integrated dose is NOT the primary concern here; it is the degradation in Plant control implied by the fact the release was NOT isolated within 60 minutes. Therefore, it is NOT intended for the release to be averaged over 60 minutes. For example, a release of 1.0E-3 $\mu\text{Ci/cc}$ for 30 minutes does NOT exceed this initiating condition. Further, the Emergency Coordinator should NOT wait until 60 minutes elapses, but declare the event as soon as it is determined the release duration will likely exceed 60 minutes. This is identified by an increasing trend in monitor readings. This does NOT include spikes or other erroneous instrument readouts.

The high alarm setpoint is set at 5.0E-4 $\mu\text{Ci/cc}$ on the Normal Range. It is based on extended shutdown conditions and is conservative for on-line operations. The monitor measures the Noble Gas component of a release only. In extended shutdown, particulates dominate the dose contribution, lowering the proportional concentration of Noble Gas needed to reach Protective Action Guideline doses. Since the ODCM deals exclusively with Noble Gases, the standard ODCM methodology using an annual limit of 500 mRem per year would yield an ODCM setpoint for a Noble Gas concentration that when multiplied by 200 for the Alert, would be greater than the Site Area Emergency threshold value. This necessitates administratively lowering ODCM setpoint. The ODCM setpoint was set arbitrarily to 10% of the Alert threshold value to produce a logical progression from Unusual Event to Alert to Site Area Emergency.

EALs 1.1-1.4 represent increasingly significant degradation in Plant conditions. The high alarm setpoint is conservative compared to two times the ODCM limit, but was chosen for the UNUSUAL EVENT EAL to create a logical, easily discernible progression.

CR3 Matrix Reference Number: 1.1

NEI 97-03 Reference: AU1

ABNORMAL RAD LEVELS / RADIOLOGICAL EFFLUENT

EAL 1.2

Gaseous Effluents

Initiating Condition:

An UNPLANNED release of gaseous radioactivity to the environment that exceeds 200 times the ODCM noble gas release setpoint for 15 minutes or longer

Emergency Action Level:

ALERT	
1.2	MODES: ALL
(1 or 2)	
1.	A VALID reading on RM-A1 or RM-A2 exceeds 5.0E-3 $\mu\text{Ci/cc}$ for 15 minutes or longer.
<u>OR</u>	
2.	Sample analysis confirms gaseous effluent being released exceeds 5.0E-3 $\mu\text{Ci/cc}$ for 15 minutes or longer

VALID: An indication or report or condition is considered VALID when it is conclusively verified by (1) an instrument channel check, or (2) indications on related or redundant indicators, or (3) by direct observation by Plant personnel, such that doubt related to the indicator's operability, the condition's existence, or the report's accuracy is removed. Implicit in this definition is the need for timely assessment (e.g., within 15 minutes).

Basis:

Unplanned releases in excess of 5.0E-3 $\mu\text{Ci/cc}$ continuing for 15 minutes or longer represent an uncontrolled situation and hence, a potential substantial degradation in the level of safety. The primary concern for the time factor here is the loss of control of radioactive material allowing the release to continue. The Emergency Coordinator should **NOT** wait until 15 minutes elapses, but declare the event as soon as it is determined the release duration will likely exceed 15 minutes.

The single threshold value of 5.0E-3 $\mu\text{Ci/cc}$ is based on extended shutdown conditions and is conservative for on-line operations. The monitor measures the Noble Gas component of a release only. In extended shutdown, particulates dominate the dose contribution, lowering the proportional concentration of Noble Gas needed to reach Protective Action Guideline doses. Since the ODCM deals exclusively with Noble Gases, the standard ODCM methodology using an annual limit of 500 mRem per year would yield an ODCM setpoint for a Noble Gas concentration that when multiplied by 200 for the Alert, would be greater than the Site Area Emergency threshold value. This necessitates administratively lowering ODCM setpoint and the threshold value. The threshold value is less than 200 times the ODCM setpoint. The threshold value was set arbitrarily to the transition point from the Normal Range to the Accident Range to produce an easily identifiable threshold and logical progression from Alert to Site Area Emergency.

EALs 1.1-1.4 represent increasingly significant degradation in Plant conditions.

CR3 Matrix Reference Number: 1.2

NEI 97-03 Reference: AA1

ABNORMAL RAD LEVELS / RADIOLOGICAL EFFLUENT

EAL 1.3

Gaseous Effluents

Initiating Condition:

SITE BOUNDARY dose resulting from an actual or projected release of airborne radioactivity exceeding 100 mR TEDE or 500 mR Thyroid CDE

Emergency Action Level:

SITE AREA EMERGENCY		
1.3 MODES: ALL		
(1 or 2 or 3)		
1. VALID RM-A1 or RM-A2 Accident Range monitor reading exceeds the values on the following Table for the current Stability Class for 15 minutes or longer:		
Stability Class	On-Line Operations (μCi/cc)	Extended Shutdown or SF Pools (μCi/cc)
A, B, or C	5.1E-1	7.5E-2
D or E	3.3E-1	5.4E-2
F or G	3.0E-1	4.5E-2
<u>OR</u>		
2. Dose Assessment results indicate SITE BOUNDARY dose >100 mR TEDE or >500 mR thyroid CDE for the actual or projected duration of the release		
<u>OR</u>		
3. Field survey results indicate closed windows dose rates >100mR/hr expected to continue for more than one hour; or analyses of field survey samples indicate thyroid CDE of 500mR for one hour of inhalation, at or beyond SITE BOUNDARY		

VALID: An indication or report or condition is considered VALID when it is conclusively verified by (1) an instrument channel check, or (2) indications on related or redundant indicators, or (3) by direct observation by Plant personnel, such that doubt related to the indicator's operability, the condition's existence, or the report's accuracy is removed. Implicit in this definition is the need for timely assessment (e.g., within 15 minutes).

SITE BOUNDARY: That area, including the PROTECTED AREA, that extends 4400 feet or 0.83 miles in a circle around the Reactor Building

PROTECTED AREA: All areas within the CR3 security perimeter fence that require badged authorization for entry.

Basis:

TEDE - Total Effective Dose Equivalent (external dose + equivalent amount of whole body dose due to individual organ uptakes)

CDE - Committed Dose Equivalent (dose to an organ due to the intake of radioactive materials)

Threshold values in item 1 above are provided for On-line Operations and Extended Shutdown/Spent Fuel Pools. IF the source of the release is unknown, **THEN** USE Extended Shutdown/Spent Fuel Pools.

"Extended Shutdown" as used in the right-hand column in item 1 above refers to all releases that occur in the unique period that began 9/26/09 (Refuel 16) and continuing through plant restart.

"SF Pools" as used in the right-hand column in item 1 above refers to releases that occur from the Spent Fuel Pools during the fuel cycle beginning at restart from the extended shutdown and continuing until additional irradiated fuel is off-loaded into the Spent Fuel Pools. When additional irradiated fuel is off-loaded, this EAL will be revised to revert back to a single column and no plant condition label will be needed.

(continued)

ABNORMAL RAD LEVELS / RADIOLOGICAL EFFLUENT

EAL 1.3

Gaseous Effluents, continued

Basis, continued

The threshold values in item 1 above are described in Calculation N12-0001. The monitor measures the Noble Gas component of a release only. In extended shutdown, particulates dominate the dose contribution, lowering the proportional concentration of Noble Gas needed to reach Protective Action Guideline doses.

Classification for items 2 & 3 above result from emergency response team input. For example, the Environmental Survey Team provides actual dose rates used to determine dose for the projected duration of the release. The Dose Assessment Team provides projected dose.

For Item 1 above, Stability Class groupings assume the most stable class in Groups "A, B, or C" and "D or E." The "F or G" group was calculated using "F" Stability Class due to the very low percentage of time the "G" Stability Class exists (< 0.4% based on FSAR Table 12.2).

EALs 1.1-1.4 represent increasingly significant degradation in Plant conditions.

The 100 mR integrated dose in this initiating condition is based on the 10 CFR 20 annual average population exposure. It is deemed exposures less than this are NOT consistent with the Site Area Emergency class description. These values are 10% of the EPA 400 Protective Action Guidelines (PAG).

CR3 Matrix Reference Number: 1.3

NEI 97-03 Reference: AS1

ABNORMAL RAD LEVELS / RADIOLOGICAL EFFLUENT

EAL 1.4

Gaseous Effluents

Initiating Condition:

SITE BOUNDARY dose resulting from an actual or projected release of gaseous radioactivity exceeding 1000 mR TEDE or 5000 mR Thyroid CDE

Emergency Action Level:

GENERAL EMERGENCY					
1.4	MODES: ALL				
(1 or 2 or 3)					
1.	VALID RM-A1 or RM-A2 Accident Range monitor reading exceeds the values in the following table for 15 minutes or longer:				
<table><tr><th>On-Line Operations ($\mu\text{Ci/cc}$)</th><th>Extended Shutdown or SF Pools ($\mu\text{Ci/cc}$)</th></tr><tr><td>3.0E+0</td><td>4.5E-1</td></tr></table>		On-Line Operations ($\mu\text{Ci/cc}$)	Extended Shutdown or SF Pools ($\mu\text{Ci/cc}$)	3.0E+0	4.5E-1
On-Line Operations ($\mu\text{Ci/cc}$)	Extended Shutdown or SF Pools ($\mu\text{Ci/cc}$)				
3.0E+0	4.5E-1				
<u>OR</u>					
2.	Dose Assessment results indicate SITE BOUNDARY dose >1000 mR TEDE or >5000 mR thyroid CDE for the actual or projected duration of the release AND core damage is suspected or has occurred				
<u>OR</u>					
3.	Field survey results indicate closed windows dose rates >1000mR/hr expected to continue for more than one hour; or analyses of field survey samples indicate thyroid CDE of 5000 mR for one hour of inhalation, at or beyond SITE BOUNDARY				

VALID: An indication or report or condition is considered VALID when it is conclusively verified by (1) an instrument channel check, or (2) indications on related or redundant indicators, or (3) by direct observation by Plant personnel, such that doubt related to the indicator's operability, the condition's existence, or the report's accuracy is removed. Implicit in this definition is the need for timely assessment (e.g., within 15 minutes).

SITE BOUNDARY: That area, including the PROTECTED AREA, that extends 4400 feet or 0.83 miles in a circle around the Reactor Building.

PROTECTED AREA: All areas within the CR3 security perimeter fence that require badged authorization for entry.

Basis:

TEDE - Total Effective Dose Equivalent (external dose + equivalent amount of whole body dose due to individual organ uptakes)

CDE - Committed Dose Equivalent (dose to an organ due to the intake of radioactive materials)

Threshold values in item 1 above are provided for On-line Operations and Extended Shutdown/Spent Fuel Pools. IF the source of the release is unknown, **THEN** USE Extended Shutdown/Spent Fuel Pools.

“Extended Shutdown” as used in the right-hand column in item 1 above refers to all releases that occur in the unique period that began 9/26/09 (Refuel 16) and continuing through plant restart.

“SF Pools” as used in the right-hand column in item 1 above refers to releases that occur from the Spent Fuel Pools during the fuel cycle beginning at restart from the extended shutdown and continuing until additional irradiated fuel is off-loaded into the Spent Fuel Pools. When additional irradiated fuel is off-loaded, this EAL will be revised to revert back to a single column and no plant condition label will be needed.

(continued)

ABNORMAL RAD LEVELS / RADIOLOGICAL EFFLUENT

EAL 1.4

Gaseous Effluents, continued

Basis, continued

The threshold values in item 1 above are described in Calculation N12-0001. The monitor measures the Noble Gas component of a release only. In extended shutdown, particulates dominate the dose contribution, lowering the proportional concentration of Noble Gas needed to reach Protective Action Guideline doses.

To achieve the dose for this initiating condition, core damage with a failure of all the fission product barriers is necessary. Protective Action Guideline limits cannot be reached without some amount of fuel damage. In classifying this event, verifying that core damage is suspected or has occurred precludes erroneous protective action recommendations based on incorrect or default dose assessments when Plant conditions clearly do NOT support the magnitude of the release.

Classification for items 2 & 3 above result from emergency response team input. For example, the Environmental Survey Team provides actual dose rates used to determine dose for the projected duration of the release. The Dose Assessment Team provides projected dose.

EALs 1.1-1.4 represent increasingly significant degradation in Plant conditions.

The 1000 mR TEDE and the 5000 mR Thyroid CDE are based on the EPA protective action guidance, which indicates that public protective actions are indicated if the dose exceeds 1000 mRem TEDE or 5000 mRem Thyroid CDE. This is consistent with the emergency class description for a General Emergency. Actual meteorology (including forecasts) should be used whenever possible.

CR3 Matrix Reference Number: 1.4

NEI 97-03 Reference: AG1

ABNORMAL RAD LEVELS / RADIOLOGICAL EFFLUENT

EAL 1.5

Liquid Effluents

Initiating Condition:

An UNPLANNED release of liquid radioactivity to the environment exceeding 2 times the ODCM release setpoint for 60 minutes or longer

Emergency Action Level:

UNUSUAL EVENT	
1.5	MODES: ALL
(1 or 2)	
1.	A VALID reading on RM-L2, RM-L7, or sample analysis confirms the release exceeds 2 times the ODCM release setpoint for 60 minutes or longer
<u>OR</u>	
2.	Release continued for 60 minutes or longer with no dilution flow

VALID: An indication or report or condition is considered VALID when it is conclusively verified by (1) an instrument channel check, or (2) indications on related or redundant indicators, or (3) by direct observation by Plant personnel, such that doubt related to the indicator's operability, the condition's existence, or the report's accuracy is removed. Implicit in this definition is the need for timely assessment (e.g., within 15 minutes).

Basis:

This EAL is based on failure of the monitor interlock to perform its function or loss of dilution flow. "No dilution flow" would indicate that NO raw water flow is available. If the interlock failed, a factor of 2 times the release setpoint as compared to actual readings, can be used to judge if the EAL is exceeded. For other conditions, an evaluation of liquid effluent radioactivity must be performed and compared against the ODCM release setpoint to determine entry conditions.

Releases in excess of 2 times the ODCM limits continuing for 60 minutes or longer represent an uncontrolled situation and hence, a potential degradation in the level of safety. The final integrated dose is NOT the primary concern here; it is the degradation in Plant control implied by the fact the release was NOT isolated within 60 minutes. Therefore, it is NOT intended for the release to be averaged over 60 minutes. For example, a release of 4 times the ODCM limits for 30 minutes does NOT exceed this initiating condition. Further, the Emergency Coordinator should NOT wait until 60 minutes elapses, but declare the event as soon as it is determined the release duration will likely exceed 60 minutes. An evaluation is necessary to compare monitor setpoint against the EAL limit.

