Crystal River Nuclear Plant
15760 W. Power Line Street
Crystal River, FL 34428
Docket 50-302
Docket 72-1035
Operating License No. DPR-72

10 CFR 50.90

July 14, 2016
3F0716-01

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

Subject: Crystal River Unit 3 – License Amendment Request #318, Revision 0, Supplement 1, Permanently Defueled Emergency Plan, and Permanently Defueled Emergency Action Level Bases Manual, for the Independent Spent Fuel Storage Installation

Reference: CR-3 to NRC Letter Dated August 27, 2015, "Crystal River Unit 3 – License Amendment Request #318, Revision 0, Permanently Defueled Emergency Plan, and Permanently Defueled Emergency Action Level Bases Manual, for the Independent Spent Fuel Storage Installation" (ADAMS Accession No. ML15246A231)

Dear Sir:

Pursuant to 10 CFR 50.54(q), 10 CFR 50.47(b), 10 CFR 50, Appendix E, and 10 CFR 50.90, Duke Energy Florida, LLC, previously known as Duke Energy, Inc., (DEF) submitted License Amendment Request (LAR) #318, Revision 0, where the Permanently Defueled Emergency Plan (PDEP) has been revised to reflect the planned use of an Independent Spent Fuel Storage Installation (ISFSI) located in the Crystal River Unit 3 Nuclear Plant (CR-3) Protected Area while the spent fuel pool contains spent fuel assemblies.

Subsequent to that submittal, DEF revised the PDEP under 10 CFR 50.54(q) and submitted that change under a 30 day letter per the requirements in 10 CFR 50.54(q), by letter dated March 22, 2016 (ADAMS Accession No. ML16082A463). This change deleted the requirement to maintain the meteorological tower as the source of meteorological data for assessing radiological hazards within the site boundary (Revision 2). Meteorological data may now be obtained from local media sources or the internet in a timely manner. DEF also revised the PDEP a second time (Revision 3) under 10 CFR 50.54(q) to incorporate largely editorial changes, and is submitting this change per the requirements of 10 CFR 50.54(q) as a 30 day letter.

DEF is providing in this letter PDEP Draft C incorporating the above changes in order that the NRC has all approved changes in the draft version of the PDEP, while reviewing the above referenced License Amendment Request. This draft version of the PDEP includes all changes made to the PDEP under 10 CFR 50.54(q) current to July 12, 2016, with the changes requested under LAR #318. The two changes requested under LAR #318 are the addition of an EAL that addresses the independent Spent Fuel Storage Installation and the deletion of the Main Control Room Communicator (an Emergency Response Organization position determined to not be required).

There are no new regulatory commitments made within this submittal.

The proposed change has been evaluated in accordance with 10 CFR 50.91(a)(1) using criteria in 10 CFR 50.92(c), and it has been determined that the proposed change involves no significant hazards consideration. The bases for these determinations are included in the above reference. This supplement does not revise or alter the bases for any of the 10 CFR 50.92(c) determinations previously submitted.

If you have any questions regarding this submittal, please contact Mr. Phil Rose, Lead Engineer, Nuclear Regulatory Affairs, at (352) 563-4883.

I declare under penalty of perjury that the foregoing is true and correct. Executed on July 14, 2016.

Sincerely,

Ronald Reising,
Senior Vice President
Operations Support

RRR/par

Enclosure: Permanently Defueled Emergency Plan, Draft C

xc: NRR Project Manager
Regional Administrator, Region I

DUKE ENERGY FLORIDA, INC.

CRYSTAL RIVER UNIT 3

DOCKET NUMBER 50-302 / 72-1035
LICENSE NUMBER DPR-72

LICENSE AMENDMENT REQUEST #318, REVISION 0, SUPPLEMENT 1
PERMANENTLY DEFUELED EMERGENCY PLAN AND PERMANENTLY DEFUELED EMERGENCY ACTION LEVEL BASES MANUAL FOR THE INDEPENDENT SPENT FUEL STORAGE INSTALLATION

ENCLOSURE 1

PERMANENTLY DEFUELED EMERGENCY PLAN, DRAFT C

PERMANENTLY DEFUELED EMERGENCY PLAN

DRAFT C

DUKE ENERGY FLORIDA, INC.

CRYSTAL RIVER UNIT 3

Bryan Ferguson

Emergency Planning Coordinator **Date**

Terry Hobbs

General Manager Decommissioning **Date**

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Nuclear Operations Commitment System (NOCS) References

[R1] NOCS001122, Description of Licensee, State and Local Resources Available to Support the Federal Response

[R2] NOCS001130, Provisions for Controlling Exposure of Offsite Ambulance Drivers; Advance Approval of Emergency Level Doses and Assurance of Adequate Training

1.0 INTRODUCTION

Crystal River Unit 3 Nuclear Plant (CR3) has been safely shutdown since September 26, 2009. On February 20, 2013, by letter 3F0213-07, Progress Energy Florida, a subsidiary of Duke Energy, provided certification to the U.S. Nuclear Regulatory Commission (NRC) required by 10 CFR 50.82(a)(1)(i) and (ii) that CR3 has permanently ceased operations and that all fuel has been permanently removed from the reactor vessel.

Commercial operation began on March 13, 1977. As of May 28, 2011, all fuel assemblies have been permanently removed from the reactor vessel and placed in the spent fuel (SF) pools for storage. By letter dated March 13, 2013, the NRC acknowledged certification of permanent cessation of power operation and permanent removal of fuel from the reactor vessel. Pursuant to 10 CFR 50.82(a)(2), the 10 CFR Part 50 license for CR3 no longer authorizes operation of the reactor or emplacement or retention of fuel in the reactor vessel. This Permanently Defueled Emergency Plan (PDEP) adequately addresses the risks associated with CR3's current conditions.

Analyses of the credible accident or beyond design basis events and consequences of an accident for CR3 in a permanently defueled condition are presented in the calculations provided as References 3.19 - 3.24. The analyses indicate that any releases beyond the EXCLUSION AREA BOUNDARY (EAB) are limited to small fractions of the Environmental Protection Agency (EPA) Protective Action Guide (PAG) exposure levels, as detailed in the EPA's "Protective Action Guide and Planning Guidance for Radiological Incidents," Draft for Interim Use and Public Comment dated March 2013 (PAG Manual). Exposure levels warranting pre-planned emergency preparedness activities are limited to onsite areas. For this reason, this Plan addresses actions necessary to safeguard onsite personnel and minimize damage to property.

1.1 PURPOSE

The purpose of this Plan is to assure an adequate level of preparedness by which to cope with a spectrum of emergencies that could be postulated to occur, including means to minimize radiation exposure to Plant personnel. This Plan integrates the necessary elements to provide effective emergency response considering cooperation and coordination of organizations expected to respond to potential emergencies.

1.2 SCOPE

Duke Energy Florida, Inc. (DEF) has developed this PDEP to respond to potential radiological emergencies at CR3 considering it's permanently shutdown and defueled status. Because the analyses of the credible design basis events and consequences indicate there are no postulated accidents that would result in off-site dose consequences that are large enough to require off-site emergency planning, the overall scope of this Plan delineates the actions necessary to safeguard onsite personnel and minimize damage to property.

2.0 DISCUSSION

2.1 OVERVIEW OF PDEP

In the event of an emergency at the CR3 Plant, actions are required to identify and assess the nature of the emergency and to bring it under control in a manner that protects the health and safety of Plant personnel.

This Plan describes the organization and responsibilities of DEF for implementing emergency measures. It describes interfaces with Federal, State of Florida, and Citrus County organizations, which may be notified in the event of an emergency, and may provide assistance. Emergency services are provided by local public and private entities. Fire, rescue and law enforcement services are provided by Citrus County. Ambulance service is provided by Nature Coast Emergency Medical Services. Medical services are provided by Seven Rivers Regional Medical Center (SRRMC).

CR3 is licensed under the requirements of 10 CFR Part 50, “Domestic Licensing of Production and Utilization Facilities.” Consistent with the requirements of 10 CFR Part 50, this Plan is based on the requirements of 10 CFR Part 50, Section 50.47(b) and Appendix E, “Emergency Planning and Preparedness for Production and Utilization Facilities,” with approved exemptions that reflects CR3 in its permanently shutdown and defueled status. Sections 5.0 thru 20.0 of this Plan address the standards outlined in 10 CFR 50.47(b)(1) through (16). In addition, the Plan is also intended to meet appropriate State of Florida and U.S. NRC regulations in accordance with DEF's Operating License (No. DPR-72).

Because the analyses of the credible design basis events and consequences indicate there are no postulated accidents that would result in off-site dose consequences that are large enough to require off-site emergency planning, emergencies are divided into two classifications: 1) Notification of UNUSUAL EVENT (UNUSUAL EVENT) and 2) ALERT. This classification scheme has been discussed and agreed upon with responsible off-site organizations and is compatible with the State Plan. According to the EPA PAG Manual, “Emergency Planning Zones (EPZs) are not necessary at those facilities where it is not possible for PAGs to be exceeded off-site.”

2.1 OVERVIEW OF PDEP (Continued)

DEF is responsible for planning and implementing emergency measures within the CR3 OWNER CONTROLLED AREA. This Plan is provided to meet that responsibility. To carry out specific emergency measures discussed in this Plan, detailed implementing procedures are established and maintained. Appendix A provides a listing of the implementing procedures for this Plan. Those procedures necessary to maintain the emergency preparedness program are also addressed in Appendix A.

In addition to the description of activities and steps that can be implemented during a potential emergency, this Plan also provides a general description of the steps taken to recover from an emergency. It also describes the training, drills, exercises, planning, and coordination appropriate to maintain an adequate level of emergency preparedness.

2.2 FACILITY DESCRIPTION

The CR3 Plant is located at Red Level, Florida in Citrus County, about 5 miles south of Levy County. The site is 7.5 miles northwest of Crystal River, Florida and 90 miles north of St. Petersburg, Florida. CR3 is situated on the Gulf of Mexico, within the Crystal River Energy Complex.

CR3 formerly consisted of a single unit nominal 911 MWe / 2609 MWth Nuclear Power Plant, utilizing a Babcock & Wilcox (B&W) Company (currently AREVA) pressurized water reactor (PWR). The unit is certified to have ceased power operations and is permanently defueled in accordance with 10 CFR 50.82(a)(1)(i) and (ii).