CR3 Matrix Reference Number: 1.5

NEI 97-03 Reference: AU1

ABNORMAL RAD LEVELS / RADIOLOGICAL EFFLUENT

EAL 1.6

Liquid Effluents

Initiating Condition:

An UNPLANNED release of liquid radioactivity to the environment exceeding 200 times the ODCM release setpoint for 15 minutes or longer

Emergency Action Level:

ALERT
1.6 MODES: ALL A VALID reading on RM-L2, RM-L7, or sample analysis confirms the release exceeds 200 times the ODCM release setpoint for 15 minutes or longer

VALID: An indication or report or condition is considered VALID when it is conclusively verified by (1) an instrument channel check, or (2) indications on related or redundant indicators, or (3) by direct observation by Plant personnel, such that doubt related to the indicator's operability, the condition's existence, or the report's accuracy is removed. Implicit in this definition is the need for timely assessment (e.g., within 15 minutes).

Basis:

This EAL is based on failure of the monitor interlock to perform its function. If the interlock failed, a factor of 200 times the release setpoint as compared to actual readings, can be used to judge if the EAL is exceeded. For other conditions, an evaluation of liquid effluent radioactivity must be performed and compared against the ODCM release setpoint to determine entry conditions.

CR3 Matrix Reference Number: 1.6

NEI 97-03 Reference: AA1

ABNORMAL RAD LEVELS / RADIOLOGICAL EFFLUENT

EAL 1.7

Unexpected Radiation Levels

Initiating Condition:

An unexpected increase in radiation levels within the Plant

Emergency Action Level:

UNUSUAL EVENT
1.7 MODES: ALL
One or more VALID radiation monitor readings unexpectedly exceed the values below for 15 minutes or longer:
RM-G3 = 400 mR/hr
RM-G4 = 600 mR/hr
RM-G5 = 3,000 mR/hr
RM-G9 = 100 mR/hr
RM-G10 = 800 mR/hr
RM-G14 = 1,000 mR/hr
RM-G17 = 800 mR/hr

VALID: An indication or report or condition is considered VALID when it is conclusively verified by (1) an instrument channel check, or (2) indications on related or redundant indicators, or (3) by direct observation by Plant personnel, such that doubt related to the indicator's operability, the condition's existence, or the report's accuracy is removed. Implicit in this definition is the need for timely assessment (e.g., within 15 minutes).

Basis:

This EAL addresses unexpected increases in in-Plant radiation levels representing a degradation in the control of radioactive material, and a potential degradation in the level of safety of the Plant.

The values above represent approximately 1000 times normal monitor levels based on nominal historical data of the monitors during normal Plant operation. Portable surveys may be substituted for in Plant radiation monitors. The specific area radiation monitors were chosen as they represent potential release areas within the Plant and/or access corridors to the Plant.

Assessment should be completed such that after the 15 minutes elapsed time of the monitor exceeding the values on the table, a classification decision should be made. This Initiating Condition is NOT intended to apply to anticipated temporary increases due to planned events (e.g., incore detector movement, radwaste container movement, depleted resin transfers, etc.)

Monitor Locations:

RM-G3	(Primary Sample Room)
RM-G4	(Auxiliary Building entrance corridor)
RM-G5	(Waste Gas Decay Tank Area)
RM-G9	(Intermediate Building outside Reactor Building (RB) personnel airlock)
RM-G10	(Makeup Pump area)
RM-G14	(Spent Fuel Pool Storage Area – 143' elev. Aux. Bldg. general area)
RM-G17	(inside RB at personnel hatch)

CR3 Matrix Reference Number: 1.7

NEI 97-03 Reference: AU2

ABNORMAL RAD LEVELS / RADIOLOGICAL EFFLUENT

EAL 1.8

Unexpected Radiation Levels

Initiating Condition:

An unexpected increase in radiation levels within the Plant impeding operation of systems required to maintain safe operations or to establish or maintain cold shutdown

Emergency Action Level:

ALERT
1.8 MODES: ALL
(1 or 2)
1. VALID radiation reading greater than 15 mR/hr for 15 minutes or longer in the Control Room (RM-G1) or the Central Alarm Station (CAS)
OR
2. One or more VALID radiation monitor readings unexpectedly exceed the values below for 15 minutes or longer:
RM-G3 = 5,000 mR/hr
RM-G4 = 5,000 mR/hr
RM-G9 = 5,000 mR/hr
RM-G10 = 5,000 mR/hr
RM-G17 = 5,000 mR/hr

VALID: An indication or report or condition is considered VALID when it is conclusively verified by (1) an instrument channel check, or (2) indications on related or redundant indicators, or (3) by direct observation by Plant personnel, such that doubt related to the indicator's operability, the condition's existence, or the report's accuracy is removed. Implicit in this definition is the need for timely assessment (e.g., within 15 minutes).

Basis:

This addresses increased radiation levels impeding necessary access to operating stations, or other areas containing equipment operated manually, in order to maintain safe operation or perform a safe shutdown. The specific area radiation monitors were chosen as they represent access corridors to the Plant. These monitors cover general areas that would require access to maintain safe operations or to establish and maintain safe shutdown. It is this impaired ability to operate the Plant that results in the actual or potential substantial degradation of the level of safety of the Plant. The cause and/or magnitude of the increase in radiation levels is NOT a concern of this initiating condition. The Emergency Coordinator must consider the source or cause of the increased radiation levels and determine if any other Initiating Condition is involved. For example, a dose rate of 15 mR/hr in the control room may be a problem in itself. However, the increase may also be indicative of high dose rates in the containment due to a LOCA. In this latter case, a Site Area Emergency or General Emergency may be indicated by the Fission Product Barrier Matrix Initiating Conditions.

Portable surveys may be substituted for in-Plant radiation monitors. A generic emergency action level at greater than 5,000 mR/hr has been chosen for those areas in the Plant that would need to be accessed for safe operation or safe shutdown of the unit.

Monitor Locations:

- RM-G3 (Primary Sample Room)
- RM-G4 (Auxiliary Building entrance corridor)
- RM-G9 (Intermediate Building outside RB personnel airlock)
- RM-G10 (Makeup Pump area)
- RM-G17 (inside RB at personnel hatch)

(continued)

ABNORMAL RAD LEVELS / RADIOLOGICAL EFFLUENT

EAL 1.8

Unexpected Radiation Levels, continued

Basis, continued

Assessment should be completed such that after the 15 minutes elapsed time of the monitor exceeding the values on the table, a classification decision should be made. This Initiating Condition is NOT intended to apply to anticipated temporary increases due to planned events (e.g., incore detector movement, radwaste container movement, depleted resin transfers, etc.)

CAS dose rates are determined by portable monitors.

Areas requiring continuous occupancy include the control room and any other control stations that are manned continuously, such as the Central Alarm Station. The value of 15 mR/hr is derived from the GDC 19 value of 5 Rem in 30 days with adjustment for expected occupancy times. Although Section III.D.3 of NUREG-0737, "Clarification of TMI Action Plan Requirements," provides that the 15 mR/hr value can be averaged over the 30 days, the value is used here without averaging, as a 30 day duration implies an event potentially more significant than an Alert.

CR3 Matrix Reference Number: 1.8

NEI 97-03 Reference: AA3

ABNORMAL RAD LEVELS / RADIOLOGICAL EFFLUENT

EAL 1.9

Fuel Handling Spent Fuel Pool or Transfer Canal Water Level

Initiating Condition:

An uncontrolled water level decrease in spent fuel pool or transfer canal with fuel remaining covered

Emergency Action Level:

UNUSUAL EVENT
1.9 MODES: ALL
(1 and 2)
1. (a or b)
a. Uncontrolled level decrease resulting in indications of -2.5 feet in spent fuel pool
<u>OR</u>
b. Confirmed Plant personnel report of uncontrolled significant water level drop in spent fuel pool <u>or</u> transfer canal when Spent Fuel transfer tubes are open
<u>AND</u>
2. Fuel remains covered with water

Basis:

The "-2.5 feet" indication is relative to the normal "zero" reading for spent fuel pool level and represents the minimum 23 feet of water (156 feet Plant datum) over the top of the fuel as described in Improved Technical Specifications.

A level decrease that cannot be readily isolated is considered uncontrolled.

CR3 Matrix Reference Number: 1.9

NEI 97-03 Reference: AU2

ABNORMAL RAD LEVELS / RADIOLOGICAL EFFLUENT

EAL 1.10

Fuel Handling/Fuel Handling Pool Water Level

Initiating Condition:

Damage to irradiated fuel or loss of water level has or will uncover irradiated fuel outside the reactor vessel

Emergency Action Level:

ALERT
1.10 MODES: ALL
(1 or 2)
1. (a and b)
a. Plant personnel report damage of irradiated fuel
AND
b. VALID high alarm as indicated on RM-G15 or RM-G16
OR
2. Plant personnel report spent fuel pool or transfer canal water level drop has <u>or</u> will exceed makeup capacity such that irradiated fuel will be uncovered

VALID: An indication or report or condition is considered VALID when it is conclusively verified by (1) an instrument channel check, or (2) indications on related or redundant indicators, or (3) by direct observation by Plant personnel, such that doubt related to the indicator's operability, the condition's existence, or the report's accuracy is removed. Implicit in this definition is the need for timely assessment (e.g., within 15 minutes).

Basis:

There is time available to take corrective actions, and there is little potential for substantial fuel damage if corrective actions are effective. Thus, an Alert classification for this event is appropriate. Escalation, if appropriate, would occur via other Abnormal Rad Levels/Radiological Effluents Initiating Conditions or Emergency Coordinator judgment.

Monitor Locations:

RM-G15 (Auxiliary Building Fuel Handling Bridge)

RM-G16 (Reactor Building Fuel Handling Bridge)

CR3 Matrix Reference Number: 1.10

NEI 97-03 Reference: AA2

NATURAL / MAN-MADE HAZARDS AND EC JUDGMENT

EAL 2.1

Earthquake Experienced

Initiating Condition:

Earthquake detected by seismic instrumentation and sensed by Control Room personnel

Emergency Action Level:

UNUSUAL EVENT
2.1 MODES: ALL (1 and 2) 1. Ground motion sensed by Plant personnel AND 2. Confirmed earthquake causing Annunciator C-3-14 "Seismic System Trouble" alarm

Basis:

Damage may be caused to some portions of the site, but should NOT affect ability of safe shutdown equipment to operate. Method of detection is based on instrumentation, validated by a reliable source, or operator assessment. As defined in the EPRI-sponsored, "Guidelines for Nuclear Plant Response to an Earthquake," dated October 1989, a "felt earthquake" is:

"An earthquake of sufficient intensity such that: (a) the ground motion is felt at the nuclear Plant site and recognized as an earthquake based on a consensus of control room operators on duty at the time, and (b) for Plants with operable seismic instrumentation, the seismic switches of the Plant are activated."

CR3 Matrix Reference Number: 2.1
NEI 97-03 Reference: HU1

Earthquake Experienced

Initiating Condition:

Earthquake detected by seismic instrumentation and sensed by Control Room personnel greater than Operating Basis Earthquake

Emergency Action Levels:

ALERT
<p>2.2 MODES: ALL</p> <p>(1 and 2)</p> <p>1. Ground motion sensed by Plant personnel or confirmed Annunciator C-3-14 "Seismic System Trouble" alarm</p> <p>AND</p> <p>2. (a or b)</p> <p>a. Analysis confirms the earthquake at >0.05g</p> <p>OR</p> <p>b. Indications show degraded SAFE SHUTDOWN EQUIPMENT performance due to the earthquake</p>

SAFE SHUTDOWN EQUIPMENT: Equipment necessary to achieve and maintain the reactor sub critical with controlled decay heat removal to bring the Plant to the ITS applicable shutdown condition/mode.

Basis:

Seismic events of this magnitude can cause damage to safety functions.

Analysis of earthquakes is completed using AP-961 and its supporting procedures. The analysis to determine the magnitude of an earthquake may take an extended period of time. If it is determined even after several hours that the earthquake was >0.05g, the event should be classified.

This EAL is intended to address an earthquake resulting in a Plant vital area being subjected to forces beyond design limits, and thus damage is assumed to have occurred to Plant safe shutdown equipment. Assessing SAFE SHUTDOWN EQUIPMENT performance is NOT interpreted as mandating a lengthy damage assessment before classification and NO attempt is made to assess the actual magnitude of the damage.

Additional information on the earthquake (confirmation and magnitude) can be obtained from the U. S. Geological Survey - Golden, Colorado at (303) 273-8500.

CR3 Matrix Reference Number: 2.2
NEI 97-03 Reference: HA1

External Flooding

Initiating Condition:

Flood being experienced

Emergency Action Level:

UNUSUAL EVENT	
2.3	MODES: ALL Intake canal level or visual observation indicates flood water level \geq 98 feet

Basis:

This EAL covers flooding due to natural phenomena. This EAL can be a precursor of more serious events. In particular, since CR3 may be subject to severe weather as defined in the NUMARC station blackout initiatives, this includes action based on activation of the severe weather mitigation procedures for flooding (e.g., precautionary shutdowns, diesel testing, staff call-outs, etc.).

Ninety-eight (98) feet is contained within the discharge and intake canal banks. The top of the concrete wall at the intake structure is 99 feet.

The highest water level recorded at CR3 was 99.5 feet during the 03/13/93 "No Name Storm."

At 98 feet, there is NO immediate impact on Plant equipment but heightened awareness is appropriate should the level increase.

CR3 Matrix Reference Number: 2.3

NEI 97-03 Reference: HU1

NATURAL / MAN-MADE HAZARDS AND EC JUDGMENT

EAL 2.4

External Flooding

Initiating Condition:

Flood being experienced

Emergency Action Level:

ALERT
2.4 MODES: ALL
(1 and 2)
1. Intake canal level or visual observation indicates flood water level \geq 98 feet
AND
2. Indications show degraded SAFE SHUTDOWN EQUIPMENT performance due to the flooding

SAFE SHUTDOWN EQUIPMENT: Equipment necessary to achieve and maintain the reactor sub critical with controlled decay heat removal to bring the Plant to the ITS applicable shutdown condition/mode.