Spent fuel is stored in SF Pool A and SF Pool B, both of which feature high-density storage racks. Spent Fuel is also stored in the Independent Spent Fuel Storage Installation (ISFSI). The SF Pool storage racks are designed to Seismic Class I requirements. The fuel storage racks are designed to have a minimum of 23 feet of water shielding over stored assembly's fuel rods. A complete description of spent fuel storage is provided in Section 9.6 of the FSAR.

ISFSI is a robust and high integrity facility for the spent fuel storage system. This facility is designed to prevent the release of radioactivity in the event of accidents, including environmental phenomena (e.g., earthquake and flooding).

2.3 SUMMARY OF EMERGENCY ACTIONS

This Plan is activated by the EMERGENCY COORDINATOR (EC) upon identification of an emergency situation at CR3. The emergency measures described in the subsequent sections and implementing procedures are implemented in accordance with the classification and nature of the emergency and directions from the EC. Regulatory authorities and off-site support organizations are notified in accordance with this Plan. The EC has authority and responsibility for control and mitigation of the emergency, including emergency response resources, coordination of radiological ASSESSMENT ACTIVITIES, RECOVERY implementation, and coordination of emergency response activities.

The following sections of this Plan describe the detailed plans and actions of the CR3 Emergency Response Organization (ERO), including interfaces with off-site support organizations.

3.0 REFERENCES

3.1 10 CFR 50.47, “Emergency Plans”

3.2 10 CFR Part 50, Appendix "E," "Emergency Planning and Preparedness for Production and Utilization Facilities"

3.3 10 CFR Part 20, "Standards for Protection Against Radiation"

3.4 NUREG-0578, "TMI-2 Lessons Learned Task Force Status Report and Short-Term Recommendations" (July 1979)

3.5 NUREG-0654/FEMA-REP-1, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants" (November 1980)

3.6 Regulatory Guide 1.101, "Emergency Planning and Preparedness for Nuclear Power Reactors"

3.7 Environmental Protection Agency, “Protective Action Guide and Planning Guidance for Radiological Incidents,” Draft for Interim Use and Public Comment (March 2013)

3.8 "State of Florida Radiological Emergency Management Plan" (herein referred to as State Plan)

3.9 State of Florida Statutes, Chapter 170J-1, "Control of Radiation Hazards"

3.10 CR3 Final Safety Analysis Report (FSAR)

3.11 CR3 Technical Specifications

3.12 CR3 Plant Operating Manual (POM)
(See Appendix A for list of implementing procedures.)

3.13 Emergency Plan Implementing Procedures (See Appendix A for list.)

3.14 Seven Rivers Regional Medical Center "Radioactive Material Contamination Response Plan"

3.15 NRC Bulletin 2005-02, “Emergency Preparedness and Response Actions for Security-Based Events”

3.16 NEI 99-01, “Development of Emergency Action Levels for Non-Passive Reactors,” Rev. 6

3.17 CR3 Letter 3F0213-07 dated February 20, 2013. Crystal River Unit 3 – Certification of Permanent Cessation of Power Operations and that Fuel Has Been Permanently Removed from the Reactor. ML13056A005.

3.18 NRC Letter dated March 13, 2013. Crystal River Unit 3 Nuclear Generating Plant Certification of Permanent Cessation of Operation and Permanent Removal of Fuel From the Reactor.

3.19 Calculation N13-0001, "Fuel Handling Accident"

3.20 Calculation F13-0002, "Loss of Pool Inventory Air Cooled Heatup"

3.21 Calculation N13-0003, "Radioactive Waste Handling Accident"

3.22 Calculation F97-0014 and Engineering Change 92486, "Loss of Spent Fuel Pool Normal Cooling"

3.23 Calculation F13-0004, "Hottest Fuel Assembly Adiabatic Heatup"

3.24 Calculation N13-0002, "Loss of Pool Inventory Dose"

3.25 Time-Motion Study – “B.5.b Actions for Catastrophic Loss of SF Pool Level”

4.0 DEFINITIONS AND ABBREVIATIONS

4.1 DEFINITIONS

1. **Annual**: Once per calendar year unless otherwise specifically stated.

2. **Assessment Activities**: Actions taken during or after an emergency for the purpose of obtaining and processing the information that will be used to make the decisions to implement specific emergency measures.

3. **Emergency Actions**: Assessment, corrective, and protective actions designed to achieve a safe, stable Plant condition, and to immediately mitigate the effects of the emergency.

4. **Emergency Action Level (EAL)**: A pre-determined, observable threshold for Plant conditions that places the Plant in a given emergency classification.

5. **Emergency Classification System**: A system of classification in which emergency occurrences are categorized according to specific protective action levels. The two emergency classifications in order of significance are UNUSUAL EVENT and ALERT. These classifications are defined by NEI 99-01, Rev. 6 as follows:

   a. **Unusual Event**: Events are in progress 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.

   b. **Alert**: Events are in progress or have occurred which involve an actual or potential 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 PAG exposure levels.

4.1 DEFINITIONS (Continued)

6. **Emergency Coordinator (EC)**: This position is the highest level of authority for the CR3 ERO and on-site emergency activities. This position is held by the Shift Supervisor or designated alternate.

7. **Exclusion Area Boundary**: The perimeter of the area that extends 4,400 feet or 0.83 miles in a circle around the Reactor Building, which includes the PROTECTED AREA.

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.

9. **Frequency**: That unit of time specified (monthly, quarterly, etc.) plus or minus 25 percent unless otherwise specifically stated. This definition does not apply to "annual" when it is related to the conduct of the Biennial Exercise (NRC Evaluated). Biennial Exercises are performed within the calendar year.

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 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 to address such activities, (e.g., violent acts between individuals in the OWNER CONTROLLED AREA). (NEI 99-01, Rev. 6)

4.1 DEFINITIONS (Continued)

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. (NEI 99-01, Rev. 6)

12. **Independent Spent Fuel Storage Installation (ISFSI)**: A complex that is designed and constructed for the interim storage of spent nuclear fuel and other radioactive materials associated with spent fuel storage.

13. **Local Assembly Area**: A pre-designated area personnel report for organization, roll-call, and supervision following an "ALERT" emergency classification.

14. **Normal Working Hours**: The normal hours that most Plant personnel are on-site, usually between 7 a.m. and 5 p.m., Monday through Friday.

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 the area of land within the SITE BOUNDARY, as shown in Figure 2-3 of the FSAR. The PROTECTED AREA is located within the OWNER CONTROLLED AREA.

16. **Protected Area**: All areas within the CR3 security perimeter fence that require badged authorization for entry.

17. **Protective Actions**: Those emergency measures taken after an uncontrolled release of radioactive material has occurred for the purpose of preventing or minimizing radiological exposures to persons that would be likely to occur if the actions were not taken.

18. **Protective Action Guide (PAG)**: The projected dose to an individual, resulting from a radiological incident at which a specific PROTECTIVE ACTION to reduce or avoid that dose is warranted.

4.1 DEFINITIONS (Continued)

19. **Recovery**: The condition declared after the immediate hazards to life and safety due to the emergency have been removed and efforts are directed to returning affected areas to normal.

20. **Recovery Actions**: Those actions taken after the emergency to restore CR3 as nearly as possible to its pre-emergency condition.

21. **Re-entry**: Return of personnel into areas evacuated due to Plant conditions.

22. **Release**: (Florida Nuclear Plant Emergency Notification Form) **-** Any of the following:

- Exceeding the warning set-point 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

NOTE

Suspected leakage should NOT be categorized as a release until confirmed by environmental monitoring or direct observation.

- Radioactivity escaping unmonitored from the Plant.

23. **Site Boundary**: That line beyond which the land is not owned, leased, or otherwise controlled by the licensee. This line establishes the perimeter of the Owner Controlled Area (OCA).

4.2 ABBREVIATIONS

CAS	Central Alarm Station
CCSO	Citrus County Sheriff's Office
CFH	Certified Fuel Handler
CR3	Crystal River Unit 3 Plant
DEF	Duke Energy Florida
DEM	State of Florida Department of Community Affairs, Division of Emergency Management
DHBRC	Department of Health, Bureau of Radiation Control (State of Florida)
DOE	U.S. Department of Energy
EAB	Exclusion Area Boundary
EAL	Emergency Action Level
EC	Emergency Coordinator
ENS	Emergency Notification System
EPA	U.S. Environmental Protection Agency
ERO	Emergency Response Organization
ESC	Emergency Support Center
FDLE	Florida Department of Law Enforcement
FRERP	Federal Radiological Emergency Response Plan
FSAR	Final Safety Analysis Report
ISFSI	Independent Spent Fuel Storage Installation
NRC	U.S. Nuclear Regulatory Commission
NSOC	Nuclear Security Operations Center
ORO	Offsite Response Organization
PA	Public Address System
PAG	Protective Action Guide
PAX	Public Address Exchange System
RCA	Radiation Controlled Area
PDEP	Permanently Defueled Emergency Plan
REAC/TS	Radiation Emergency Assistance Center/Training Site
RMS	Radiation Monitoring System
SAS	Secondary Alarm Station
SEOC	State of Florida Emergency Operations Center (Tallahassee, FL)
SF	Spent Fuel
SHRD	State Hot Ringdown
SLERS	State Law Enforcement Radio System
SRRMC	Seven Rivers Regional Medical Center
SWOT	State Watch Office-Tallahassee
TLD	Thermoluminescent Dosimeter

5.0 ASSIGNMENT OF RESPONSIBILITY (ORGANIZATION CONTROL)

The SAFSTOR organization has complete capability at all times to perform the detection, classification, initial response, and notification functions required during an emergency. This Plan considers the capabilities and responsibilities of the on-shift staff; augmented by support from other utility personnel and support organizations, if necessary.

An extended emergency situation may require augmentation of the on-site ERO. In addition, the personnel resources of off-site emergency support organizations can be mobilized to augment the on-site ERO, if conditions warrant.

This section of the Plan addresses the identification of: (a) the various emergency response organizations and sub-organizations; (b) their conduct of operations and interrelationships, and their plans to provide 24 hour per day response; and (c) reference to all written agreements between DEF and off-site emergency response organizations.

5.1 ORGANIZATIONAL PLANNING OBJECTIVE

The organizational planning objective is to assure that primary emergency preparedness responsibilities of CR3 organizations responsible for emergency support have been established and assigned. Furthermore, the objective is to assure that response organizations are staffed to respond and are capable of augmenting initial response on a continuous basis.

5.2 SAFSTOR ORGANIZATION

DEF is responsible for the safe storage and handling of spent fuel and decommissioning of CR3 in accordance with the State of Florida and NRC regulations, and its NRC Operating License (No. DPR-72), as amended. Responsibility for planning and implementing all emergency measures within the OWNER CONTROLLED AREA rests with DEF.