Basis:

This EAL covers flooding due to natural phenomena.

This EAL is intended to address flooding that may have resulted in a Plant vital area being subjected to forces beyond design limits, and thus damage may be assumed to have occurred to Plant safety systems. Assessing SAFE SHUTDOWN EQUIPMENT performance is NOT interpreted as mandating a lengthy damage assessment before classification and NO attempt is made to assess the actual magnitude of the damage.

If damage from the flooding is clearly contained and localized to one train, and safe shutdown capability exists, then item 2 of the EAL is NOT met. If the extent of the damage is uncertain in terms of loss of safe shutdown capability, then entry into this EAL is required.

CR3 Matrix Reference Number: 2.4

NEI 97-03 Reference: HA1

NATURAL / MAN-MADE HAZARDS AND EC JUDGMENT

EAL 2.5

Hurricane

Initiating Condition:

Hurricane Warning

Emergency Action Level:

UNUSUAL EVENT
2.5 MODES: ALL The Plant is within a Hurricane Warning area

Basis:

This EAL can be a precursor of more serious events. In particular, since CR3 may be subject to severe weather as defined in the NUMARC station blackout initiatives.

This should include a notification from the National Hurricane Center via the State Warning Point.

CR3 Matrix Reference Number: 2.5

NEI 97-03 Reference: HU1

NATURAL / MAN-MADE HAZARDS AND EC JUDGMENT

EAL 2.6

Tornado

Initiating Condition:

Tornado within the PROTECTED AREA

Emergency Action Level:

UNUSUAL EVENT
2.6 MODES: ALL
Report by Plant personnel of a Tornado striking within the PROTECTED AREA

PROTECTED AREA: All areas within the CR3 security perimeter fence that require badged authorization for entry.

Basis:

This EAL is based on the assumption a tornado strikes (touches down) within the protected area boundary and may have damaged Plant structures containing functions or systems required for safe shutdown of the Plant. If such damage is confirmed visually or by other in-Plant indications, the event may be escalated to an Alert.

Waterspouts remaining intact after coming onshore/land are classified as tornadoes.

CR3 Matrix Reference Number: 2.6

NEI 97-03 Reference: HU1

NATURAL / MAN-MADE HAZARDS AND EC JUDGMENT

EAL 2.7

Tornado/High Winds

Initiating Condition:

Tornado or High Winds or windborne object(s) strike structures and results in significant **VISIBLE DAMAGE**

Emergency Action Level:

ALERT
2.7 MODES: ALL
(1 or 2)
1. Tornado <u>or</u> High Winds <u>or</u> windborne object(s) cause significant VISIBLE DAMAGE to any of the following structures:
<ul style="list-style-type: none">- Auxiliary Building,- BWST,- Control Complex,- Diesel Generator Building (EGDG-1A/1B)- EFT-2 Building,- Intermediate Building,- Reactor Building- EFP-3 Building
OR
2. Indications show degraded SAFE SHUTDOWN EQUIPMENT performance due to the tornado or high winds or windborne objects

VISIBLE DAMAGE: Damage to equipment or structure that is readily observable without measurements, testing, or analyses. Damage is sufficient to cause concern regarding the continued operability or reliability of affected safety structure, system, or component. Example system/component damage includes: deformation due to heat or impact, denting, penetration, rupture, cracking, paint blistering due to fire. Example structure damage includes exposed and/or broken rebar, failed supports/pipe hangers, etc. Surface blemishing (e.g., paint chipping, scratches, concrete spalling) should NOT be included.

SAFE SHUTDOWN EQUIPMENT: Equipment necessary to achieve and maintain the reactor sub critical with controlled decay heat removal to bring the Plant to the ITS applicable shutdown condition/mode.

Basis:

This EAL addresses events that may have resulted in a Plant vital area being subjected to forces beyond design limits, and thus damage may be assumed to have occurred to Plant safety systems. Assessing **SAFE SHUTDOWN EQUIPMENT** performance is NOT interpreted as mandating a lengthy damage assessment before classification and NO attempt is made to assess the actual magnitude of the damage.

As an example, the highest recorded sustained wind speed at CR3 during the 03/13/93 "No Name Storm" was 56 mph and NO **VISIBLE DAMAGE** resulted.

Sheet metal damage to the Spent Fuel Floor walls or roof does NOT constitute significant damage to the Auxiliary Building.

Waterspouts remaining intact after coming onshore/land are classified as tornadoes.

CR3 Matrix Reference Number: 2.7

NEI 97-03 Reference: HA1

Accidental Aircraft/Vehicle Crash

Initiating Condition:

Aircraft or Vehicle crash within the Protected Area potentially damaging Plant structures containing functions and systems required for safe shutdown of the Plant

Emergency Action Level:

UNUSUAL EVENT
<p>2.8 MODES: ALL</p> <p>Report by Plant personnel of Aircraft <u>or</u> Vehicle Crash involving the following structures:</p> <ul style="list-style-type: none"> - Auxiliary Building, - BWST - Control Complex - Diesel Generator Building (EGDG-1A/B) - EFT-2 Building - Intermediate Building - Reactor Building - EFP-3 Building

Basis:

This EAL is intended to address the accidental crash of a plane, helicopter, or vehicle potentially damaging Plant structures containing functions and systems required for safe shutdown of the Plant. Automobiles, trucks, and forklifts are vehicles within the context of this EAL. The intent is to address any vehicle large enough that can cause significant damage to Plant structures. This EAL is NOT intended to include cosmetic damage because of light contact between vehicles and listed structures. This EAL does NOT include purposeful attacks to these structures (refer to Security EALs).

CR3 Matrix Reference Number: 2.8

NEI 97-03 Reference: HU1

Accidental Aircraft / Vehicle Crash

Initiating Condition:

Aircraft or Vehicle strikes vital structures and results in significant VISIBLE DAMAGE

Emergency Action Level:

ALERT	
2.9 MODES: ALL	
(1 or 2)	
1. Confirmed report of significant VISIBLE DAMAGE to any of the following structures:	
- Auxiliary Building	
- BWST	
- Control Complex	
- Diesel Generator Building (EGDG-1A/1B)	
- EFT-2 Building	
- Intermediate Building	
- Reactor Building	
- EFP-3 Building	
OR	
2. Indications show degraded SAFE SHUTDOWN EQUIPMENT performance due to the Aircraft <u>or</u> Vehicle Crash	

VISIBLE DAMAGE: Damage to equipment or structure that is readily observable without measurements, testing, or analyses. Damage is sufficient to cause concern regarding the continued operability or reliability of affected safety structure, system, or component. Example system/component damage includes: deformation due to heat or impact, denting, penetration, rupture, cracking, paint blistering due to fire. Example structure damage includes exposed and/or broken rebar, failed supports/pipe hangers, etc. Surface blemishing (e.g., paint chipping, scratches, concrete spalling) should NOT be included.

SAFE SHUTDOWN EQUIPMENT: Equipment necessary to achieve and maintain the reactor sub critical with controlled decay heat removal to bring the Plant to the ITS applicable shutdown condition/mode.

Basis:

This EAL is intended to address an accidental crash of a plane, helicopter, vehicle crash damaging Plant structures containing functions and systems required for safe shutdown of the Plant. Automobiles, trucks, and forklifts are also vehicles within the context of this EAL. This EAL does NOT include purposeful attacks to these structures (refer to Security EALs).

This EAL is intended to address events that may have resulted in a Plant vital area being subjected to forces beyond design limits, and thus damage may be assumed to have occurred to Plant safety systems. Assessing SAFE SHUTDOWN EQUIPMENT performance is NOT interpreted as mandating a lengthy damage assessment before classification and NO attempt is made to assess the actual magnitude of the damage.

If damage from the vehicle or aircraft crash is clearly contained and localized to one train, and safe shutdown capability exists, then the EAL is NOT met. If the extent of the damage is uncertain in terms of loss of safe shutdown capability, then entry into this EAL is required.

CR3 Matrix Reference Number: 2.9

NEI 97-03 Reference: HA1

Toxic or Flammable Gas**Initiating Condition:**

Release of Toxic or Flammable Gas within, or potentially affecting the Protected Area

Emergency Action Level:

UNUSUAL EVENT	
2.10 MODES: ALL	
(1 or 2)	
1.	Report or detection of Toxic or Flammable Gas within the SITE BOUNDARY that could enter the Protected Area at levels > IDLH or > 25% Lower Explosive Limits affecting NORMAL OPERATION OF THE PLANT.
OR	
2.	Confirmed notification by PE, County, or State personnel to evacuate or shelter site personnel based on an offsite event

SITE BOUNDARY: That area, including the PROTECTED AREA, that extends 4400 feet or 0.83 miles in a circle around the Reactor Building.

IDLH: Immediately Dangerous to Life or Health

NORMAL OPERATION OF THE PLANT: Activities at the plant site Associated with routine testing, maintenance, or equipment operations, in accordance with normal operating or administrative procedures. Entry into Abnormal or Emergency Operating Procedures, or deviation from normal security or radiological controls posture, is a departure from normal plant operations.

Basis:

This Initiating Condition is based on releases in concentrations within the Site Boundary that could; (1) affect the health and safety of Plant personnel; (2) affect the safe operation of the Plant; or (3) potentially put the Plant within an evacuation or sheltering area due to an offsite event.

Gases within the Site Boundary that are below life-threatening (< Immediately Dangerous to Life or Health [IDLH]) or flammable concentrations are NOT applicable to this Initiating Condition. Concentrations at these levels would NOT affect Plant personnel or the safe operation of the Plant. Gases at the Site Boundary that are above life-threatening or flammable concentrations, yet have NOT exceeded those concentrations within a facility structure, would satisfy the first EAL and would require the declaration of an Unusual Event.

Toxic or Flammable gases which are released offsite (e.g., transportation accident) confirmed by Progress Energy, County, Local, or State personnel have the potential for requiring the evacuation or sheltering of the area within the Site Boundary.

A localized/small-scale event within the Site Boundary that may involve gases at life-threatening or flammable concentrations do NOT meet the intent of this Initiating Condition.

CR3 Matrix Reference Number: 2.10

NEI 97-03 Reference: HU3

Toxic or Flammable Gas

Initiating Condition:

Release of toxic or flammable gases within a facility structure which jeopardizes operation of systems required to maintain safe operations or to establish or maintain Cold Shutdown

Emergency Action Level:

ALERT
<p>2.11 MODES: ALL (1 or 2 or 3)</p> <ol style="list-style-type: none"> 1. Flammable Gas levels > 25% Lower Explosive Limit in areas required to maintain safe operations or establish and maintain cold shutdown <p><u>OR</u></p> <ol style="list-style-type: none"> 2. Toxic Gas levels ≥ IDLH levels in areas that require continuous occupancy to maintain safe operation or establish or maintain cold shutdown <p><u>OR</u></p> <ol style="list-style-type: none"> 3. Toxic Gas levels ≥ IDLH levels within the PROTECTED AREA such that Plant personnel are unable to perform actions necessary to maintain safe operations or establish and maintain cold shutdown using protective equipment

PROTECTED AREA: All areas within the CR3 security perimeter fence that require badged authorization for entry.

Basis:

This Initiating Condition is based on gases that have entered a Plant structure affecting the safe operation of the Plant. This Initiating Condition applies to buildings and areas contiguous to Plant vital areas or other significant buildings or areas.

Concentrations at these amounts will restrict or prevent normal actions from being taken to operate the Plant. This EAL is NOT intended to include precautionary general evacuation of personnel.

If personnel can safely enter areas NOT required to be continuously occupied using protective equipment, this Initiating Condition/EAL is NOT met.

IDLH - Immediately Dangerous to Life or Health

CR3 Matrix Reference Number: 2.11
NEI 97-03 Reference: HA3

NATURAL / MAN-MADE HAZARDS AND EC JUDGMENT

EAL 2.12

Explosions/Catastrophic Pressurized Equipment Failure

Initiating Condition:

UNPLANNED EXPLOSION or catastrophic failure of pressurized equipment within the PROTECTED AREA

Emergency Action Level:

UNUSUAL EVENT
<p>2.12 MODES: ALL</p> <p>Report by Plant personnel of VISIBLE DAMAGE to permanent structures or equipment within the PROTECTED AREA due to an EXPLOSION or catastrophic failure of pressurized equipment</p> <p><i>Refer to Security Event</i></p>

VISIBLE DAMAGE: Damage to equipment or structure that is readily observable without measurements, testing, or analyses. Damage is sufficient to cause concern regarding the continued operability or reliability of affected safety structure, system, or component. Example system/component damage includes: deformation due to heat or impact, denting, penetration, rupture, cracking, paint blistering due to fire. Example structure damage includes exposed and/or broken rebar, failed supports/pipe hangers, etc. Surface blemishing (e.g., paint chipping, scratches, concrete spalling) should NOT be included.

PROTECTED AREA: All areas within the CR3 security perimeter fence that require badged authorization for entry.

EXPLOSION: A rapid, violent, unconfined combustion, or a catastrophic failure of pressurized equipment that imparts energy of sufficient force to potentially damage permanent structures, systems, or components.

Basis:

For this EAL, only those explosions or catastrophic failure of pressurized equipment of sufficient force to damage permanent structures or equipment within the PROTECTED AREA should be considered. NO attempt is made in this EAL to assess the actual magnitude of the damage. The occurrence of the explosion or catastrophic failure of pressurized equipment with reports of evidence of damage (e.g., deformation, scorching) is sufficient for declaration. The concern is NOT with the pressurized equipment that catastrophically failed, but with the damage to the structures or equipment in the area caused by the release of energy.

This EAL is NOT intended to cover small pipe cracks or small steam/feedwater leaks.

The Emergency Coordinator also needs to consider security aspects of the explosion and, if applicable, refer to the Security EALs.

CR3 Matrix Reference Number: 2.12

NEI 97-03 Reference: HU1

Explosions/Catastrophic Pressurized Equipment Failure

Initiating Condition:

EXPLOSION or catastrophic failure of pressurized equipment within the Plant affecting the operability of SAFE SHUTDOWN EQUIPMENT

Emergency Action Level:

ALERT	
2.13 MODES: ALL	
(1 or 2)	
1.	EXPLOSION or catastrophic failure of pressurized equipment causes significant VISIBLE DAMAGE to any of the following structures:
	<ul style="list-style-type: none"> - Auxiliary Building - BWST - Control Complex - Diesel Generator Building (EGDG-1A/1B) - EFT-2 Building, - Intermediate Building - Reactor Building - EFP-3 Building
OR	
2.	Indications show degraded SAFE SHUTDOWN EQUIPMENT performance due to the EXPLOSION or pressurized equipment failure

EXPLOSION: A rapid, violent, unconfined combustion, or a catastrophic failure of pressurized equipment that imparts energy of sufficient force to potentially damage permanent structures, systems, or components.