The CR3 SAFSTOR ORGANIZATION has an inherent emergency response/RECOVERY function in its overall management and operation. This function can be delineated by reviewing management structure and responsibilities as follows:

1. **General Manager Decommissioning, Crystal River Nuclear Plant**
   The General Manager Decommissioning is directly responsible for the decommissioning of CR3, reports to the Senior Vice President of Operations Support and has ultimate responsibility for the overall effectiveness of CR3's PDEP. In the event of an emergency at CR3, the General Manager Decommissioning assumes administrative authority and responsibility for the effective implementation of the PDEP.

2. **Operations and Maintenance Manager**
   The Operations and Maintenance Manager reports to the General Manager Decommissioning and is responsible for the safe spent fuel handling and decommissioning activities of CR3 and for the supervision of persons assigned. During an emergency, the Operations and Maintenance Manager is responsible for the protection of Energy Complex personnel from radiation exposure and/or any other consequence of an accident at CR3. The Operations and Maintenance Manager is responsible for the accountability of all personnel within the confines of CR3.

5.3 OVERALL EMERGENCY RESPONSE ORGANIZATIONS

During an emergency, numerous response organizations and sub-organizations are available to provide assistance, if required. The analyses of the credible design basis events and consequences indicate that there are no postulated accidents that would result in off-site dose consequences that are large enough to require off-site emergency planning. Any assistance from off-site organizations is limited to law enforcement, fire or medical support. These emergency services are drawn from local government and the private sector and are listed for reference in an off-site support directory.

5.4 RESPONSE ORGANIZATIONS

Response organizations are available on a continuous basis and interrelate to receive notifications and communications and provide medical and law enforcement support to CR3.

5.5 INTERRELATIONSHIP OF KEY RESPONSE ORGANIZATIONS [R1]

Figure 5.1 illustrates the functional interrelationship of the key response organizations.

5.5.1 CR3 Emergency Response Organization

The CR3 Staff has the immediate and continuing responsibility for emergency response and control of emergency activities at CR3.

The CR3 ERO and its functions are predefined and personnel assignments are specified and updated on a continuous basis to provide for automatic, unambiguous staffing of the CR3 ERO to respond effectively and in a timely manner. The CR3 ERO is capable of functioning on a 24-hour basis.

5.5.1.1 Relationship to the Total Effort:

The CR3 ERO performs the emergency technical, radiological, warning, and health support response. This organization is supported directly and indirectly on a broad scale by off-site organizations in the governmental and private sector, as necessary.

5.5.1.2 Concept of Operations:

The CR3 ERO evaluates the emergency and initiates the necessary actions to address it.

The Shift Supervisor has the responsibility and authority to declare an emergency and initiate appropriate actions in accordance with written procedures to mitigate the consequences. The Shift Supervisor also has the responsibility to notify the Operations and Maintenance Manager as soon as possible after an emergency classification has been determined. The Shift Supervisor serves as the EC.

The EC is responsible for the direction of all activities at the Plant site during an emergency. Should evaluation indicate the need, the EC has the authority to direct any or all personnel to evacuate CR3 and to notify all applicable agencies of the Plant status. The EC ensures that appropriate actions are taken to mobilize emergency teams and to notify management and applicable off-site supporting organizations and regulatory agencies as necessary.

5.5.2 State Watch Office-Tallahassee

The State Watch Office-Tallahassee (SWOT) is the primary point of contact for the State of Florida for the purpose of notification of an emergency declaration. Notification of an emergency will be made to the SWOT within 60 minutes after an emergency declaration or change in classification. The SWOT will notify the Division of Emergency Management (DEM) and Citrus County officials of an emergency at CR3.

5.5.2.1 Relationship to the Total Effort:

The SWOT is available on a 24-hour basis to receive emergency communications from CR3 and, in turn, contact State and local emergency response organizations, as appropriate.

5.5.2.2 Concept of Operations:

Emergency notification is received from the CR3 EC or designated alternate via the State Hot Ringdown Telephone System (SHRD), or other means necessary. The Duty Officer notifies the Florida Division of Emergency Management (DEM) and Citrus County officials. The Duty Officer, with assistance from the DEM, then notifies appropriate State agencies.

5.5.3 Florida Division of Emergency Management

The State of Florida Department of Community Affairs' DEM is responsible for coordinating Federal, State and local radiological emergency response activities, and for preparing and maintaining the State Plan.

5.5.3.1 Relationship to the Total Effort:

The DEM provides guidance and assistance in preparation of local emergency response procedures. The DEM provides personnel and equipment to emergency response facilities, and provides needed supplies to State and local political subdivisions.

5.5.3.2 Concept of Operations:

The Director, DEM is responsible for coordinating DEM emergency response. The DEM receives notification of an emergency at CR3 via the SWOT; verifies the information contained in the notification messages; and alerts key State, local and Federal emergency response personnel, as appropriate.

5.5.4 Citrus County Sheriff's Office, Division of Emergency Management

Citrus County Emergency Management is responsible for law enforcement and fire support at CR3.

5.5.4.1 Relationship to the Total Effort:

The CCSO is responsible for coordinating emergency operations at the local level and for keeping local officials advised of law enforcement actions involving CR3. During an emergency requiring CCSO response to CR3, communications with the CCSO are maintained through the Citrus County 911 Dispatch Center.

5.5.4.2 Concept of Operations:

The Citrus County EOC in Lecanto, Florida maintains 24 hour per day communications through the County's Fire Dispatch/EOC on the SHRD or commercial telephone, and the State Law Enforcement Radio System (SLERS).

5.5.5 Seven Rivers Regional Medical Center

SRRMC in Crystal River, Florida serves as the hospital to treat injuries resulting from any non-radiological or radiological emergency situation at CR3.

5.5.5.1 Relationship to the Total Effort:

The hospital will acknowledge and respond to all emergency medical requests from the emergency response organization and management at CR3. Treatment will be provided for non-radiological and radiological injuries. The hospital will maintain communications with CR3. The hospital will maintain communications with the Citrus County EOC on support needs or other agencies as appropriate.

5.5.5.2 Concept of Operations:

The hospital will furnish the services of physicians to injured persons. The hospital will accept all patients dispatched from CR3. If necessary, the hospital will utilize radiological support provided by CR3 Staff.

5.5.6 Local Emergency Medical Services

Ambulance service is available 24 hours per day to provide assistance in the event of an emergency at CR3.

5.5.6.1 Relationship to the Total Effort:

Upon request, local ambulance services will provide emergency medical services. It will maintain communication with CR3, SRRMC and/or CCSO on support needs.

5.5.6.2 Concept of Operations:

Upon request from the CR3 EC or designee, ambulance service will be provided immediately, which includes emergency medical treatment and/or transportation to a designated hospital facility. The service shall accept all patients dispatched from CR3 and, where necessary, shall utilize the radiological support provided by CR3 Staff.

5.5.7 Nuclear Regulatory Commission

The NRC is the primary Federal agency providing coordination and support to the licensee in the event of an emergency at a CR3. NRC responsibilities are directed toward a coordination of Federal efforts to provide assistance to the licensee and State and local governments in their planning and implementation of emergency preparedness procedures.

5.5.7.1 Relationship to the Total Effort:

The NRC response must be regarded primarily as supportive of, and not a substitute for, responsible action by DEF and other key response organizations. The NRC must be continually informed of status and possible radiological consequences, and be frequently updated on plans for emergency and RECOVERY ACTIONS and needs for assistance.

5.5.7.2 Concept of Operations:

In the event of an emergency at CR3, the NRC Operations Center in Rockville, Maryland will be notified immediately after notification of the SWOT and not later than 60 minutes after declaration of an emergency classification or change in classification. Classification information and radiological information are communicated to this office over a dedicated telephone line from CR3. Emergency notification, plant status information and radiological information is communicated via the Emergency Notification System (ENS). Other Plant information is communicated via normal telephone service.

5.5.8 Federal Emergency Management Agency

The U.S. Federal Emergency Management Agency (FEMA) is the primary Federal agency for coordination of Federal response activities at the national level and at the scene of the emergency in accordance with the Federal Radiological Emergency Response Plan (FRERP).

5.5.8.1 Relationship to the Total Effort:

FEMA has the lead responsibility for off-site emergency preparedness. To meet this role, FEMA establishes policy and provides leadership in the coordination of all Federal assistance and guidance to local and State governments for developing, reviewing, assessing, and testing the local and State radiological emergency response plans.

5.5.8.2 Concept of Operations:

In the event of an emergency at CR3, the primary role of FEMA is to assure that appropriate Federal assistance is available to State and local governments. This is accomplished through coordination with other Federal agencies as appropriate.

5.5.9 Local Fire Departments

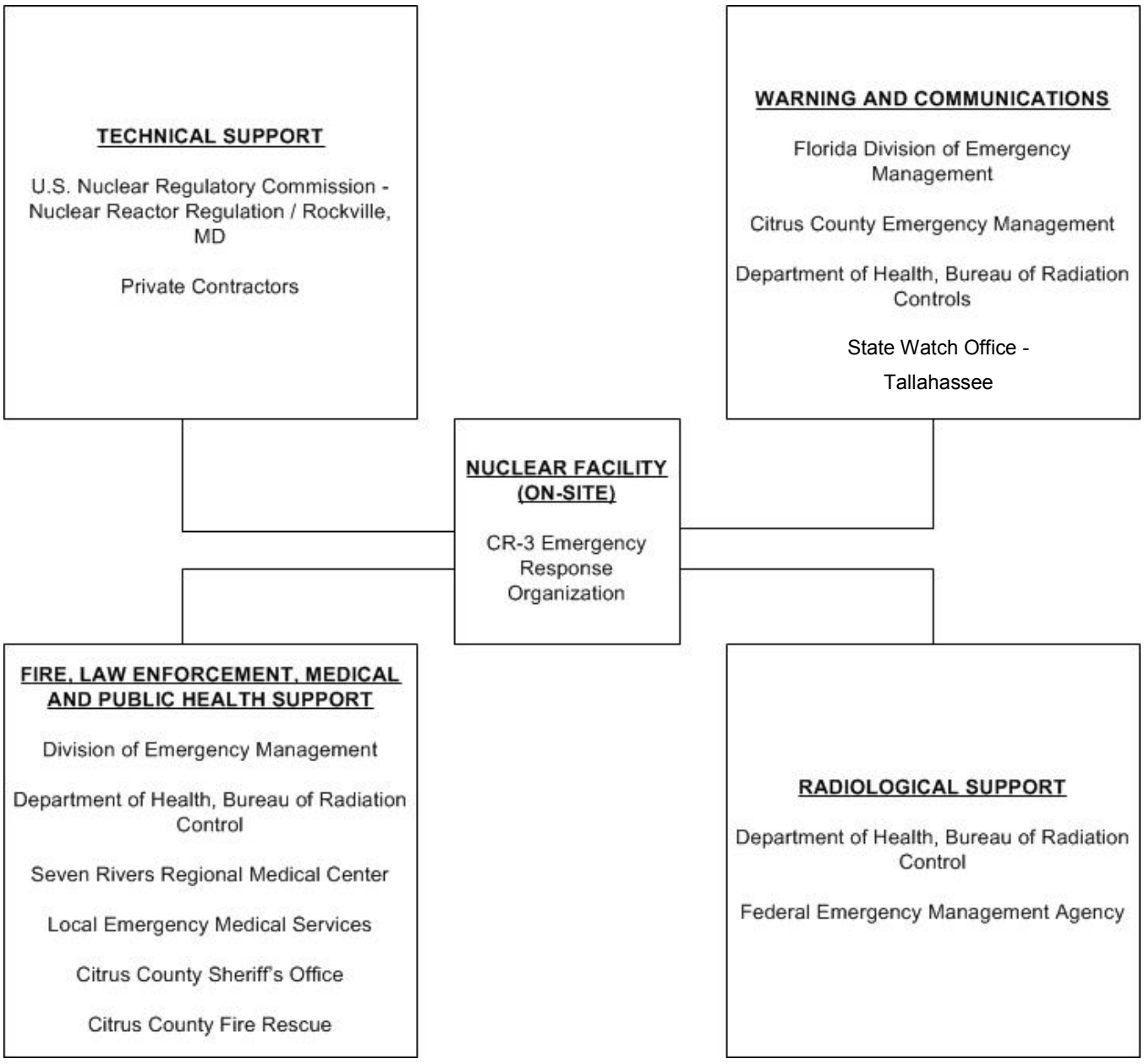
In the event of a large area FIRE at CR3, local fire departments will be called upon for assistance. Assistance will be requested from larger departments outside of the immediate area if conditions warrant.

5.6 WRITTEN AGREEMENTS FOR EMERGENCY RESPONSE

Discussions have been held and agreements reached and confirmed, in writing, with State, County and private sector organizations having responsibilities for coping with radiological emergencies. Appendix B contains a list of these agreements. A copy of each agreement is maintained on file at CR3.

FIGURE 5.1

FUNCTIONAL INTERRELATIONSHIP OF KEY EMERGENCY ORGANIZATIONS



6.0 ON-SITE EMERGENCY RESPONSE ORGANIZATION

General elements of the CR3 SAFSTOR organization are described in the preceding section. This section provides additional detail of the CR3 ERO. Within the normal SAFSTOR organization, the ERO and its augmented support from off-site organizations are described. Mobilization of the ERO, including action levels and contact points, are described in Section 9.0.

6.1 ON-SHIFT POSITIONS

The personnel and resources of the CR3 SAFSTOR organization maintain the capabilities necessary to respond to an emergency. All site activities are conducted under the direction and control of the Operations and Maintenance Manager. To provide support in required areas, the SAFSTOR organization is broken down into functional areas headed by designated managers. As appropriate, these areas are further subdivided according to specific technical disciplines or support functions.

The CR3 organization is a key element for spent fuel handling, spent fuel storage activities and emergency response. The minimum on-shift positions are defined in the CR3 Technical Specifications and Table 6.1.

Chemistry Technician positions are staffed during normal day-shift working hours. In addition to this normal shift crew, the organizational complement of Maintenance, Technical Support, and Administrative personnel will be available during NORMAL WORKING HOURS.

The Shift Supervisor is at CR3 on a 24-hour basis. The Shift Supervisor is also a Certified Fuel Handler (CFH). This position is responsible for monitoring SF Pool conditions and managing the activities of the plant, including the ISFSI facility. When an abnormal condition warranting an emergency declaration is recognized, the Shift Supervisor makes the decision to classify the event and assumes the position of EC and associated responsibilities. The Shift Supervisor is authorized to change process controls as necessary to maintain SF Pool cooling, and for taking immediate actions required to maintain or bring CR3 to a safe condition during abnormal and/or emergency conditions. Two Fire Brigade members (excluding the Shift Operator) are utilized to perform mitigating strategies required for a catastrophic loss of spent fuel pool inventory.

6.1 ON-SHIFT POSITIONS (Continued)

Reference 3.25 contains a timeline analysis that demonstrates that mitigating actions to address a beyond design bases catastrophic failure of SF Pool are within the capability of on-shift staff and any additional response by augmented ERO staffing is not required to perform the mitigating action.

Fire Brigade staffing is maintained in accordance with the Fire Protection Plan.

Security staffing is maintained in accordance with the Security Plan.

6.2 CR3 EMERGENCY RESPONSE ORGANIZATION

In the event of an emergency at CR3, a pre-established ERO is activated. This organization is established to contain all the essential operational and technical capabilities of the normal organization, but is structured to expedite emergency response. The CR3 ERO is under the direction of the EC, and consists of operational and technical staff described below. Figure 6.1 illustrates the CR3 ERO.

Emergency duties and responsibilities are described in the series of Emergency Plan Implementing Procedures, listed in Appendix A. Personnel assignments will be in accordance with the emergency responsibilities. All personnel will be trained to fulfill their responsibilities as defined in Section 19.0. Mobilization of the emergency teams will be conducted under the direction of the EC, according to personnel assignments and telephone numbers maintained in various phone directories.

In addition to the emergency teams, DEF has designated specific personnel assignments for the functional areas of emergency activities. These assignments are made for all shifts and for Plant Staff members. Table 6.1, "Minimum Staffing Requirements for CR3 Emergencies," depicts these assignments.

The following sections address these assignments and identify and describe the ERO augmented positions.

6.2.1 On-Shift Organization

Under normal conditions, CR3 will be staffed by the on-shift organization described in Section 6.1. On-shift personnel are trained in emergency response procedures and have the knowledge and capability to institute measures to mitigate the effects of an emergency and to take appropriate actions for monitoring and controlling the emergency situation. Personnel required for long-term response or reliefs are available through notification of augmented staff.

6.2.2 Emergency Coordinator

The Shift Supervisor has the responsibility and authority to declare an emergency and to initiate appropriate actions in accordance with written procedures to mitigate the consequences of the emergency. The Shift Supervisor will assume the position of EC upon declaration of an emergency and has the responsibility to notify the Operations and Maintenance Manager, or the designated alternate of an emergency at CR3. The Operations and Maintenance Manager, or a designee, who is qualified as an EC, may assume the position of EC, if necessary.

The EC is responsible for the direction of all activities at CR3 during any emergency. In accordance with site procedures, the EC shall evaluate the emergency and take necessary actions to mitigate the consequences. The EC has the authority to direct personnel to evacuate the CR3 site or to direct activities on the Energy Complex as necessary to ensure personnel safety.

The EC is responsible for assuring that appropriate corrective and PROTECTIVE ACTIONS are taken to mobilize emergency response personnel and for notifying management and off-site supporting organizations and regulatory agencies, as necessary.

The highest level of authority for on-site emergency activities will remain with the EC who may delegate responsibilities to other personnel as deemed necessary. The EC shall not delegate the responsibility to make emergency classifications or approval of emergency notifications. However, the task of making notifications to off-site organizations may be delegated.

6.2.3 Augmented Staff

The goal of the ERO is to augment the on-shift staff within 2 hours of an ALERT classification. Due to the slow rate of the postulated event scenarios in the accident analysis, the ERO augmentation goal of 2 hours is appropriate. The augmented staff provides the technical expertise required to assist the EC. The on-shift staff is augmented by station personnel that report as directed after receiving notification of an emergency requiring augmented staff. The minimum augmented staff consists of an Emergency Mitigation Coordinator and a Radiation Controls Coordinator. Technical support personnel will supplement the minimum augmented staff as necessary. Augmented staff will be briefed and dispatched to assigned tasks.

The Emergency Support Center (ESC) serves as an assembly point for making available the technical expertise required to assist the EC, while at the same time minimizing the number of personnel in the Control Room to those absolutely necessary. Coordination of the ESC personnel is provided through procedure EM-501. The ESC is further described in Section 12.1.2.

6.2.3.1 Emergency Mitigation Coordinator

The Emergency Mitigation Coordinator reports to the EC and is responsible for:

- Evaluating technical data pertinent to Plant conditions
- Assessing the emergency situation
- Developing strategies for mitigation and corrective actions
- Developing strategies for search and rescue and firefighting
- Directing maintenance and equipment restoration
- Augmenting the ERO with additional technical support and emergency repair personnel as deemed necessary

6.2.3.2 Radiation Controls Coordinator

The Radiation Controls Coordinator reports to the EC and is responsible for:

- Monitoring personnel accumulated dose
- Advising the EC concerning radiological conditions
- Establishing and monitoring Radiation Controlled Areas (RCAs)
- On-Site Dose Assessment
- Augmenting the ERO with radiation monitoring personnel as deemed necessary

6.2.3.3 Technical Personnel

Technical personnel operate under the direction of the EC, Emergency Mitigation Coordinator or Radiation Controls Coordinator, as identified above. Technical personnel are described as follows;

- Emergency mitigation personnel are responsible for providing assessment and repairs of equipment and facilities necessary to return CR3 to a safe condition. The emergency mitigation personnel operate under the direction of the Emergency Mitigation Coordinator.

- Radiation monitoring personnel have the authority, through the EC, to prevent any or all personnel from crossing lines of controlled areas in the emergency area; the authority to require individuals to evacuate from the emergency area; and the authority to require decontamination of evacuated personnel. Radiation monitoring personnel are responsible for issuing protective equipment and monitoring devices to other personnel; performing radiological surveys in accordance with written and verbal instructions from the Radiation Controls Coordinator; establishing RCAs in accordance with surveys; providing qualified personnel for RE-ENTRY procedures; and supervising the survey and release of all personnel who evacuate on-site assembly areas. Within the OWNER CONTROLLED AREA, The radiation monitoring personnel perform area monitoring for the Energy Complex in the event of a radiological emergency.

6.2.4 Medical Response Personnel

LEADER: Any Emergency Response Coordinator.