VISIBLE DAMAGE: Damage to equipment or structure that is readily observable without measurements, testing, or analyses. Damage is sufficient to cause concern regarding the continued operability or reliability of affected safety structure, system, or component. Example system/component damage includes: deformation due to heat or impact, denting, penetration, rupture, cracking, paint blistering due to fire. Example structure damage includes exposed and/or broken rebar, failed supports/pipe hangers, etc. Surface blemishing (e.g., paint chipping, scratches, concrete spalling) should NOT be included.

SAFE SHUTDOWN EQUIPMENT: Equipment necessary to achieve and maintain the reactor sub critical with controlled decay heat removal to bring the Plant to the ITS applicable shutdown condition/mode.

Basis:

This EAL is intended to address events that may have resulted in a Plant vital area being subjected to forces beyond design limits, and thus damage may be assumed to have occurred to Plant safe shutdown equipment. Assessing SAFE SHUTDOWN EQUIPMENT performance is NOT interpreted as mandating a lengthy damage assessment before classification. NO attempt is made in this EAL to assess the actual magnitude of the damage. The observation of damage to a structure is sufficient to make a declaration.

The concern is NOT with the pressurized equipment that catastrophically failed, but with the actual or potential damage to safe shutdown equipment caused by the release of energy.

A catastrophic failure of pressurized equipment does not include small lines or equipment that may cause only localized damage. A catastrophic failure of a steam line is of sufficient size that would be characterized by an uncontrolled depressurization of the secondary side.

CR3 Matrix Reference Number: 2.13
NEI 97-03 Reference: HA2

Fire

Initiating Condition

FIRE within the PROTECTED AREA that could affect SAFE SHUTDOWN EQUIPMENT

Emergency Action Level:

UNUSUAL EVENT
<p>2.14 MODES: ALL (1 and 2)</p> <p>1. FIRE in or threatening one of the following structures:</p> <ul style="list-style-type: none"> - Auxiliary Building - BWST - Control Complex, - Diesel Generator Building (EGDG-1A/1B) - EFT-2 Building - Intermediate Building - Reactor Building - EFP-3 Building <p>AND</p> <p>2. FIRE not extinguished within 15 minutes from either Control Room notification <u>or</u> receipt of a VALID fire alarm in the Control Room</p>

FIRE: Combustion characterized by heat and light. Sources of smoke such as slipping drive belts or **overheated** electrical equipment do not constitute fires. Observation of flame is preferred but is NOT required if large quantities of smoke and heat are observed.

VALID: An indication or report or condition is considered VALID when it is conclusively verified by (1) an instrument channel check, or (2) indications on related or redundant indicators, or (3) by direct observation by Plant personnel, such that doubt related to the indicator's operability, the condition's existence, or the report's accuracy is removed. Implicit in this definition is the need for timely assessment (e.g., within 15 minutes).

Basis:

This EAL is to address the magnitude and extent of fires that may be potentially significant precursors to damage to safety systems. This excludes such items as fires within administration buildings, wastebasket fires, and other small fires of NO safety consequence. This Initiating Condition applies to buildings and areas contiguous to Plant vital areas or other significant buildings or areas.

Validation of the alarm in this context means those actions taken in the control room or other location to determine the control room alarm is NOT spurious. Fire in other areas adjacent to vital areas may warrant classification if the fire is of a magnitude that threatens vital areas.

The 15-minute time period begins with the time when a credible notification that a fire is occurring or the time a VALID fire detection system alarm is received. The intent of the 15-minute duration is to discriminate against small fires that are readily extinguished.

OP-880A, Appendix "R" Post-Fire Safe Shutdown Information contains additional information on fire damage assessment

CR3 Matrix Reference Number: 2.14

NEI 97-03 Reference: HU2

Fire

Initiating Condition:

FIRE affecting the operability of SAFE SHUTDOWN EQUIPMENT

Emergency Action Level:

ALERT	
2.15	MODES: ALL
(1 or 2)	
1.	Report by Plant personnel of VISIBLE DAMAGE to SAFE SHUTDOWN EQUIPMENT due to the FIRE
<u>OR</u>	
2.	Indications show degraded SAFE SHUTDOWN EQUIPMENT performance due to the FIRE

VISIBLE DAMAGE: Damage to equipment or structure that is readily observable without measurements, testing, or analyses. Damage is sufficient to cause concern regarding the continued operability or reliability of affected safety structure, system, or component. Example system/component damage includes: deformation due to heat or impact, denting, penetration, rupture, cracking, paint blistering due to fire. Example structure damage includes exposed and/or broken rebar, failed supports/pipe hangers, etc. Surface blemishing (e.g., paint chipping, scratches, concrete spalling) should NOT be included.

SAFE SHUTDOWN EQUIPMENT: Equipment necessary to achieve and maintain the reactor sub critical with controlled decay heat removal to bring the Plant to the ITS applicable shutdown condition/mode.

FIRE: Combustion characterized by heat and light. Sources of smoke such as slipping drive belts or **overheated** electrical equipment do not constitute fires. Observation of flame is preferred but is NOT required if large quantities of smoke and heat are observed.

Basis:

The key to classifying fires as an Alert is the damage because of the incident. The fact that the equipment required for safe shutdown of the unit has been affected or damaged because of the fire is the driving force for declaring the Alert.

If damage from the fire is clearly contained and localized to one train, and safe shutdown capability exists, then the EAL is NOT met. If the extent of the damage is uncertain in terms of loss of safe shutdown capability, then entry into this EAL is required.

CR3 Matrix Reference Number: 2.15

NEI 97-03 Reference: HA2

Control Room Evacuation

Initiating Condition:

Evacuation of Control Room is Required

Emergency Action Level:

ALERT
<p>2.16 MODES: ALL</p> <p>Control Room evacuation is required per AP-990, "Shutdown Outside of the Control Room"</p>

Basis:

With the control room evacuated, additional support, monitoring and direction through the Technical Support Center and/or the Emergency Operations Facility is necessary.

Declaration of an Alert may be delayed until the transfer to remote shutdown is completed. This is appropriate since establishing control of the Plant takes precedence.

CR3 Matrix Reference Number: 2.16

NEI 97-03 Reference: HA5

Control Room Evacuation

Initiating Condition:

Evacuation of Control Room is Initiated and Plant Control cannot be established

Emergency Action Level:

SITE AREA EMERGENCY	
2.17 MODES: ALL	
(1 and 2)	
1.	Control Room evacuation is required per AP-990, "Shutdown Outside of the Control Room"
<u>AND</u>	
2.	Control of the necessary equipment <u>not</u> established per AP-990 within 15 minutes

Basis:

The 15 minutes begins at the first attempt to turn the transfer switch to transfer control from the Main Control Room to the Remote Shutdown Panel.

The timely transfer of control to alternate control areas has NOT been accomplished. The failure to transfer control would be evidenced by deteriorating reactor coolant system or steam generator parameters.

The determination of whether control is established at the Remote Shutdown Panel is based upon the judgment of the Shift Manager. The Shift Manager is expected to make a reasonable, informed judgment within fifteen minutes of the transfer from the Control Room that the operating crew has control of the Plant from the Remote Shutdown Panel.

CR3 Matrix Reference Number: 2.17

NEI 97-03 Reference: HS2

NATURAL / MAN-MADE HAZARDS AND EC JUDGMENT

EAL 2.18

Security Event

Initiating Conditions:

Confirmed SECURITY CONDITION or threat which indicates a potential degradation in the level of safety of the Plant

Emergency Action Level:

UNUSUAL EVENT
<p>2.18 MODES: ALL</p> <p>(1 or 2 or 3)</p> <p>Report by Security Shift Supervisor or NRC of one or more of the following events:</p> <ol style="list-style-type: none">1. A validated notification from NRC providing information of an AIRCRAFT or AIRLINER threat. <p>OR</p> <ol style="list-style-type: none">2. A CREDIBLE SITE-SPECIFIC SECURITY THREAT NOTIFICATION <p>OR</p> <ol style="list-style-type: none">3. A SECURITY CONDITION that does NOT involve a HOSTILE ACTION as reported by the Security Shift Supervisor.

AIRCRAFT – Aircraft smaller than an AIRLINER.

AIRLINER: A large aircraft with the potential for causing significant damage to the Plant. (The NRC notification should designate aircraft vs. airliner.)

CREDIBLE SITE-SPECIFIC SECURITY THREAT NOTIFICATION – A threat specifically to CR3 confirmed and validated by Site Security or received over the Emergency Notification System (ENS) from the Nuclear Regulatory Commission (NRC). Notification may be received from recognized law enforcement or governmental agencies (e.g. Federal Bureau of Investigation (FBI), Florida Department of Law Enforcement (FDLE), Division of Emergency Management (DEM), NRC.)

HOSTILE ACTION: An act toward a nuclear power Plant or its personnel that includes the use of violent force to destroy equipment, take hostages, and/or intimidate the licensee to achieve an end. This includes attack by air, land, or water using guns, explosives, projectiles, vehicles, or other devices used to deliver destructive force. Other acts that satisfy the destructive intent may be included. Hostile action should not be construed to include acts of civil disobedience or felonious acts that are not part of a concerted attack on the nuclear power Plant. Non-terrorism-based EALs should be used address such activities.

SECURITY CONDITION: Any Security Event as listed in the approved security contingency plan that constitutes a threat/compromise to site security, threat/risk to site personnel, or a potential degradation to the level of safety of the plant. A SECURITY CONDITION does not involve a HOSTILE ACTION.

Basis:

Note: Timely and accurate communication between Security Shift Supervision and the Control Room is crucial for the implementation of effective Security EALs.

Security events which do not represent a potential degradation in the level of safety of the plant are reported under 10 CFR 73.71 or in some cases under 10 CFR 50.72. Security events assessed as HOSTILE ACTIONS are classifiable under EALs 2.19, 2.20, and 2.21.

A higher initial classification could be made based upon the nature and timing of the security threat and potential consequences. The licensee shall consider upgrading the emergency response status and emergency classification level in accordance with the site's Safeguards Contingency Plan and Emergency Plan.

(continued)

EAL #1

The intent of this EAL is to ensure that notifications for the AIRCRAFT or AIRLINER threat are made in a timely manner and that offsite response organizations and CR3 personnel are at a state of heightened awareness regarding the credible threat.

This EAL is met when CR3 receives information regarding an AIRCRAFT or AIRLINER threat from NRC. Validation is performed by calling the NRC or by other approved methods of authentication.

The NRC Headquarters Operations Officer (HOO) will communicate to CR3 if the threat involves an AIRLINER. The status and size of the plane may be provided by NORAD through the NRC.

Escalation to Alert emergency classification level via EAL 2.19 would be appropriate if the threat involves an AIRLINER within 30 minutes of the plant.

EAL #2

This threshold is included to ensure that appropriate notifications for the security threat are made in a timely manner. This includes information of a credible threat. Only the plant to which the specific threat is made need declare the Notification of an Unusual Event.

The determination of "credible" is made through use of information found in the Safeguards Contingency Plan.

EAL #3

Reference is made to security shift supervision because these individuals are the designated personnel on-site qualified and trained to confirm that a security event is occurring or has occurred. Training on security event classification confirmation is closely controlled due to the strict secrecy controls placed on the plant Safeguards Contingency Plan.

This threshold is based on site specific security plans. Site specific Safeguards Contingency Plans are based on guidance provided by NEI 03-12.

CR3 Matrix Reference Number: 2.18
NEI 99-01 Reference: HU4

NATURAL / MAN-MADE HAZARDS AND EC JUDGMENT

EAL 2.19

Security Event

Initiating Condition:

HOSTILE ACTION in the OWNER CONTROLLED AREA or airborne attack threat.

Emergency Action Level:

ALERT
2.19 MODES: ALL
(1 or 2)
1. A validated notification from NRC of an AIRLINER attack threat less than 30 minutes away
OR
2. A HOSTILE ACTION is occurring or has occurred within the OWNER CONTROLLED AREA as reported by the Security Shift Supervisor.

AIRLINER: A large aircraft with the potential for causing significant damage to the Plant. (The NRC notification should designate aircraft vs. airliner.)

HOSTILE ACTION: An act toward a nuclear power Plant or its personnel that includes the use of violent force to destroy equipment, take hostages, and/or intimidate the licensee to achieve an end. This includes attack by air, land, or water using guns, explosives, projectiles, vehicles, or other devices used to deliver destructive force. Other acts that satisfy the destructive intent may be included. Hostile action should not be construed to include acts of civil disobedience or felonious acts that are not part of a concerted attack on the nuclear power Plant. Non-terrorism-based EALs should be used address such activities.

OWNER CONTROLLED AREA: The area of land (approximately 4738 acres) that is owned, leased, or otherwise controlled by DEF, situated between the mouths of the Withlacoochee and Crystal Rivers and bounded to the north by woodlands, to the east by Highway 19, to the south by medium to dense woodlands and to the west by marshlands and the Gulf of Mexico. The OWNER CONTROLLED AREA is indicated in Figure 2-3 of the FSAR and encompasses both the PROTECTED AREA and the SITE BOUNDARY.

PROTECTED AREA: All areas within the CR3 security perimeter fence that require badged authorization for entry.

Basis:

Note: Timely and accurate communication between Security Shift Supervision and the Control Room is crucial for the implementation of effective Security EALs.

These EALs address the contingency for a very rapid progression of events, such as that experienced on September 11, 2001. They are not premised solely on the potential for a radiological release. Rather the issue includes the need for rapid assistance due to the possibility for significant and indeterminate damage from additional air, land or water attack elements.

The fact that the site is under serious attack or is an identified attack target with minimal time available for further preparation or additional assistance to arrive requires a heightened state of readiness and implementation of protective measures that can be effective (such as on-site evacuation, dispersal or sheltering).

(continued)

NATURAL / MAN-MADE HAZARDS AND EC JUDGMENT

EAL 2.19

EAL #1

This EAL addresses the immediacy of an expected threat arrival or impact on the site within a relatively short time.