RESPONSIBILITIES: The responsibilities of the medical response personnel are to provide basic life support to injured persons and request transportation for injured persons to a medical facility, as required.

AUTHORITY: The medical response personnel are authorized to release to medical personnel only the required pertinent information necessary to treat the injured, and to deliver the injured to the appropriate medical facility. Emergency Response Coordinators provide search and rescue support as well as medical response.

6.2.5 Industrial Incipient Fire Brigade

LEADER: Any Emergency Response Coordinator that has completed training and qualifications as directed in the Fire Protection Plan. The leader is cognizant of the system interrelationships for maintaining spent fuel cooling and SF Pool inventory.

RESPONSIBILITIES: To provide direction within the CR3 PROTECTED AREA and perform functions as assigned by the EC during emergencies not involving a FIRE.

AUTHORITY: To maintain command and control of the FIRE scene.

6.3 AUGMENTATION OF CR3 EMERGENCY RESPONSE ORGANIZATION

In the event of an emergency at CR3 that requires personnel and other support resources beyond those available within the CR3 ERO, augmentation is available from other Duke Energy facilities and can be requested from various contractors. Additional support to CR3 is available from off-site organizations, as previously discussed in Section 5.0 of this Plan.

6.4 CORPORATE ORGANIZATION

The Operations and Maintenance Manager and the entire CR3 Staff are a part of the SAFSTOR organization, headed by the General Manager Decommissioning. The General Manager Decommissioning reports to the Senior Vice President of Operations Support who, in turn, reports to the Executive Vice President & President Generation and Transmission.

In addition to Duke Energy Nuclear, the organization consists of elements that provide administrative and technical support to assure continued safe spent fuel handling and decommissioning operations in compliance with applicable licensing requirements and regulations.

TABLE 6.1

On-Shift Positions and Assigned Functions

FUNCTIONAL AREA	LOCATION	ON-SHIFT STAFF	AUGMENTED STAFF 2 HOUR RESPONSE
Plant Operations and Assessment of Operational Aspects	Control Room	Emergency Coordinator	--
Emergency Direction and Control	Control Room	Emergency Coordinator	--
Notification/ Communication	Control Room	Emergency Coordinator	--
Radiological Accident Assessment and Protective Actions (In-Plant)	Control Room; On Scene	Emergency Coordinator; Health Physics Technician	Radiation Controls Coordinator
Plant System Engineering, Repair, and Corrective Actions	Control Room; On Scene	Emergency Coordinator; Shift Operator	Emergency Mitigation Coordinator
Fire Fighting	On Scene	Per Fire Protection Program Plan	Offsite Response Organization **Note (1)**
Rescue and First Aid Treatment	On Scene	Emergency Response Coordinator	Offsite Response Organization **Note (1)**
Site Access Control and Accountability	Security Station	Per Security Plan	--

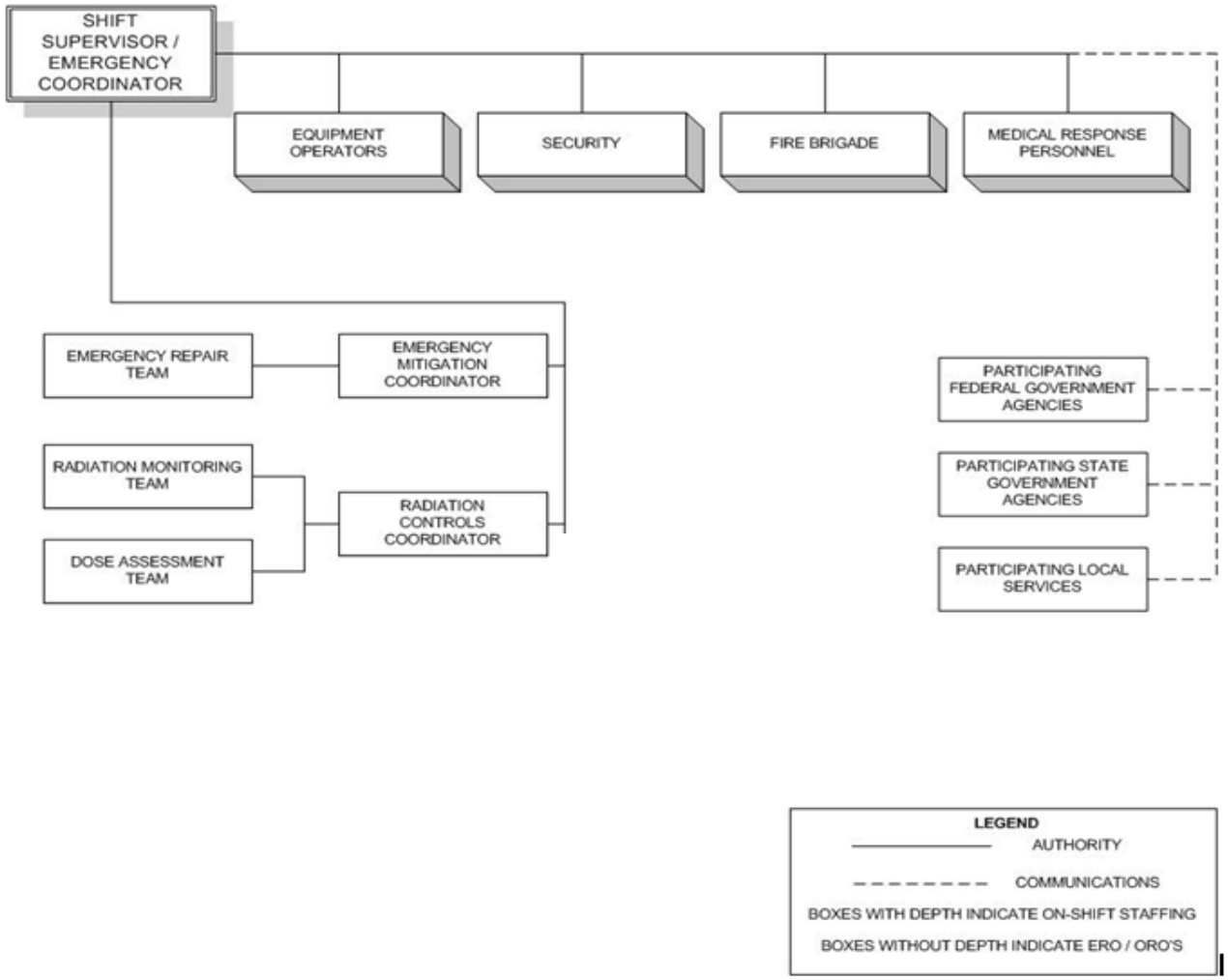
Fire Brigade composed of the Emergency Response Coordinator, Shift Operator, and an additional qualified member.
Fire Brigade Personnel may be assigned other Emergency Plan Functions (e.g., rescue and first aid treatment, repair, and corrective actions).

Fire Brigade members (2 personnel) are utilized to perform mitigating strategies required for a catastrophic loss of spent fuel pool inventory.

NOTE (1) : Response time is based upon response capability of off-site organization (e.g. Ambulance, Fire and Rescue)

FIGURE 6.1

CR3 EMERGENCY RESPONSE ORGANIZATION



7.0 EMERGENCY RESPONSE SUPPORT AND RESOURCES

Response support organizations from the local, State, Federal, and private sectors available to assist in an emergency at CR3 are identified and described in Section 5.0. This section addresses emergency support arrangements among local, State, and DEF facilities and individuals providing emergency services other than those already cited.

CR3 maintains agreements with organizations that can be relied upon in an emergency to provide assistance. The agreements are listed in Appendix B of this Plan.

7.1 LICENSEE RESOURCES SUPPORTING FEDERAL RESPONSE [R1]

Specific resources will be made available by DEF to support a Federal response to an emergency. DEF will provide for office space and telephone services for NRC use during an emergency, if requested. DEF personnel will be designated to assist NRC personnel during the emergency. Details of any Federal response deemed necessary are outlined in the FRERP.

7.2 RADIOLOGICAL LABORATORIES

Duke maintains facilities capable of providing post-accident analytical services, particularly for high level radioactivity samples.

7.3 NUCLEAR AND OTHER FACILITIES, ORGANIZATIONS, AND INDIVIDUALS PROVIDING EMERGENCY ASSISTANCE

Support available from the Department of Energy-Oak Ridge includes medical support from the Radiation Emergency Assistance Center/Training Site (REAC/TS).

8.0 EMERGENCY CLASSIFICATION SYSTEM

8.1 STANDARD CLASSIFICATION OF EMERGENCIES

DEF utilizes NEI 99-01, "Development of Emergency Action Levels for Non-Passive Reactors" Rev. 6, as its basis for classifying emergencies. Specifically, Appendix C of NEI 99-01, Rev. 6 contains a set of Initiating Conditions/EMERGENCY ACTION LEVELs (EALs) for permanently defueled nuclear power plants that had previously operated under a 10 CFR Part 50 license and have permanently ceased operations. Section 8, Table E-1 of NEI 99-01, Rev. 6 contains the Initiating Conditions/EALs for the Independent Spent Fuel Storage Installation (ISFSI). The classification system referenced in NEI 99-01, Rev. 6 has been endorsed by the NRC and offers a standard method for classifying emergencies. EALs are addressed in site procedures and the Permanently Defueled EAL Basis Manual (PDEALBM).

This Plan addresses two (2) classifications of emergencies (UNUSUAL EVENT and ALERT), which represent a hierarchy of emergencies based on potential accidents that could occur at CR3. CR3 maintains the capability to assess, classify and declare an emergency condition within 30 minutes of information becoming available to Control Room personnel that conditions have reached an EAL threshold.

8.1.1 Unusual Event

Events are in progress 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 release of radioactive material requiring off-site response or monitoring are expected. The State of Florida and the NRC are notified of an UNUSUAL EVENT.

The purpose of the UNUSUAL EVENT classification is to bring the on-shift staff to a state of readiness and to provide for systematic handling of event information and its related decision making.

8.1.2 Alert

Events are in progress or have occurred which involve an actual or potential 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 PAG exposure levels.

As in the case of the UNUSUAL EVENT, the ALERT classification includes emergency situations which are not expected to threaten the public, but for which notification of the State of Florida and the NRC is required.

The purpose of the ALERT classification is to assure that the CR3 ERO is available to respond to perform event mitigation, radiation monitoring if required, and to provide the State of Florida and the NRC with current information on Plant status.