The intent of this EAL is to ensure that notifications for the AIRLINER attack threat are made in a timely manner and that offsite response organizations and plant personnel are at a state of heightened awareness regarding the credible threat.

This EAL is met when CR3 receives information regarding an AIRLINER attack threat from NRC and the AIRLINER is within 30 minutes of the plant.

The NRC Headquarters Operations Officer (HOO) will communicate to the licensee if the threat involves an AIRLINER. The status and size of the plane may be provided by NORAD through the NRC.

EAL #2

This EAL addresses the potential for a very rapid progression of events due to a HOSTILE ACTION. It is not intended to address incidents that are accidental events or acts of civil disobedience, such as small aircraft impact, hunters, or physical disputes between employees within the OWNER CONTROLLED AREA. Those events are adequately addressed by other EALs.

Note that this EAL is applicable for any HOSTILE ACTION occurring, or that has occurred, in the OWNER CONTROLLED AREA outside of the PROTECTED AREA. For events that affect the PROTECTED AREA, refer to EAL 2.20 or EAL 2.21.

Although nuclear plant security officers are well trained and prepared to protect against HOSTILE ACTION, it is appropriate for offsite response organizations to be notified and encouraged to begin activation to be better prepared should it be necessary to consider further actions.

If not previously notified by the NRC that the airborne HOSTILE ACTION was intentional, then it would be expected, although not certain, that notification by an appropriate Federal agency would follow. In this case, appropriate federal agency is intended to be NORAD, FBI, FAA or NRC. However, the declaration should not be unduly delayed awaiting Federal notification.

CR3 Matrix Reference Number: 2.19

NEI 99-01 Reference: HA4

Security Event**Initiating Condition:**

HOSTILE ACTION within the PROTECTED AREA

Emergency Action Level:

SITE AREA EMERGENCY
<p>2.20 MODES: ALL</p> <p>1. A HOSTILE ACTION is occurring or has occurred within the PROTECTED AREA as reported by the Security Shift Supervisor.</p>

HOSTILE ACTION: An act toward a nuclear power Plant or its personnel that includes the use of violent force to destroy equipment, take hostages, and/or intimidate the licensee to achieve an end. This includes attack by air, land, or water using guns, explosives, projectiles, vehicles, or other devices used to deliver destructive force. Other acts that satisfy the destructive intent may be included. Hostile action should not be construed to include acts of civil disobedience or felonious acts that are not part of a concerted attack on the nuclear power Plant. Non-terrorism-based EALs should be used address such activities.

HOSTILE FORCE: One or more individuals who are engaged in a determined assault, overtly or by stealth and deception, equipped with suitable weapons capable of killing, maiming, or causing destruction.

OWNER CONTROLLED AREA: The area of land (approximately 4738 acres) that is owned, leased, or otherwise controlled by DEF, situated between the mouths of the Withlacoochee and Crystal Rivers and bounded to the north by woodlands, to the east by Highway 19, to the south by medium to dense woodlands and to the west by marshlands and the Gulf of Mexico. The OWNER CONTROLLED AREA is indicated in Figure 2-3 of the FSAR and encompasses both the PROTECTED AREA and the SITE BOUNDARY.

PROTECTED AREA: All areas within the CR3 security perimeter fence that require badged authorization for entry.

Basis:

This condition represents an escalated threat to plant safety above that contained in the Alert in that a HOSTILE FORCE has progressed from the OWNER CONTROLLED AREA to the PROTECTED AREA.

This EAL addresses the contingency for a very rapid progression of events, such as that experienced on September 11, 2001. It is not premised solely on the potential for a radiological release. Rather the issue includes the need for rapid assistance due to the possibility for significant and indeterminate damage from additional air, land or water attack elements.

The fact that the site is under serious attack with minimal time available for further preparation or additional assistance to arrive requires offsite response organization readiness and preparation for the implementation of protective measures.

(continued)

NATURAL / MAN-MADE HAZARDS AND EC JUDGMENT

EAL 2.20

This EAL addresses the potential for a very rapid progression of events due to a HOSTILE ACTION. It is not intended to address incidents that are accidental events or acts of civil disobedience, such as small aircraft impact, hunters, or physical disputes between employees within the PROTECTED AREA. Those events are adequately addressed by other EALs.

Although nuclear plant security officers are well trained and prepared to protect against HOSTILE ACTION, it is appropriate for offsite response organizations to be notified and encouraged to begin preparations for public protective actions to be better prepared should it be necessary to consider further actions.

If not previously notified by NRC that the airborne HOSTILE ACTION was intentional, then it would be expected, although not certain, that notification by an appropriate Federal agency would follow. In this case, appropriate federal agency is intended to be NORAD, FBI, FAA or NRC. However, the declaration should not be unduly delayed awaiting Federal notification.

Escalation of this emergency classification level, if appropriate, would be based on actual plant status after impact or progression of attack.

CR3 Matrix Reference Number: 2.20
NEI 99-01 Reference: HS4

NATURAL / MAN-MADE HAZARDS AND EC JUDGMENT

EAL 2.21

Security Event

Initiating Condition:

HOSTILE ACTION resulting in loss of physical control of the facility

Emergency Action Level:

GENERAL EMERGENCY
2.21 MODES: ALL (1 or 2)
1. A HOSTILE ACTION has occurred such that plant personnel are unable to operate equipment required to maintain safety functions .
OR
2. A HOSTILE ACTION has caused failure of Spent Fuel Cooling Systems and imminent fuel damage is likely.

HOSTILE ACTION: An act toward a nuclear power Plant or its personnel that includes the use of violent force to destroy equipment, take hostages, and/or intimidate the licensee to achieve an end. This includes attack by air, land, or water using guns, explosives, projectiles, vehicles, or other devices used to deliver destructive force. Other acts that satisfy the destructive intent may be included. Hostile action should not be construed to include acts of civil disobedience or felonious acts that are not part of a concerted attack on the nuclear power Plant. Non-terrorism-based EALs should be used address such activities.

VITAL AREA: Any area, normally within the PROTECTED AREA, that contains equipment, systems, components, or material, the failure, destruction, or release of which could directly or indirectly endanger the public health and safety by exposure to radiation.

Basis:

EAL #1

This EAL encompasses conditions under which a HOSTILE ACTION has resulted in a loss of physical control of a VITAL AREA or equipment required to maintain safety functions (reactivity control, reactor coolant system inventory, and secondary heat removal) and control of that equipment cannot be transferred to and operated from another location. If control of the plant equipment necessary to maintain safety functions can be transferred to another location, then the threshold is not met.

EAL #2

This EAL addresses failure of spent fuel cooling systems as a result of HOSTILE ACTION if imminent fuel damage is likely, such as when a freshly off-loaded reactor core is in the spent fuel pool. For the purposes of EAL 2.21, "imminent" means that mitigation actions have been ineffective, additional actions are not likely to be successful, and trended information indicates that fuel damage will occur.

CR3 Matrix Reference Number: 2.21

NEI 99-01 Reference: HG1

NATURAL / MAN-MADE HAZARDS AND EC JUDGMENT

EAL 2.22

Internal Flooding

Initiating Condition:

Internal flooding affecting areas containing SAFE SHUTDOWN EQUIPMENT

Emergency Action Level:

UNUSUAL EVENT
2.22 MODES: ALL (1 and 2) 1. Indication of uncontrolled flooding in the Auxiliary Building or Intermediate Building <u>AND</u> 2. Water level/flooding has the potential to affect or immerse SAFE SHUTDOWN EQUIPMENT

SAFE SHUTDOWN EQUIPMENT: Equipment necessary to achieve and maintain the reactor sub critical with controlled decay heat removal to bring the Plant to the ITS applicable shutdown condition/mode.

Basis:

This addresses the possible effects of flooding from system malfunctions, component failures, or repair activity mishaps that could threaten the safe operation of the Plant. The flooding could affect equipment NOT designed to be submerged.

CR3 Matrix Reference Number: 2.22
NEI 97-03 Reference: HU1

NATURAL / MAN-MADE HAZARDS AND EC JUDGMENT

EAL 2.23

Internal Flooding

Initiating Condition:

Internal flooding affecting SAFE SHUTDOWN EQUIPMENT

Emergency Action Level:

ALERT
2.23 MODES: ALL
(1 and 2)
1. Water level exceed 5 inches in the Auxiliary Building or Intermediate Building
AND
2. (a or b)
a. Indications show degraded SAFE SHUTDOWN EQUIPMENT due to the flooding
OR
b. Electrical hazards prevent Plant personnel normal access to areas of Plant containing SAFE SHUTDOWN EQUIPMENT

SAFE SHUTDOWN EQUIPMENT: Equipment necessary to achieve and maintain the reactor sub critical with controlled decay heat removal to bring the Plant to the ITS applicable shutdown condition/mode.

Basis:

This addresses the possible effects of flooding from system malfunctions, component failures, or repair activity mishaps that has either threatened the safe operation of the Plant or resulted in a complete loss of function required for cold shutdown.

The water value was selected to be consistent with the site's flooding analysis and mitigative strategy of abnormal procedures. A flooding hazard evaluation established 7 inches as the level in the Auxiliary Building which would begin to affect equipment (ref: Gilbert/Commonwealth FCS-9852, 10/12/88). The 5-inch value was selected for conservatism.

If damage from the internal flooding is clearly contained and localized to one train, and safe shutdown capability exists, then item 2a of the EAL is NOT met. If the extent of the damage is uncertain in terms of loss of safe shutdown capability, then entry into this EAL is required. If all Auxiliary Building 95-ft. elevation motor control centers are de-energized in accordance with abnormal procedures as a result of flooding, then SAFE SHUTDOWN EQUIPMENT is deemed to be degraded and entry into this EAL is required.

CR3 Matrix Reference Number: 2.23
NEI 97-03 Reference: HA1

NATURAL / MAN-MADE HAZARDS AND EC JUDGMENT

EAL 2.24

Emergency Coordinator Judgment

Initiating Conditions:

Other conditions existing, which in the judgment of the Emergency Coordinator, warrant declaration of an Unusual Event

Emergency Action Level:

UNUSUAL EVENT
2.24 MODES: ALL Other conditions exist which indicate a potential degradation of the level of safety of the Plant

Basis:

This EAL addresses unanticipated conditions NOT addressed explicitly elsewhere but warrant declaration of an emergency because conditions exist which are believed by the Emergency Coordinator to fall under the Unusual Event emergency class.

This EAL should also be referenced if, in the judgment of the Emergency Coordinator, an Unusual Event should be classified if Plant symptoms are less than the threshold of an existing EAL.

CR3 Matrix Reference Number: 2.24

NEI 97-03 Reference: HU5

NATURAL / MAN-MADE HAZARDS AND EC JUDGMENT

EAL 2.25

Emergency Coordinator Judgment

Initiating Conditions:

Other conditions exist, which in the judgment of the Emergency Coordinator, warrant declaration of an Alert

Emergency Action Level:

ALERT
2.25 MODES: ALL Other conditions exist which indicate that events are in process or have occurred which involve potential or actual substantial degradation of the level of safety of the Plant

Basis:

This EAL is intended to address unanticipated conditions NOT addressed explicitly elsewhere but warrant declaration of an emergency because conditions exist which are believed by the Emergency Coordinator to fall under the Alert emergency class.

Any release is expected to be limited to small fractions of the EPA plume Protective Action Guideline Exposure Levels.

This EAL should also be referenced if, in the judgment of the Emergency Coordinator, an Alert should be classified if Plant symptoms are less than the threshold of an existing EAL.

It is NOT necessary to declare an ALERT if an Initiating Condition/EAL is NOT met and it is desirable to have TSC support, however, if support of the TSC staff is vital to mitigate an event, an Alert declaration should be considered

CR3 Matrix Reference Number: 2.25
NEI-97-03 Reference: HA6

NATURAL / MAN-MADE HAZARDS AND EC JUDGMENT

EAL 2.26

Emergency Coordinator Judgment

Initiating Conditions:

Other conditions exist, which in the judgment of the Emergency Coordinator, warrant declaration of a Site Area Emergency

Emergency Action Level:

SITE AREA EMERGENCY	
2.26	MODES: ALL Other conditions exist which indicate actual or likely major failures of Plant functions needed for the protection of the public

Basis:

This EAL is intended to address unanticipated conditions NOT addressed explicitly elsewhere but that warrant declaration of an emergency because conditions exist which are believed by the Emergency Coordinator to fall under the emergency class description for Site Area Emergency.

A release is NOT expected to result in exposure levels exceeding EPA plume Protective Action Guideline Exposure Levels beyond the SITE BOUNDARY (1 Rem TEDE or 5 Rem Thyroid CDE).

TEDE - Total Effective Dose Equivalent

CDE - Committed Dose Equivalent

This EAL should also be referenced if, in the judgment of the Emergency Coordinator, a Site Area Emergency should be classified if Plant symptoms are less than the threshold of an existing EAL.

CR3 Matrix Reference Number: 2.26

NEI 97-03 Reference: HS3

NATURAL / MAN-MADE HAZARDS AND EC JUDGMENT

EAL 2.27

Emergency Coordinator Judgment

Initiating Condition:

Other conditions exist, which in the judgment of the Emergency Coordinator, warrant declaration of a General Emergency

Emergency Action Level:

GENERAL EMERGENCY
2.27 MODES: ALL
(1 or 2)
Other conditions exist which indicate:
1. Actual or imminent substantial core degradation with potential loss of containment integrity
OR
2. The potential for uncontrolled radionuclide releases that can be expected to exceed EPA Protective Action Guidelines Plume Exposure Levels beyond the SITE BOUNDARY (see EAL 1.4)

SITE BOUNDARY: That area, including the PROTECTED AREA, that extends 4400 feet or 0.83 miles in a circle around the Reactor Building.

PROTECTED AREA: All areas within the CR3 security perimeter fence that require badged authorization for entry.

Basis:

This EAL is intended to address unanticipated conditions NOT addressed explicitly elsewhere but that warrant declaration of an emergency because conditions exist which are believed by the Emergency Coordinator to fall under the General Emergency class.

Releases can reasonably be expected to exceed EPA Protective Action Guidelines Plume Exposure Levels beyond the Site Boundary (1 Rem TEDE or 5 Rem Thyroid CDE).

CR3 Matrix Reference Number: 2.27

NEI 97-03 Reference: HG2

SYSTEM MALFUNCTION

EAL 3.1

Loss of Communication

Initiating Condition:

Unplanned loss of all In-Plant or all offsite Communication capability

Emergency Action Level:

UNUSUAL EVENT
3.1 MODES: ALL
(1 or 2)
1. Loss of <u>all</u> the following in-Plant communications capability:
a. PE Internal Telephone System
b. PAX
c. Portable UHF Radios
<u>OR</u>
2. Loss of <u>all</u> of the following Offsite Communication capability:
a. PE Telephone System
b. State Hot Ringdown (SHRD)
c. All FTS 2001 NRC phones (ENS, HPN, etc.)
d. State-Wide Emergency Management Network (EMnet)
e. Cellular Telephones

Basis:

The purpose of this Initiating Condition and its associated EALs is to recognize a loss of communications capability either defeating the Plant operations staff ability to perform routine tasks necessary for Plant operations or the ability to communicate problems with offsite authorities. The loss of offsite communications ability is expected to be significantly more comprehensive than the condition addressed by 10 CFR 50.72.

The onsite or offsite communications loss must encompass the loss of all means of routine direct communications with intended parties. This includes the ENS, Commercial lines, Cellular Phones, Microwave, and FAX transmissions. This EAL is used only when extraordinary means are used to make communications possible (relaying of information from radio transmissions, individuals being sent to offsite locations, etc.). Credit is NOT taken for portable satellite phones located in the Technical Support Center due to the time it takes to establish a communications link. Once a link is established with a portable satellite phone, the event may be terminated.

CR3 Matrix Reference Number: 3.1

NEI 97-03 Reference: SU6

SYSTEM MALFUNCTION

EAL 3.2

Failure of Reactor Protection

Initiating Condition:

Failure of Reactor Protection System (RPS) instrumentation to complete or initiate an automatic reactor trip once an RPS setpoint has been exceeded and manual trip was successful

Emergency Action Level:

ALERT
3.2 MODES: 1,2,3
(1 and 2)
1. RPS Trip setpoint exceeded and no Reactor trip occurred
AND
2. Manual Reactor trip from Control Room was successful and reactor is shutdown

Basis:

This condition indicates failure of the Reactor Protection System to trip the reactor. This condition is more than a potential degradation of a safety system in that a front line automatic protection system did NOT function in response to a Plant transient and thus the Plant safety has been compromised, and design limits of the fuel may have been exceeded.

An Alert is indicated because conditions exist that lead to potential loss of fuel clad or RCS. Reactor protection system setpoint being exceeded is specified here because failure of the automatic protection system is the issue. A manual trip is any set of actions by the reactor operator(s) in the Control Room which causes sufficient control rods to be rapidly inserted into the core and brings the reactor subcritical (e.g., reactor trip button, de-energizing control rod power from the control room). Operator actions to drive rods or other actions taken or occurring outside the control room does NOT constitute a reactor trip because it does NOT meet the rapid insertion criterion.

An automatic reactor trip is considered as the RPS tripping the reactor.

Failure of the manual trip pushbutton when pressed in anticipation of an automatic trip does NOT constitute a failure of the RPS if it is certain that NO other trip setpoints have been exceeded AND de-energizing control rod power from the Control Room results in a subcritical reactor. An Alert declaration would NOT be required in this instance since design limits would NOT have been exceeded.

CR3 Matrix Reference Number: 3.2

NEI 97-03 Reference: SA2

SYSTEM MALFUNCTION

EAL 3.3

Failure of Reactor Protection

Initiating Condition:

Failure of Reactor Protection System (RPS) instrumentation to complete or initiate an automatic reactor trip once an RPS setpoint has been exceeded and manual trip was not successful

Emergency Action Level:

SITE AREA EMERGENCY
3.3 MODES: 1,2 (1 and 2) 1. RPS Trip setpoint exceeded and no Reactor trip occurred <u>AND</u> 2. Manual Reactor trip from Control Room was <u>not</u> successful in shutting down the reactor

Basis:

Automatic and manual trips are NOT considered successful if action away from the Control Room was required to trip the reactor. Manual trip is successful if the trip push button or de-energizing control rod power in the Control Room results in shutting down the reactor.

An automatic reactor trip is considered as the RPS tripping the reactor.

The trip is considered successful when Control Room actions have inserted enough control rods to cause the reactor power to fall below that percent power associated with the ability of the safety systems to remove heat and continue to decrease. Subsequent actions necessary for the reactor to be prepared for a cooldown and depressurization are NOT to be considered.

Under these conditions, the reactor is producing more heat than the maximum decay heat load for which the safety systems are designed. A Site Area Emergency is indicated because conditions exist that lead to imminent loss or potential loss of both fuel clad and RCS. Although this Initiating Condition may be viewed as redundant to the Fission Product Barrier Matrix, its inclusion is necessary to better assure timely recognition and emergency response.

CR3 Matrix Reference Number: 3.3
NEI 97-03 Reference: SS2

SYSTEM MALFUNCTION

EAL 3.4

Failure of Reactor Protection

Initiating Condition:

Failure of the Reactor Protection System to complete an automatic trip and manual trip was NOT successful and there is indication of extreme challenge to the ability to cool the core

Emergency Action Level:

GENERAL EMERGENCY
3.4 MODES: 1,2 (1 and 2 and 3)
1. RPS Trip setpoint exceeded and no Reactor trip occurred AND
2. Manual Reactor trip from Control Room was <u>not</u> successful in shutting down the reactor AND (a or b)
a. Core exit thermocouple temperatures > 700°F, as indicated on SPDS. OR
b. Adequate Secondary Cooling not available

Basis:

Under the conditions of this Initiating Condition and its associated EALs, the efforts to bring the reactor subcritical have been unsuccessful and, as a result, the reactor is producing more heat than the maximum decay heat load for which the safety systems were designed. Although there are capabilities away from the reactor control console, such as emergency boration, the continuing temperature rise indicates that these capabilities are NOT effective. This situation could be a precursor for a core melt sequence.

700°F is a good indicator of an extreme challenge to the ability to cool the core and is consistent with the "potential loss" factor in the Fission Product Barrier Matrix.

Another consideration is the inability to initially remove heat during the early stages of this sequence. If emergency feedwater flow is insufficient to remove the amount of heat required by design from at least one steam generator, an extreme challenge should be considered to exist.

In the event either of these challenges exist at a time the reactor has NOT been brought below the power associated with the safety system design a core melt sequence exists. In this situation, core degradation can occur rapidly. For this reason, the General Emergency declaration is intended to be anticipatory of the Fission Product Barrier Matrix declaration to permit maximum offsite intervention time.

CR3 Matrix Reference Number: 3.4

NEI 97-03 Reference: SG2

SYSTEM MALFUNCTION

EAL 3.5

Inability to Reach Required Mode Within Improved Technical Specification Time Limits

Initiating Condition:

Inability to reach required operating mode within Improved Technical Specification limits

Emergency Action Level:

UNUSUAL EVENT		
3.5	MODES:	1,2,3,4
(1 and 2)		
1. Entry into an Improved Technical Specification LCO statement requiring a mode reduction		
<u>AND</u>		
2. The Plant is <u>not</u> in the required operating mode within the time prescribed by the LCO required action		

Basis:

Limiting Conditions for Operation (LCOs) require the Plant to be brought to a required shutdown mode when the Improved Technical Specification required configuration cannot be restored. The Plant is within its safety envelope when being shut down within the allowable required action time in the Improved Technical Specifications. An immediate Notification of an Unusual Event is required when the Plant is NOT brought to the required operating mode within the allowable required action time in the Improved Technical Specifications.

Declaration of an Unusual Event is based on the time at which the LCO-specified required action time period elapses under the Improved Technical Specifications and is NOT related to how long a condition may have existed.

CR3 Matrix Reference Number: 3.5

NEI 97-03 Reference: SU2

SYSTEM MALFUNCTION

EAL 3.6

Loss of Alarms/Indications

Initiating Condition:

UNPLANNED loss of most or all Control Room Annunciators for 15 minutes or longer

Emergency Action Level:

UNUSUAL EVENT	
3.6	MODES: 1,2,3,4
(1 or 2)	
1.	UNPLANNED loss of Annunciator panels A-L <u>and</u> Annunciator printer for 15 minutes or longer
<u>OR</u>	
2.	UNPLANNED loss of NNI-X and NNI-Y for 15 minutes or longer

UNPLANNED: An event or action is UNPLANNED if it is NOT the expected result of normal operations, testing, or maintenance. Events that result in corrective or mitigative actions being taken in accordance with abnormal or emergency procedures are UNPLANNED.

Basis:

This Initiating Condition and its associated EAL are intended to recognize the difficulty associated with monitoring changing Plant conditions without the use of a major portion of the annunciation or indication equipment. Recognition of the availability of computer-based indication equipment is considered (SPDS, Plant computer, etc.). The Annunciator printer includes: 1) the far left overhead Annunciator CRT display; 2) the printer in the cabinet labeled "Sequential Events Recorder;" and 3) the computer behind the main Control Board labeled "Annunciator Monitor."

A loss of Annunciators is considered a loss of the visual, as opposed to a loss of the audible portion of the Annunciator. Annunciator panels A-L contain the major control systems (RPS, ES, ICS, etc.).

Loss of NNI-X and NNI-Y will cause the loss of most or all safety system indication.

Fifteen minutes was selected as a threshold to exclude transient or momentary power losses.

Due to the limited number of safety systems in operation during cold shutdown, refueling, and defueled modes, NO IC is indicated during these modes of operation.

CR3 Matrix Reference Number: 3.6

NEI 97-03 Reference: SU3

SYSTEM MALFUNCTION

EAL 3.7

Loss of Alarms/Indications

Initiating Condition:

UNPLANNED loss of most or all Control Room Annunciators for 15 minutes or longer with either a SIGNIFICANT TRANSIENT in progress or Plant Computer and SPDS unavailable

Emergency Action Level:

ALERT	
3.7	MODES: 1,2,3,4
(1 and 2)	
1.	(a or b)
a.	UNPLANNED loss of Annunciator panels A-L <u>and</u> Annunciator printer for 15 minutes or longer
<u>OR</u>	
b.	UNPLANNED loss of NNI-X and NNI-Y for 15 minutes or longer
<u>AND</u>	
2.	(a or b)
a.	SIGNIFICANT TRANSIENT in progress
<u>OR</u>	
b.	Loss of Plant Computer <u>and</u> SPDS

UNPLANNED: An event or action is UNPLANNED if it is NOT the expected result of normal operations, testing, or maintenance. Events that result in corrective or mitigative actions being taken in accordance with abnormal or emergency procedures are UNPLANNED.

SIGNIFICANT TRANSIENT: An UNPLANNED event involving one or more of the following:

- (1) Automatic turbine trip at >25% reactor thermal power
- (2) Electrical load rejection >25% full electrical load
- (3) Plant runback
- (4) Reactor trip
- (5) Safety injection system actuation
- (6) >10% thermal power oscillations
- (7) Loss of decay heat removal in Mode 4 ("Significant Transient" is NOT used in any Mode 5 or 6 EALs.)

Basis:

This Initiating Condition and its associated EAL are intended to recognize the difficulty associated with monitoring changing Plant conditions without the use of a major portion of the annunciation or indication equipment during a transient. Recognition of the availability of computer based indication equipment is considered (SPDS, Plant computer, etc.).

The Annunciator printer includes: 1) the far left overhead Annunciator CRT display; 2) the Rochester printer ("Sequential Events Recorder") in cabinet ANN/EVENT RCDC. CAB. #1; and 3) the computer behind the main Control Board labeled "Annunciator Monitor." A loss of both the Annunciator printer and computer-based indication is required to meet the IC.

A loss of Annunciators is considered a loss of the visual, as opposed to a loss of the audible portion of the Annunciator.

Annunciator panels A-L contain the major control systems (RPS, ES, ICS, etc.)

Due to the limited number of safety systems in operation during cold shutdown, refueling and defueled modes NO IC is indicated during these modes of operation.

CR3 Matrix Reference Number: 3.7

NEI 97-03 Reference: SA4

SYSTEM MALFUNCTION

EAL 3.8

Loss of Alarms/Indications

Initiating Condition:

Inability to monitor a SIGNIFICANT TRANSIENT in progress

Emergency Action Level:

SITE AREA EMERGENCY	
3.8	MODES: 1,2,3,4
(1 and 2 and 3 and 4)	
1. (a or b)	
a.	Loss of Annunciator panels A-L and Annunciator printer for 15 minutes or longer
<u>OR</u>	
b.	Loss of NNI-X and NNI-Y for 15 minutes or longer
<u>AND</u>	
2.	SIGNIFICANT TRANSIENT in progress
<u>AND</u>	
3.	Loss of Plant Computer and SPDS
<u>AND</u>	
4.	Inability to directly monitor any one of the following: Subcriticality Core Cooling Containment RCS Inventory

SIGNIFICANT TRANSIENT: An UNPLANNED event involving one or more of the following:

- (1) Automatic turbine trip at >25% reactor thermal power
- (2) Electrical load rejection >25% full electrical load
- (3) Plant runback
- (4) Reactor trip
- (5) Safety injection system actuation
- (6) >10% thermal power oscillations
- (7) Loss of decay heat removal in Mode 4 ("Significant Transient" is NOT used in any Mode 5 or 6 EALs.)

Basis:

This Initiating Condition and its associated EAL are intended to recognize the inability of the control room staff to monitor the Plant response to a transient.

The Annunciator printer includes: 1) the far left overhead Annunciator CRT display; 2) the Rochester printer ("Sequential Events Recorder") in cabinet ANN/EVENT RCDC. CAB. #1; and 3) the computer behind the main Control Board labeled "Annunciator Monitor." A loss of both the Annunciator printer and computer-based indication is required to meet the IC.

A loss of Annunciators is considered a loss of the visual, as opposed to a loss of the audible portion of the Annunciator.

Indications needed to monitor safety functions necessary for protection of the public must include control room indications, computer generated indications and dedicated annunciation capability. The specific indications should be those used to determine such functions as the ability to shut down the reactor, maintain the core cooled and in a coolable geometry, to remove heat from the core, to maintain the reactor coolant system intact, and to maintain containment intact.

Planned and unplanned actions are NOT differentiated in this EAL since the loss of instrumentation of this magnitude is of such significance during a transient, that the cause of the loss does NOT make the condition more tolerable.