8.2 EMERGENCY ACTION LEVELS AND POSTULATED ACCIDENTS

Both emergency classifications are characterized by EALs consisting of specific instrument readings, alarms, and observations which are used either in combination or singularly to tell the on-shift staff that an initiating condition has occurred, thus allowing the EC to declare the appropriate level of emergency. These EALs are used to assure that the initial classification of emergencies can be accomplished rapidly, allowing for the prompt identification of the nature of mitigating activities needed.

EALs and Initiating Conditions are provided under the following categories for permanently defueled stations:

- Abnormal Radiation Levels / Radiological Effluent
- Hazards and Other Conditions Affecting Plant Safety
- System Malfunction

EALs and Initiating Conditions are also provided for the ISFSI.

These conditions include accidents evaluated in the FSAR. Specific guidance for classifying emergencies is found in site procedures and the Permanently Defueled EAL Basis Manual (PDEALBM).

EALs shall be reviewed with State of Florida and Citrus County government authorities on an ANNUAL basis.

9.0 NOTIFICATION METHODS AND PROCEDURES

To provide prompt notification of affected personnel and emergency response organizations in the event of an emergency at CR3, DEF has established means for notification and dissemination of emergency messages. These means utilize both normal communications systems and those dedicated for emergency use. Emergency message formats have been established to disseminate appropriate emergency information to affected personnel and organizations.

9.1 BASIS FOR NOTIFICATION

The analyses of the credible design basis events and consequences indicate that there are no postulated accidents that would result in off-site dose consequences that are large enough to require off-site emergency planning. The notification of personnel and emergency response organizations is commensurate with the hazard posed by the emergency. The EMERGENCY CLASSIFICATION SYSTEM described in Section 8.0 is the primary bases for notification and has been mutually agreed upon by applicable State and Federal response organizations.

The EC is responsible for identifying the appropriate emergency classification, declaring the emergency and initiating emergency notifications.

9.2 MEANS OF NOTIFICATION

Various communications systems, as described in Section 10.0 are available to perform emergency notifications. As noted above, the EC is the primary individual for initiating notifications; however, the EC may designate an individual to carry out appropriate notifications. Implementing procedures and various directories identify organizations and individuals to be notified and contain appropriate listings of telephone numbers.

The following sections describe the means of notifying, alerting, and mobilizing the various emergency response organizations or individuals.

9.2.1 CR3 Plant Staff

Following declaration of an emergency, the EC will notify the Station Duty Manager. The Station Duty Manager will then notify the General Manager Decommissioning of an emergency condition. These notifications will be completed via the Plant phone system or a commercial telephone which may include land line and/or a wireless device capable of receiving text messages. Notification of other key personnel may be made by commercial telephone and include land lines and/or wireless devices capable of receiving text messages.

On-site staff is informed of an emergency condition through the use of both audible and visual alarms and the Public Address (PA) System. Separate, distinct, audible alarms are available to alert personnel of a FIRE, building evacuation and PROTECTED AREA evacuation. The EC or designee will use the CR3 PA System to inform personnel of specific emergency conditions or instructions, and to activate the CR3 ERO. In the event that personnel required to staff emergency positions are not on-site, they may be contacted through manual notification by commercial telephone and/or wireless devices capable of receiving text messages.

9.2.2 CR1 & 2 and 4 & 5 Control Centers

Upon declaration of an emergency, the EC or a delegate will notify the CR1 & 2 and the 4 & 5 Control Centers by Plant phone or other available means, and an appropriate response will be initiated. The EC or a delegate will provide further instructions, as required.

9.2.3 Nuclear Regulatory Commission

The NRC Operations Center will be notified of an emergency via the ENS, a designated phone line available in the CR3 Control Room. Upon contact with the NRC, a description of the emergency is provided, along with potential consequences. Commercial phone lines will be used as a backup means of notification in the event of failure of the ENS.

9.2.4 State Watch Office-Tallahassee

The State Watch Office-Tallahassee (SWOT) will be notified of an emergency via the SHRD. The commercial telephone system serves as back-up communications systems. Upon contact, the content of the Florida Nuclear Plant Emergency Notification Form will be provided. The SWOT will notify the Florida DEM and Citrus County officials of an emergency at CR3.

9.2.5 Medical Support Organizations

If an emergency involves personnel injury, the EC can request assistance from off-site medical support organizations. Based on the type of injury and degree of possible contamination, the requirements for medical care will be determined, and the appropriate medical facility and personnel needed to accompany the injured personnel will be notified.

9.3 EMERGENCY MESSAGES

Notification of an emergency is provided verbally to the SWOT based on the content of the Florida Nuclear Plant Emergency Notification Form. The form may also be transmitted electronically. The content of the initial notification and follow-up message form has been established in conjunction with the State of Florida and includes the date and time of the incident, the class of emergency, and the EAL. Appropriate identification of the caller and time of the notification are also provided.

As additional information describing the emergency situation and local conditions becomes available, supplemental messages containing additional detail are provided.

9.4 PUBLIC ALERT AND NOTIFICATION

The analyses of the credible design basis events and consequences indicate there are no postulated accidents that would result in off-site dose consequences that are large enough to require off-site emergency planning. Prompt notification of the public, particularly to take PROTECTIVE ACTIONS such as sheltering or evacuation, is not necessary. However, Federal, State and local emergency response organizations maintain the capability to disseminate appropriate information regarding an emergency at CR3.

Also, DEF maintains the capability to interface with the media and disseminate information during an emergency, if necessary.

10.0 EMERGENCY COMMUNICATIONS

10.1 GENERAL GUIDELINES

Several modes of communication are available to transmit information within CR3; throughout the Crystal River Energy Complex; and to various locations off-site during normal and emergency conditions. In the event of an emergency at CR3, these communications systems provide the appropriate means for alerting or activating emergency personnel in each response organization and allow continued means for contact throughout the emergency.

The various communications systems provided for both on-site and off-site communications are used on a regular basis or tested periodically in accordance with Plant procedures. Periodic testing or frequent use of each system is conducted as follows:

System	Use/Testing
Public Address Exchange System	Frequent Use
Commercial Telephones	Frequent Use
Portable UHF Radios	Frequent Use
Maintenance Telephones	Frequent Use
Evacuation and Fire Alarms	Tested Monthly
SHRD	Tested Monthly
ENS	Tested Daily
Duke Intra-Company System	Frequent Use
Satellite Phones	Tested Annually

The communications systems available between on-site locations and personnel are described in Sections 10.2 thru 10.9. All systems are available in the CR3 Control Room on a 24-hour basis to allow prompt notification and activation of emergency response organizations.

During an emergency, use of all communications systems is limited to those necessary and appropriate contacts related to the emergency. Specific individuals are designated to provide notifications and communications. The Emergency Coordinator will assure effective use of communications systems and provide for timely, knowledgeable review and dissemination of messages and is responsible for overall awareness and coordinated dissemination to responsible ERO positions.

10.2 PAX SYSTEM

The Public Address Exchange (PAX) System consists of a network of phones and speakers strategically located throughout CR3. PAX is utilized for mass communications, paging, special instructions, and announcements. In addition, the PA system is utilized as an alarm system supported by strobe lights in high noise level areas.

10.3 COMMERCIAL TELEPHONES

Commercial telephones are located throughout the CR3 site and serve as a means to communicate off-site.

10.4 PORTABLE UHF RADIOS

Portable UHF radios are available for limited communication on the CR3 site. During normal shift operations, key personnel have UHF radios available for communication. These radios are the primary communications link during a FIRE.

This system utilizes UHF repeaters and antennas located in the Plant and Energy Complex to aid in radio communications. Earphones are provided for use in high noise areas.

10.5 MAINTENANCE TELEPHONES

These telephones are normally used for communication between the Control Room and personnel conducting maintenance operations.

10.6 EVACUATION AND FIRE ALARMS

The evacuation and FIRE alarms are actuated manually from the Control Room if conditions warrant.

10.7 STATE HOT RINGDOWN

The SHRD serves as the primary means of communications between the CR3 Control Room and the SWOT. CR3 is capable of dialing all stations on the circuit or calling selected station(s). The network includes CR3, the SWOT, Citrus County EOC and the DHBRC. All stations on the network can call all or a selected number of other stations by utilizing a dial-up code.

10.8 EMERGENCY NOTIFICATION SYSTEM

In the event of an emergency at CR3, the NRC Operations Center in Rockville, Maryland will be notified via the ENS. Emergency notification, plant status information and radiological information are communicated via the ENS.

10.9 SATELLITE TELEPHONES

Satellite telephones are available in the Control Room and provide an additional back-up means of communication off-site.

11.0 PUBLIC EDUCATION AND INFORMATION

The EC will notify Duke Energy Corporate Communications following a CR-3 emergency event declaration. The Corporate Nuclear Communications emergency response plan requires that the Corporate Communications be notified at an ALERT classification. The Corporate Communications will be notified at the company's Charlotte headquarters and a near-site response team will be established for CR-3.

The near-site response team will be staffed with a company spokesperson and media communicators, who will provide local interaction with the media. If an event occurs at CR-3, information will be disseminated to the public in a timely manner.

Briefings with media organizations will be coordinated between Duke Energy Corporate Communications and the near-site response team per Corporate Communications protocols.

12.0 EMERGENCY FACILITIES AND EQUIPMENT

Facilities and equipment available to augment the CR3 ERO and effectively mitigate and control emergencies are identified in this section. Where adequate description is provided in the CR3 FSAR, such information is incorporated by reference.
The following paragraphs describe these emergency facilities. Subsequent sections describe the emergency equipment and other means of providing emergency support through these centers. Communications systems available at each center have been described in Section 10.0.

The State of Florida has facilities to carry out their emergency response activities and interface with DEF.

12.1 EMERGENCY RESPONSE FACILITIES

The ability of Plant personnel to monitor Plant systems and equipment on a continuous basis is maintained in various locations at CR3 and allows the ERO to effectively control and support emergency response activities. Some of these locations (e.g., Control Room and 95' elevation) are staffed on a regular basis while others are staffed in the event of an emergency.

12.1.1 CR3 Control Room

The principal emergency control center is the CR3 Control Room. The Control Room contains instrumentation and control systems necessary to identify and continuously monitor emergency conditions and for taking various corrective and on-site PROTECTIVE ACTIONS. Section 12.2 identifies the systems important for emergency response and detailed descriptions are provided in the FSAR. The Control Room has reliable voice and data communications capabilities with the SWOT and the NRC.