CR3 Matrix Reference Number: 3.8

NEI 97-03 Reference: SS6

SYSTEM MALFUNCTION

EAL 3.9

Fuel Clad Degradation

Initiating Condition:

Fuel Clad Degradation

Emergency Action Level:

UNUSUAL EVENT	
3.9	MODES: 1,2,3,4,5
(a or b)	
Radiochemistry analysis indicates:	
a.	Dose Equivalent Iodine (I-131) > 1.0 $\mu\text{Ci/gm}$ for 48 hours or longer
<u>OR</u>	
b.	Specific activity >100/E-bar for 48 hours or longer

Basis:

This Initiating Condition is included as an Unusual Event because it is considered a potential degradation in the level of safety of the Plant and a potential precursor of more serious problems. This EAL addresses RCS samples exceeding Improved Technical Specifications for radioactivity levels in the RCS.

RCS purification will provide for Iodine and crud cleanup in the reactor coolant system and reduce activity to < 1.0 $\mu\text{Ci/gm}$ within 48 hours.

The EAL values are based on Improved Technical Specification Limits.

E-bar is the weighted average energy of RCS isotopes.

CR3 Matrix Reference Number: 3.9

NEI 97-03 Reference: SU4

SYSTEM MALFUNCTION

EAL 3.10

Turbine Failure

Initiating Condition:

Turbine failure results in casing penetration

Emergency Action Level:

UNUSUAL EVENT	
3.10	MODES: 1,2,3
Report by Plant personnel of main turbine failure causing penetration of the turbine casing <u>or</u> damage to main generator seals	

Basis:

This EAL is intended to address main turbine rotating component failures of sufficient magnitude to cause observable damage to the turbine casing or to the seals of the turbine generator. Of major concern is the potential for leakage of combustible fluids (lubricating oils) and gases (hydrogen) to the Plant environs. Actual fires and flammable gas build up are appropriately classified via Fire and Flammable Gas EALs. This EAL is consistent with the definition of an Unusual Event while maintaining the anticipatory nature desired and recognizing the risk to non-safety related equipment.

Escalation of the emergency classification is based on the potential damage done by missiles generated by the failure. It is NOT the intent of this Initiating Condition to declare an event based on damage discovered in a maintenance evolution. Generator seal damage observed after generator purge does NOT meet the intent of this EAL because it did NOT impact normal operation of the Plant.

CR3 Matrix Reference Number: 3.10

NEI 97-03 Reference: HU1

SYSTEM MALFUNCTION

EAL 3.11

Turbine Failure

Initiating Condition:

Turbine failure generated projectiles cause significant **VISIBLE DAMAGE** to **SAFE SHUTDOWN EQUIPMENT**

Emergency Action Level:

ALERT
3.11 MODES: 1,2,3
(1 or 2)
1. Report by Plant personnel of projectiles generated by a main turbine failure causing significant VISIBLE DAMAGE any of the following structures:
<ul style="list-style-type: none">- Auxiliary Building- BWST- Control Complex- Diesel Generator Building (EGDG-1A/!B)- EFT-2 Building- Intermediate Building- Reactor Building- EFP-3 Building
OR
2. Indications show degraded SAFE SHUTDOWN EQUIPMENT performance due to turbine generated projectiles

VISIBLE DAMAGE: Damage to equipment or structure that is readily observable without measurements, testing, or analyses. Damage is sufficient to cause concern regarding the continued operability or reliability of affected safety structure, system, or component. Example system/component damage includes: deformation due to heat or impact, denting, penetration, rupture, cracking, paint blistering due to fire. Example structure damage includes exposed and/or broken rebar, failed supports/pipe hangers, etc. Surface blemishing (e.g., paint chipping, scratches, concrete spalling) should NOT be included.

SAFE SHUTDOWN EQUIPMENT: Equipment necessary to achieve and maintain the reactor sub critical with controlled decay heat removal to bring the Plant to the ITS applicable shutdown condition/mode.

Basis:

This EAL is intended to address the threat to safe shutdown equipment imposed by missiles generated by main turbine rotating component failures. The list of areas includes all areas containing safe shutdown equipment, their controls, and their power supplies. This EAL is, therefore, consistent with the definition of an Alert in that if missiles have damaged or penetrated areas containing safety-related equipment the potential exists for substantial degradation of the level of safety of the Plant.

This EAL is intended to address events that may have resulted in a Plant vital area being subjected to forces beyond design limits, and thus damage may be assumed to have occurred to Plant safety systems. Assessing **SAFE SHUTDOWN EQUIPMENT** performance is NOT interpreted as mandating a lengthy damage assessment before classification and NO attempt is made to assess the actual magnitude of the damage. This EAL is NOT intended to be used for temporary loss of Control Complex habitability where timely repairs can be affected.

If damage from the turbine failure is clearly contained and localized to one train, then safe shutdown equipment is NOT affected and the EAL is NOT met. If the extent of the damage is uncertain in terms of loss of safe shutdown equipment, then entry into this EAL is required.

CR3 Matrix Reference Number: 3.11

NEI 97-03 Reference: HA1

SYSTEM MALFUNCTION

EAL 3.12

RCS Leakage

Initiating Condition:

RCS leakage

Emergency Action Level:

UNUSUAL EVENT	
3.12	MODES: 1,2,3,4
(1 or 2)	
1. Unidentified Leakage ≥ 10 gpm <u>or</u> Pressure Boundary Leakage ≥ 10 gpm	
<u>OR</u>	
2. Identified leakage ≥ 25 gpm	

Basis:

The terms "identified," "unidentified," and "pressure boundary" leakage are as defined in Improved Technical Specifications. The intent of this EAL is that the loss of RCS inventory is due to a failure of equipment.

The Reactor Coolant System (RCS) barrier is the RCS primary side and its connections up to and including the pressurizer safety and relief valves, and other connections up to and including the primary isolation valves. Any leakage in an RCS interfacing system containing reactor coolant (MU, DH, SF, WD, etc.) that can be readily located and isolated within 15 minutes of detection does NOT require entry into this EAL.

OTSG Tube Leaks are considered as part of "identified" RCS leaks and apply to this EAL.

NOTE: See section 4.1.2 of this Manual for Transient Event Classification (i.e. PORV Failed open, block valve closed).

This Initiating Condition is included as an Unusual Event because it may be a precursor of more serious conditions and, as result, is considered a potential degradation of the level of safety of the Plant. The 10 gpm value for the unidentified and pressure boundary leakage was selected as it is observable with normal control room indications. Lesser values must generally be determined through time-consuming surveillance tests (e.g., mass balances). The EAL for identified leakage is set at a higher value due to the lesser significance of identified leakage in comparison to unidentified or pressure boundary leakage.

CR3 Matrix Reference Number: 3.12

NEI 97-03 Reference: SU5

SYSTEM MALFUNCTION

EAL 3.13

Inability to Maintain Hot Shutdown

Initiating Condition:

Complete loss of core heat removal capability

Emergency Action Level:

SITE AREA EMERGENCY	
3.13	MODES: 1,2,3,4 (1 and 2)
1.	Complete loss of Main, Emergency, and Auxiliary Feedwater and unable to establish HPI cooling
<u>AND</u>	
2.	Loss of subcooling margin

Basis:

This EAL addresses complete loss of functions, including loss of heat removal capability, required for hot shutdown. Under these conditions, there is an actual major failure of a system intended for protection of the public. Thus, declaration of a Site Area Emergency is warranted.

CR3 Matrix Reference Number: 3.13

NEI 97-03 Reference: SS4

SYSTEM MALFUNCTION

EAL 3.14

Inadvertent Criticality

Initiating Condition:

Inadvertent criticality

Emergency Action Level:

UNUSUAL EVENT	
3.14	MODES: 2,3,4,5,6
An extended and unplanned sustained positive startup rate monitored by nuclear instrumentation	

Basis:

This condition can be identified using the startup rate monitor. The term "extended" is used to allow for exclusion of expected short term positive startup rates from planned fuel bundle or control rod movements during core alterations. The short term startup rates are the result of the increase in neutron population due to subcritical multiplication.

This Initiating Condition/EAL is NOT intended to classify an early criticality during reactor startup. This type event is indicative of errors in reactivity data/calculations and/or mis-operation. The loss of the required shutdown margin can be quickly restored by manual actions or automatic reactor trip.

CR3 Matrix Reference Number: 3.14

NEI 97-03 Reference: SU8

SYSTEM MALFUNCTION

EAL 3.15

Inability To Maintain Plant In Cold Shutdown

Initiating Condition:

Complete loss of functions required for core cooling during refueling and cold shutdown modes

Emergency Action Level:

ALERT	
3.15	MODES: 5,6
(1 or 2)	
1.	Inability to maintain reactor coolant temperature below 200°F
<u>OR</u>	
2.	Uncontrolled reactor coolant temperature approaching 200°F

Basis:

For PWRs, this Initiating Condition and its associated EAL are based on concerns raised by Generic Letter 88-17 "Loss Of Decay Heat Removal." A number of phenomena, such as pressurization, vortexing, steam generator draining, RCS level differences when operating at a mid-loop condition, decay heat removal system design and level instrumentation problems can lead to conditions where decay heat removal is lost and core uncover can occur. NRC analyses show that sequences can cause core uncover in 15 to 20 minutes, and severe core damage within an hour after decay heat removal is lost. The site-specific indicators for these EALs are those methods used by the Plant in response to Generic Letter 88-17, which include core exit temperature monitoring and RCS water level monitoring. In addition, radiation monitor readings may also be appropriate as an indicator of this condition.

"Uncontrolled" means that system temperature increase is NOT the result of planned actions by the Plant staff. The EAL guidance related to uncontrolled temperature rise is necessary to preserve the anticipatory philosophy of NUREG-0654 for events starting from temperatures much lower than the cold shutdown temperature limit.

A momentary UNPLANNED excursion above 200 °F when the heat removal function is available is NOT intended to constitute an ALERT. For example, if the on line DH pump trips and if in the process of starting the alternate pump RCS temperature briefly exceeds 200 °F, an ALERT declaration is NOT required.

CR3 Matrix Reference Number: 3.15

NEI 97-03 Reference: NEI-SA3

SYSTEM MALFUNCTION

EAL 3.16

Loss of Water Level in Reactor Vessel That Has or Will Uncover Fuel

Initiating Condition:

Loss of water level in the reactor vessel that has or will uncover fuel.

Emergency Action Level:

SITE AREA EMERGENCY
3.16 MODES 5,6
(1 and 2)
1. Loss of decay heat removal per AP-404
<u>AND</u>
2. (a or b)
a. Incores indicating superheated conditions
<u>OR</u>
b. Incores unavailable and time to uncover exceeded as specified in OP-103H

Basis:

Under the conditions specified by this Initiating Condition, severe core damage can occur and reactor coolant system pressure boundary integrity may NOT be assured. OP-103H, "Reactor Coolant System And Spent Fuel Pool Decay Heat Tables And Figures," contains time to core uncover without decay heat removal curves.

This Initiating Condition covers sequences such as prolonged boiling following loss of decay heat removal. Thus, declaration of a Site Area Emergency is warranted under the conditions specified by the Initiating Condition.

Incore indication is sufficient for this EAL since NO means of water level indication exist in the active fuel region.

CR3 Matrix Reference Number: 3.16

NEI 97-03 Reference: SS5

LOSS OF POWER

EAL 4.1

Loss of AC Power

Initiating Condition:

Loss of All Offsite Power for 15 minutes or longer

Emergency Action Level:

UNUSUAL EVENT	
4.1	MODES: ALL
(1 and 2)	
1.	Offsite Power Transformer (OPT) <u>and</u> Backup ES Transformer (BEST) <u>and</u> Auxiliary Transformer not available for 15 minutes or longer
<u>AND</u>	
2.	EDGs supplying power to 4160V ES Busses

Basis:

Prolonged loss of AC power reduces required redundancy and potentially degrades the level of safety of the Plant by rendering the Plant more vulnerable to a complete Loss of AC Power (Station Blackout). Fifteen minutes is used as a threshold to exclude transient or momentary power losses.

Available indicates transformers are capable of energizing ES busses.

CR3 Matrix Reference Number: 4.1

NEI 97-03 Reference: SU1

LOSS OF POWER

EAL 4.2

Loss of AC Power

Initiating Condition:

AC power capability to required 4160V ES busses reduced to a single source for 15 minutes or longer such that an additional failure would result in station blackout

Emergency Action Level:

ALERT		
4.2	MODES:	1,2,3,4
AC power capability to the 4160V ES busses reduced to a single power source for 15 minutes or longer such that only one of the following is available:		
<ul style="list-style-type: none">- "A" EDG- "B" EDG- Offsite Power Transformer (OPT)- Backup ES Transformer (BEST)		

Basis:

This Initiating Condition and the associated EALs are intended to provide an escalation from "Loss of Offsite Power for Greater Than 15 Minutes." The condition indicated by this Initiating Condition is the degradation of the offsite and onsite power systems such that any additional single failure would result in a station blackout.

Available indicates transformers are capable of energizing required busses.

EDG = Emergency Diesel Generator

CR3 Matrix Reference Number: 4.2

NEI 97-03 Reference: SA5

LOSS OF POWER

EAL 4.3

Loss of AC Power

Initiating Condition:

Loss of All Offsite and required Onsite AC Power for 15 minutes or longer

Emergency Action Level:

SITE AREA EMERGENCY	
4.3	MODES: 1,2,3,4
Neither 4160V ES bus is capable of being energized within 15 minutes	

Basis:

Loss of all AC power compromises all Plant safety systems requiring electric power including ECCS, Containment Heat Removal and the Ultimate Heat Sink. Prolonged loss of all AC power will cause core uncovering and may challenge containment integrity. The fifteen-minute time duration is to exclude transient or momentary power losses and begins at the time power is lost to the ES busses (NOT when repair efforts begin).

NOTE: In Modes 5 and 6, the same initiating condition/EAL is an ALERT classification.

CR3 Matrix Reference Number: 4.3

NEI 97-03 Reference: SS1

LOSS OF POWER

EAL 4.4

Loss of AC Power

Initiating Condition:

Prolonged Loss of All Offsite and Onsite AC power

Emergency Action Level:

GENERAL EMERGENCY	
4.4	MODES: 1,2,3,4
(1 and 2)	
1. Neither 4160V ES bus is capable of being energized	
<u>AND</u>	
2. (a or b)	
a. Restoration of 4160V ES Bus A <u>or</u> 4160V ES Bus B is not likely within 4 hours	
<u>OR</u>	
b. Core exit thermocouples > 700°F as indicated on SPDS	

Basis:

Loss of all AC power compromises all Plant safety systems requiring electric power including ECCS and the Ultimate Heat Sink. Prolonged loss of all AC power will lead to loss of fuel clad, RCS, and may challenge containment integrity. The four hours to restore AC power is based on the CR3 station blackout coping analysis performed in conformance with 10 CFR 50.63 and Regulatory Guide 1.155, "Station Blackout." The four-hour time limit begins at the time power is lost to the ES busses (NOT when repair efforts begin).

Although this Initiating Condition may be viewed as redundant to the Fission Product Barrier Matrix, its inclusion is necessary to better assure timely recognition and emergency response.

700°F is a good indicator of an extreme challenge to the ability to cool the core and is consistent with the "potential loss" factor in the Fission Product Barrier Matrix.

This Initiating Condition is specified to assure that in the unlikely event of a prolonged station blackout, timely recognition of the seriousness of the event occurs and that declaration of a General Emergency occurs as early as is appropriate, based on a reasonable assessment of the event trajectory.

The likelihood of restoring at least one emergency bus should be based on a realistic appraisal of the situation since a delay in an upgrade decision based on only a chance of mitigating the event could result in a loss of valuable time in preparing and implementing public protective actions.

CR3 Matrix Reference Number: 4.4

NEI 97-03 Reference: SG1

LOSS OF POWER

EAL 4.5

Loss of AC Power (Shutdown)

Initiating Condition:

Loss of All Offsite and Onsite AC Power to Required Busses During Cold Shutdown or Refueling Mode for 15 minutes or longer

Emergency Action Level:

ALERT
4.5 MODES: 5,6, No Mode
Neither 4160V ES bus is capable of being energized within 15 minutes

Basis:

Loss of all AC power compromises all Plant safety systems requiring electric power including ECCS, Containment Heat Removal and the Ultimate Heat Sink. When in cold shutdown, refueling, or defueled mode the event can be classified as an Alert, because of the significantly reduced decay heat, lower temperature and pressure, increasing the time to restore one of the emergency busses, relative to that specified for the Site Area Emergency EAL. Fifteen minutes was selected as a threshold to exclude transient or momentary power losses and begins at the time power is lost to the ES busses (NOT when repair efforts begin).

CR3 Matrix Reference Number: 4.5

NEI 97-03 Reference: SA1

LOSS OF POWER

EAL 4.6

Loss of Vital DC Power

Initiating Condition:

Loss of all Vital DC Power for 15 minutes or longer

Emergency Action Level:

SITE AREA EMERGENCY		
4.6	MODES:	1,2,3,4
Standby Power Status Lights for BUS A1, A2, and BUS B1, B2 on the Main Control Board (SSF Panel) are out for 15 minutes or longer		

Basis:

Loss of all DC power compromises ability to monitor and control Plant safety functions. Prolonged loss of all DC power could cause core uncover and loss of containment integrity when there is significant decay heat and sensible heat in the reactor system. Fifteen minutes is used to exclude transient or momentary power losses and begins at the time power is lost to the DC busses (NOT when repair efforts begin).

NOTE: In Modes 5 and 6, the same Initiating Condition/EAL is an UNUSUAL EVENT classification.

CR3 Matrix Reference Number: 4.6

NEI 97-03 Reference: SS3

LOSS OF POWER

EAL 4.7

Loss of Vital DC Power (Shutdown)

Initiating Condition:

Loss of all Vital DC Power for 15 minutes or longer

Emergency Action Level:

UNUSUAL EVENT	
4.7	MODES: 5,6, No Mode
Standby Power Status Lights for BUS A1, A2, and BUS B1, B2 on the Main Control Board (SSF Panel) are out for 15 minutes or longer	

Basis:

Loss of required DC power compromises ability to monitor and control Plant safety functions. Prolonged loss of all DC power could cause core uncover and loss of containment integrity when there is significant decay heat and sensible heat in the reactor system. When in cold shutdown, refueling, or defueled mode the event can be classified as an Unusual Event, because of the significantly reduced decay heat, lower temperature and pressure, increasing the time to restore one of the emergency busses, relative to that specified for the Site Area Emergency EAL. Fifteen minutes is used to exclude transient or momentary power losses.

CR3 Matrix Reference Number: 4.7

NEI 97-03 Reference: SU7

ATTACHMENT 2

Development of Parameters and Values Used in Selected EALs

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FISSION PRODUCT BARRIER MATRIX 5.1, 6.1, and 7.2.....	84
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Basis for RM-G29 and RM-G30 values used FPBM 5.1, 6.1, 7.2

FPBM 5.1: The 100 R/hr value listed in Fission Product Barrier Matrix (FPBM) 5.1 is based on the response of the containment monitors in the 2/26/80 event during which approximately 43,000 gallons of reactor coolant were released to the containment building. Response Technical Manual RTM-91 Workbook page 25 shows the CR3 containment monitor response graph peaking at about 80 R/hr. RTM-91 page 120 notes that due to uneven mixing, various containment locations may differ by several orders of magnitude and RTM-93 page B-8 notes that it may take several hours for uniform mixing. MicroShield calculations indicated that all normal coolant curies released to the containment and uniformly mixed would result in less than 1 R/hr. Since the 2/26/80 event did not involve gas gap damage, the peak monitor reading was due to uneven mixing. An arbitrary value of 100 R/hr was assumed as a conservative indication of the threshold of gas gap damage.

FPBM 6.1: As noted in the Emergency Action Level Bases Manual, the 10 R/hr value listed in FPBM 6.1 is a value which indicates the release of reactor coolant to containment. RM-G29 and RM-G30 typically read about 1 to 2 R/hr in normal operation due mostly to insensitivity at the extreme low end of the seven decade high-range monitors scales. 10 R/hr represents the beginning of the second decade on the monitor scale and a reading that can fairly confidently be attributed to a release of reactor coolant, while fuel barrier remains intact.

FPBM 7.2: The development of the 5,000 R/hr value in FPBM 7.2 is documented in EC 86189 and represents 20% clad damage. It is based on the discussion of RM-G29 and RM-G30 indication of 100% fuel clad damage in Engineering Evaluation EEF-00-009. NEI 97-03 recommends this potential loss threshold correspond to 20% gap release. Per Engineering Evaluation EC 86189, Vendor Manual 00506-000 states in section 2.2 that the monitor response is proportional (linear) over the range of concern. Therefore, 5000 R/hr corresponds to 20% gap release.

ATTACHMENT 3

EC 76363 RM-A1 & RM-A2 REPLACEMENT INTERIM COMPENSATORY ACTIONS

EC 76363 RM-A1 & RM-A2 Replacement Compensatory Actions

Engineering Change 76363 has replaced RM-A1 and RM-A2. The new equipment was installed in the same locations as the previous equipment. However, due to problems with the new Accident Range detectors, only the RM-A1 and RM-A2 Normal ranges will initially be placed in service. There will be an interim period when the Accident Range exhaust duct (effluent) monitor will not be operational. RM-A1 is not required during the current extended shutdown since RB Purge operations will not be performed and therefore needs no compensatory actions.

Gaseous Effluent EALs 1.3 Site Area Emergency (SAE), and 1.4 General Emergency (GE) and emergency dose assessment continue to be impacted by the lack of RM-A2 Accident Range.

All significant radioactive sources are in the Spent Fuel Pools and decay heat and source term are significantly diminished. Only a release from a drained Spent Fuel Pool will reach Alert, SAE or GE dose levels (reference 520663-08). Compensatory actions for these emergency levels focus on Spent Fuel Pool level with the intent to make emergency declarations proactively, before a significant release is in progress.

Compensatory actions focus on the Gaseous Effluent EALs only. There are many other EALs that could require an Unusual Event or Alert declaration that are not related to a release and are unaffected by this EC. The Emergency Coordinator will need to evaluate those EALs normally.

EAL Compensatory Actions:

1. Two temporary redundant dose rate instruments have been installed on the Auxiliary Building effluent duct on the 143' elevation downstream of the filters (reference Engineering Evaluation 87296). These instruments (DMC-2000S) have specified range of 0.01 mRem/hr to 1000 Rem/hr. They do NOT replace RM-A2 EAL threshold values. They will provide additional information on release trending for the Emergency Coordinator to use for implementation of the Emergency Coordinator Judgment EALs. Dose rates from these instruments are transmitted to the GEDDS system, which can be accessed on any business computer. Access: NGG OSI-PI Displays, CR3 General, O&S tab, All GEDDS Tags on PI – Trend 1, scroll to 143FT AUXILIARY BUILDING EXH DUCT LOCATION 1 and 2 (U3GRP_OCB 101 and U3GRP_OCB 102).
2. A close-circuit TV (CCTV) camera is also available on the Spent Fuel floor, which may assist the Emergency Coordinator in monitoring Spent Fuel Pool level. A CCTV monitor is available in the Control Room.
3. EAL 1.3 Site Area Emergency while RM-A2A is out of service: (Spent Fuel Pool release with pool drained is the only source that can reach this level.)
 - Use a continuing uncontrolled loss of Spent Fuel Pool level approaching uncover of fuel assemblies as indicated by extremely high Spent Fuel Pool area dose rates (e.g., RM-G15 offscale) due to direct shine from unshielded fuel assemblies or use images from CCTV as indicators of actual or likely major failures of plant systems needed for protection of the public (EAL 2.26 Emergency Coordinator Judgment).
 - **IF** Spent Fuel Pool level **CANNOT** be estimated, **THEN** use factor of 100 increase on the temporary Auxiliary Building effluent duct dose rate instrument (from the point RM-A4 or RM-A8 is offscale) **OR** a factor of 10 increase on the temporary instrument (from the point RM-A2N is offscale) as a further indicator of actual or likely major failures of plant systems needed for protection of the public (EAL 2.26 Emergency Coordinator Judgment). **NOTE:** If fuel remains covered, this level release is NOT credible.)
 - Use EAL 1.3 option 2 dose assessment.
 - Use EAL 1.3 option 3 field team readings.

4. EAL 1.4 General Emergency while RM-A2A is out of service: (Spent Fuel Pool release with pool drained is the only source that can reach this level.)
 - Use a continuing uncontrolled loss of Spent Fuel Pool level approaching draining of the pools as indicator of the potential for uncontrolled radionuclide releases that can be expected to exceed EPA Protective Action Guideline plume exposure levels beyond the site boundary (EAL 2.27 item 2 Emergency Coordinator Judgment). This may be indicated by increasing dose rates on RM-G14, estimated leak rates or images from CCTV.
 - **IF** Spent Fuel Pool level **CANNOT** be estimated, **THEN** use factor of 1000 increase on the temporary Auxiliary Building effluent duct dose rate instrument (from the point RM-A4 or RM-A8 is offscale) OR a factor of 100 increase on the temporary instrument (from the point RM-A2N is offscale) as a further indicator of the potential for uncontrolled radionuclide releases that can be expected to exceed EPA Protective Action Guideline plume exposure levels beyond the site boundary (EAL 2.27 item 2 Emergency Coordinator Judgment). NOTE: If fuel remains covered, this level release is NOT credible.)
 - Use option 2 dose assessment
 - Use option 3 field team readings

Dose Assessment Compensatory Actions:

In the current plant condition, dose assessment is not expected to drive any emergency classifications with the possible exception of "what if" projections (before a release is in progress) contributing to Emergency Coordinator Judgment decisions.

Temporary Instruments - Two temporary redundant dose rate instruments have been installed on the Auxiliary Building effluent duct on the 143' elevation downstream of the filters. Dose rates from these instruments are transmitted to the GEDDS system, which can be accessed on any business computer (reference Engineering Evaluation 87296).

RASCAL - An EM-204B worksheet has been developed for using RM-A4, RM-A8 or the temporary Auxiliary Building effluent duct dose rate instrument to estimate source terms for entry into RASCAL. RM-A4 and RM-A8 ranges are limited and could not be used for Alert, SAE or GE dose levels.

Other Support Actions:

As a defence in depth:

1. No fuel assembly or component manipulations in the Spent Fuel Pools will be performed unless both RM-A2N AND RMA2A are operable. :
2. No Reactor Building purge or vent activities will be performed unless both RM-A1N AND RMA1A are operable.

Revision 17 Change Summary:
DRR 664299

NOTE

Writers and Reviewers: Changes to certain parts of this document may impact other EIPs.

EAL Bases Manual	EM-202
Section 3.1	Section 3.0
Attachment 1	Enclosure 1

Ensure appropriate PRRs are initiated as needed.

EALBM Section	CHANGE	REASON, REFERENCES
TOC	Change Page# of 'Revision Summary' from '89' to '88'	EDITORIAL CHANGE – typographical error
Page 2, Step 3.1.10	Capitalized 'owner controlled area'	EDITORIAL CHANGE - as a defined term, this should be capitalized
Page 3, Step 3.1.15	Revise Definition of OWNER CONTROLLED AREA to read: "The area of land (approximately 4738 acres) that is owned, leased, or otherwise controlled by DEF, situated between the mouths of the Withlacoochee and Crystal Rivers and bounded to the north by woodlands, to the east by Highway 19, to the south by medium to dense woodlands and to the west by marshlands and the Gulf of Mexico. The OWNER CONTROLLED AREA is indicated in Figure 2-3 of the FSAR and encompasses both the PROTECTED AREA and the SITE BOUNDARY."	This corrects the definition of OWNER CONTROLLED AREA to agree with the FSAR
Page 4, Step 3.1.22	Delete "Also referred to as the Owner Controlled Area" from definition of SITE BOUNDARY.	Correct incorrect definition; The OWNER CONTROLLED AREA and the SITE BOUNDARY are not the same.

EALBM Section	CHANGE	REASON, REFERENCES
Pages 18, 20, 38 and 58	Modify definition of SITE BOUNDARY to be the same as Step 3.1.22	Consistency
Page 38	Change "Owner Controlled Area (Site Boundary)" to "area within the Site Boundary"	Correct wording to agree with altered definition
Pages 48 and 50	Modify definition of OWNER CONTROLLED AREA to be the same as Step 3.1.15	Consistency
Page 49	Add " outside of the PROTECTED AREA. For events that affect the PROTECTED AREA, refer to EAL 2.20 or EAL 2.21."	Added to clarify that higher level EALs may be applicable if the HOSTILE ACTION is within the PROTECTED AREA.
Throughout	Change revision # from '16' to '17'	EDITORIAL CHANGE – word processing change