During an emergency, Control Room activities are conducted under the direct supervision of the Shift Supervisor, who can maintain contact with augmented staff located in the Emergency Support Center (ESC). The Control Room is staffed as described in Section 6.0 and additional support can be obtained from the augmenting staff responding to the ESC, as required.

12.1.2 Emergency Support Center (ESC)

The ESC is provided as a point of assembly for augmented resources providing technical expertise to assist the EC and the Control Room in the assessment, mitigation and response to an emergency. It also supports the dispatch of emergency teams. The ESC is located in the Control Complex adjacent to the Control Room. The Control Complex contains communications equipment, emergency radiation monitoring equipment, emergency respiratory devices, and an emergency kit containing protective clothing and other supplies (see Table 12.1).

Augmented staff responding to the ESC and the Control Room have access to up-to-date technical documentation, including drawings, system information and procedures to enable mitigation planning and support of Control Room staff. Communications systems available in the Control Complex are described in Section 10.0.

12.1.3 Nuclear Security Operations Center

The Nuclear Security Operations Center (NSOC) provides appropriate accountability of individuals leaving the PROTECTED AREA and controls access to the facility. This building serves as the key location for security activity and control in accordance with site procedures. The NSOC is equipped to implement all appropriate security measures and is the primary location for personnel accountability. Under certain meteorological conditions, evacuation of the NSOC may be necessary and personnel accountability can be conducted at an alternate location as directed by the EC.

12.1.4 Alternate ERO Augmentation Facility

DEF maintains an off-site facility that would be available as a staging area for augmentation staff in the event that access to CR3 is impeded. The alternate facility is capable of:

- Communicating with the Control Room and Plant Security
- Performing notifications to the SWOT
- Enabling emergency repair and damage control teams to begin planning actions to mitigate the consequences of an event
- Supporting a rapid response as soon as the site is deemed accessible

The alternate facility is located at the Duke Energy Operations Center in Inverness.

12.2 ASSESSMENT SYSTEMS AND EQUIPMENT

DEF maintains or has access to data from monitoring systems essential for initiating emergency measures and performing accident assessment. This includes monitoring systems for radiological conditions, hydrology, meteorology, and Plant processes.

12.2.1 Radiation Monitoring System

DEF maintains the radiation monitors described in the Permanently Defueled EAL Basis Manual (PDEALBM) that monitor areas near the Spent Fuel Pool, the Control Room, and that monitor gaseous and liquid releases. Portable radiation monitoring instruments are maintained to support ISFSI operations including transfer operations of the Dry Shielded Canister (DSC) to the Horizontal Storage Module (HSM) and for monitoring of the spent fuel while in storage in the HSM. Additional detail regarding the Radiation Monitoring System is contained in the FSAR. Field radiation monitoring capabilities are described in Section 13.2.2 of the PDEP. Installed and portable radiation monitoring and sampling equipment, including dedicated emergency response equipment are maintained.

12.2.2 Hydrologic Monitoring Systems

Off-site hydrologic monitoring data is available to DEF from the Southwest Florida Water Management District which maintains monitoring wells throughout Citrus County. Additional hydrologic data could be obtained from the public water supplies identified in the FSAR.

12.2.3 Meteorological Monitoring Systems

DEF receives meteorological data from established local weather services, such as Local News and Weather television and radio stations, including the Internet. CR3 has reduced the risk of a credible accident now that it has entered decommissioning. There is no credible accident that can result in a radiological release off-site. Therefore, methods for assessing an off-site release are no longer warranted. Meteorological methods that provide local wind direction and wind speed data are adequate to protect on-site workers and members of the general public that may be on site.

12.2.4 Plant Process Monitoring Systems

Annunciator and computer alarms are provided for a variety of parameters including the Spent Fuel Cooling System to indicate SF Pool level, temperature, and pump status.

12.3 PROTECTIVE FACILITIES AND EQUIPMENT

12.3.1 Fire Protection System

The Fire Protection Plan outlines FIRE protection, FIRE detection, and FIRE suppression activities at CR3. These systems are designed to detect and alert CR3 personnel of excess temperature or FIRE conditions in specified areas of the Plant and to automatically actuate fixed FIRE extinguishing systems in affected areas.

A variety of manual FIRE extinguishing equipment is also available to the Fire Brigade.

12.4 EMERGENCY SUPPLIES

Emergency equipment and supplies to carry out the provisions of the Emergency Plan are specified in Plant procedures. Table 12.1 lists typical emergency equipment and supplies and their locations.

Emergency kit contents listed in Table 12.1 are inspected, inventoried, and operationally checked at least quarterly and anytime a kit is opened and used, in accordance with HPP-409, “Inventory and Availability of Emergency Supplies / Equipment." Sufficient reserves of instruments/equipment are provided to replace those which are removed from emergency kits for calibration or repair. Calibration of instruments has been established at intervals recommended by instrument suppliers, or as required by Federal regulations.

12.5 FIRST AID FACILITIES

First aid supplies and equipment are located throughout CR3. Qualified personnel are available 24 hours per day to provide medical treatment as referenced in Section 16.0.

Radiological wound monitoring on-site is performed using an appropriate high sensitivity detector (e.g., HP-210 probe). If the severity of the wound restricts decontamination efforts by radiation protection personnel, the injured personnel will be referred to off-site medical personnel or transported to an off-site medical facility for treatment and further decontamination.

12.6 DAMAGE CONTROL EQUIPMENT

Fire protection systems described in Section 12.3.1 are designed and maintained to mitigate the effects of FIRE.

The Plant elevation has been set at a level in excess of expected water surges, and the buildings have been designed for wind speeds in excess of probable maximum velocities.

TABLE 12.1

TYPICAL EMERGENCY EQUIPMENT/SUPPLIES AND LOCATIONS

Kit Contents

Compass
Protective Clothing
Air Sampler Heads
Tape, Barricade
Thermoluminescent Dosimeter (TLD) Badges
Radiation Signs
Plastic Rain Gear
Smears
Air Filters, Particulate
Charcoal Cartridges
Silver Zeolite Cartridges
Labeled Envelopes
SH-4 Sample Mount and Holder
Bottle, for water samples
Electronic Dosimeters
Pens, Pencils
Calculator
Plant Survey Map
Area Map
Tape, Masking
HP Probes
Check Source
Area Monitor (or Electronic Dosimeters)
Batteries
Flashlight
Felt Marker, Black
Shoe Covers
Gloves
Pad Paper

Kit Locations

CR3 Control Room
Control Complex

13.0 ACCIDENT ASSESSMENT

Effective response to a potential emergency situation requires assessment to determine the nature of the emergency and its actual and potential consequences. DEF has established various methods to evaluate and monitor the effects of a potential emergency at CR3 and has the appropriate means to assure adequate assessment.

13.1 RANGE OF ASSESSMENT ACTIVITIES

The ASSESSMENT ACTIVITIES required to evaluate a particular emergency depend on the specific nature and classification of the emergency. Activities could range from increased surveillance of monitors in the Control Room to surveys of affected Plant areas

During an UNUSUAL EVENT, ASSESSMENT ACTIVITIES required to fully identify the nature of the emergency are completed to determine the possibility of an escalation in the severity of the situation. At an ALERT classification, the ERO is activated to assist in assessment functions, such as performing confirmatory surveys or radiation monitoring, as required.

The EC determines the initial classification of the emergency based on systems and effluent parameter values or other observations as presented in the EALs. In order to provide effective coordination and direction of the CR3 ERO, the EC utilizes the minimum augmented staff, emergency teams, systems and equipment for continuing assessment of accident severity and means of control and potential impact on CR3 and Energy Complex personnel. The EC institutes ASSESSMENT ACTIVITIES prescribed by implementing procedures as needed to accurately classify each emergency and to maintain accurate classification throughout the emergency.

13.2 ACCIDENT ASSESSMENT METHODS

Accident ASSESSMENT ACTIVITIES carried out at CR3 are aimed at three (3) basic areas: (a) determining the nature of the emergency; (b) determining or estimating the nature and quantities of an actual or potential radioactive release; and (c) assessing the actual or potential dose to CR3 and Energy Complex personnel.

13.2.1 Incident Determination

ASSESSMENT ACTIVITIES are necessary to determine the means to bring the emergency situation under control and to identify the specific affected areas, systems, and components. Based on this assessment, appropriate corrective actions can be identified and implemented.

The Control Room staff monitors instrumentation, including SF Pool parameters and process and radiation monitoring systems, and provides early identification of system status and potential for change. Augmented staff is provided appropriate data to assess the nature of the emergency and, in combination with the on-shift staff, recommend control actions to mitigate the emergency and potential effects.

Plant procedures provide instructions on identifying and responding to various types of abnormal and emergency situations involving Plant systems.

13.2.2 Radiation Monitoring and Estimating Release Potential

Methods have been established to monitor radiation levels in the PROTECTED AREA and OWNER CONTROLLED AREA and to determine the nature of actual or potential radioactive releases. These activities range from radiation surveys to confirm the emergency classification to detailed measurement and analysis of liquid and gaseous samples to identify key isotopes or the nature of damage.

Control Room instrumentation is used by the operating staff to monitor SF Pool inventory and cooling capabilities and to obtain early indication of any release of radioactivity. The Plant process and effluent radiological monitoring systems and associated alarms described in Section 12.0 are utilized for this purpose.

13.2.2 Radiation Monitoring and Estimating Release Potential (Continued)

In-Plant evaluations and radiological surveys are performed by radiation monitoring personnel. Upon activation of these personnel, the Radiation Controls Coordinator and EC determine area(s) to be surveyed. The radiation monitoring personnel conduct a general beta-gamma survey of the selected area(s), performs gross particulate air samples, conducts smear surveys, and establishes RCAs. Survey results are forwarded to the Radiation Controls Coordinator for evaluation and assessment. The Radiation Controls Coordinator will advise the EC of radiological status. The need for additional or continuing surveys is established by the EC.

Provisions have been established through implementing procedures to sample and analyze in-plant atmosphere and effluent releases for additional information.

Dose levels are determined at the EAB as soon as possible following an accidental release of radioactive material for EAL evaluation. Implementing procedures provide instructions for sampling plant effluents.

13.2.3 Dose Assessment

Emergency workers are provided with dose measurement instrumentation. Dose assessment capabilities are available on a 24-hour per day basis.

Implementing procedures provide a rapid method of determining the magnitude of a radioactive release from CR3 during an accident condition. A computerized and manual method can be used along with meteorological and radiological data to generate dose projections for EAL evaluation.

Radiological surveys and monitoring outside of the OWNER CONTROLLED AREA are not anticipated as any credible accident or beyond design basis accident can result in radioactive releases or direct radiation doses which exceed EPA PAGs beyond the EAB. However, in the event the State of Florida elects to conduct radiological surveys and monitoring, these activities would be coordinated by the State and conducted by the State Radiological Emergency Team.

14.0 PROTECTIVE RESPONSE [R2]

The Radiation Protection Program assures that protective measures are provided for the purpose of safeguarding the health of all personnel working at the Energy Complex. DEF is responsible for the implementation of these protective measures. Implementation guidelines for PROTECTIVE ACTIONS are contained in implementing procedures.

14.1 ON-SITE PROTECTIVE MEASURES

The protective measures serve as the basis for additional measures required during an emergency. Some of the standard and emergency measures are discussed in the following sections.

14.1.1 Radiation Protection Program

A detailed description of the Radiation Protection Program is provided in Section 15.0 of this Plan. The Radiation Protection Program requires the use of protective equipment to minimize personnel exposure and to maintain exposure limits within 10 CFR 20. The external dosimetry program includes provisions and requirements for use of both permanent record and self-reading dosimeters (e.g., pocket or electronic dosimeters). Dosimeter ranges are sufficient to measure both planned routine and foreseeable accident doses. Implementing procedures associated with this Plan establish requirements for distributing dosimeters to emergency responders, including those individuals responding to CR3 from off-site locations. Internal doses are typically estimated through the use of whole body counting and/or in-vitro sampling and analysis routines. Implementing procedures associated with this Plan or the Radiation Protection Program establish requirements for determining internal doses based on in-vivo or in-vitro analyses results or by assessment of individual exposures to airborne radioactive materials.

Implementing procedures also establish guidance for wearers to periodically read their self-reading dosimeters to maintain compliance with emergency exposure guidelines. DEF maintains individual dose records in accordance with the requirements of 10 CFR 20 and the Radiation Protection Program and its supporting procedures.

14.1.2 Emergency Exposure Guidelines

Protective measures of on-site personnel are detailed in implementing procedures for circumstances in which Plant personnel exposure may otherwise exceed allowable limits. These procedures address corrective and PROTECTIVE ACTIONS, use of protective equipment, and personnel evacuation and accountability.
Table 14.1 provides exposure guidelines for on-site emergency activities.
These measures are determined from considerations of personnel protection and not by emergency classification.

14.2 PERSONNEL ASSEMBLY, SHELTERING, OR EVACUATION

The EC has the authority to initiate personnel assembly, sheltering, or evacuation of CR3. Personnel assembly can be used to facilitate communication, accountability, and supervision during an emergency. When assembly is requested, personnel will stop work, shut down potentially hazardous equipment, and proceed to the pre-designated LOCAL ASSEMBLY AREAS. LOCAL ASSEMBLY AREA accountability will take place and the results will be reported to the EC when requested. At a declaration of an ALERT or at any time deemed necessary, the EC will direct non- essential personnel to LOCAL ASSEMBLY AREAS.
Plant personnel are expected to report to LOCAL ASSEMBLY AREAS immediately following the Public Address System announcement. The Local Area Supervisor is required to notify Security at the Central Alarm Station (CAS) if an individual's location is not determined in approximately 30 minutes from the time assembly begins. Personnel will remain in the assembly areas until instructed to return to work, report to the Main Assembly Area, or leave the Crystal River Energy Complex.
Accountability of all personnel onsite will be accomplished during local assembly and the names of missing individuals will be determined within 60 minutes of the start of an emergency (at a declaration of an ALERT or at any time deemed necessary). Onsite individuals will be accounted for continuously thereafter.

The EC will initiate evacuation of the PROTECTED AREA if deemed necessary to ensure personnel safety. Evacuation of the CR3 PROTECTED AREA will be coordinated by the Director Nuclear Plant Security, or a designated representative. In the event of an evacuation of the PROTECTED AREA, Plant personnel will report to the Main Assembly Area for organization and supervision.

14.2 PERSONNEL ASSEMBLY, SHELTERING, OR EVACUATION (Continued)

An evacuation may affect the CR3 PROTECTED AREA or the Energy Complex. The EC will determine the specific areas to be evacuated. Evacuation of all other portions of the Energy Complex will be coordinated by CR3 Security.

Procedural guidance has been established as an aid in implementing an evacuation. Plant procedures contain instructions to evacuate specific work areas or buildings whenever emergency conditions create a localized radiological hazard.

14.3 OFF-SITE PROTECTIVE MEASURES

The analyses of the credible design basis events and consequences indicate there are no postulated accidents that would result in off-site dose consequences that are large enough to require off-site protective measures.

TABLE 14.1

GUIDELINES FOR DEF EMERGENCY WORKER EXPOSURE

ACTIVITY	GUIDELINE	CONDITION
All occupational exposures	5 rem	All reasonably achievable actions have been taken to minimize dose.
Protecting valuable property necessary for public welfare.	10 rem [a]	Exceeding 5 rem unavoidable and all appropriate actions taken to reduce dose. Monitoring available to project or measure dose.
Lifesaving or protection of large populations	25 rem [b]	Exceeding 5 rem unavoidable and all appropriate actions taken to reduce dose. Monitoring available to project or measure dose.

Notes: a For potential doses >5 rem, medical monitoring programs should be considered.

b In the case of a very large incident, consider need to raise property and lifesaving response worker guidelines.

NOTE: Reference for this table is Table 2-2 in the EPA PAG Manual.

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

15.0 RADIOLOGICAL EXPOSURE CONTROL

CR3 maintains a radiological exposure control program to assure that protection against radiological exposure, as set forth in 10 CFR Part 20 and Chapter 170J-1 of the State of Florida Statutes, is provided. This program is implemented through the "Radiological Protection Standard" which covers both normal and emergency radiation protection measures.

15.1 EXPOSURE GUIDELINES

During an emergency operation, doses above normal occupational radiation exposure limits may be authorized by the EC for activities such as saving a life, preservation of valuable equipment, or controlling exposure. Table 14.1 provides exposure guidelines for on-site emergency activities.

Actions such as providing first aid or medical treatment, removal of injured personnel, personnel decontamination, or ambulance service could encounter the lifesaving guideline. Measures to reduce exposure should be considered as practical. Personnel involved in lifesaving actions should be volunteers (healthy and above the age of 45) with the approval and authorization of the EC. If the situation allows, Health Physics personnel should provide recommended courses of action to minimize exposure.

15.2 RADIATION PROTECTION

The purpose of a Radiation Protection Program is to assure that radiation doses received by personnel are kept as low as reasonably achievable and do not exceed the prescribed limits for both normal and emergency conditions. The established measures to provide this assurance include access control, personnel monitoring, and contamination control.

15.2.1 Access Control

Strict access control is a primary means to minimize radiation exposure. Measures are initiated by the EC through the use of the radiation monitoring personnel as described in procedures.

In an emergency in which hazardous radiation levels might be encountered, the radiation monitoring personnel are dispatched. RCAs are established where elevated levels of radiation, contamination, and/or airborne radioactivity may exist. Within the RCA, areas of varying hazards may be present; these are identified and controlled per Radiation Protection procedures.

During an emergency, a temporary RCA may be set up in other parts of the Plant, as directed by the EC, by barricades, ropes, etc., and be conspicuously posted with precautionary signs.

Radiations Work Permits (RWP)s are utilized to maintain control of personnel radiation exposures. For emergency, short-term, or special situations, an Emergency RWP can be initiated in accordance with procedures.

A Control Point is established, as appropriate, as the point of entrance to and exit from an RCA to ensure personnel are adequately attired with required protective clothing and have proper personnel monitoring devices, and to prevent the spread of radioactive contamination upon exiting.

15.2.2 Personnel Exposure Monitoring

Personal dosimeters are utilized to monitor the exposure of personnel during normal or emergency conditions. Adequate supplies of dosimeters are maintained for use during an emergency. Procedures describe in detail the types of personal dosimeter devices, the manner in which they are to be used, who is to wear them, and how they are to be cared for. Provisions have been established, both on-site and through service organizations, to provide 24 hour per day capability to read dosimeters to determine the doses received by emergency workers.

When it is suspected that radioactive materials may have entered the body, appropriate bioassay services and/or special tests shall be performed as stipulated in 10 CFR 20. The determination of the individual's exposure shall be based upon this evaluation.

The CR3 Radiation Protection Program requires that individual exposure records be documented and maintained in order to: (a) evaluate the effectiveness of the Radiation Protection Program; (b) demonstrate and facilitate compliance with procedural requirements and applicable governmental regulations; and (c) reconstruct for legal or medical purposes situations and conditions for analysis of radiation doses received.

15.3 CONTAMINATION CONTROL

Various contamination control measures are utilized. These include the access control measures discussed above and means for the decontamination of personnel, areas, and equipment are addressed in Plant procedures and are briefly described below.

15.3.1 Personnel Decontamination

During normal or emergency conditions, contamination should be removed from any part of a person's body prior to their leaving the RCA. All personnel decontamination, even during an emergency, will be performed under the supervision of the Health Physics Section and in accordance with Plant procedures.

CR3 maintains dedicated decontamination and clothing supplies on-site. The location of the decontamination supplies are listed in Plant procedures. Decontamination stations, which include a decontamination shower, are located in the Control Complex near the exit to the RCA and on the first floor of the Plant Administration Building.

15.3.2 Area and Equipment Decontamination

Areas and equipment are considered contaminated when there is loose, removable, contamination in excess of levels stipulated in Radiation Protection procedures.

Radioactive material may be shipped following an emergency in accordance with site procedures.

15.3.3 Control of Potable Water and Food

Potable water and food supplies are protected from radioactive contamination on-site by the following measures:

a. All potable water for the Plant site comes from wells located four (4) miles east of the Plant, through an open lime softener at Unit 1.
b. No food is permitted in the RCA.
c. Controlled use of hydration station when necessary.

In addition, selected water sources and vegetation around the Plant are routinely analyzed for radioactivity. Also, external radiation field measurements and ambient air samples are analyzed.

16.0 MEDICAL AND PUBLIC HEALTH SUPPORT

Medical assistance is available on-site and off-site for treatment of CR3 personnel. Various means of transportation are also available to transport individuals for radiological and non-radiological injuries. The following sections describe the available medical support. Table 16.1 summarizes the types of medical treatment for various types of injuries.

The individuals and organizations providing emergency medical assistance as identified in this section either have the capability for evaluation of radiation exposure and uptake or they are provided this capability from DEF in the form of personnel and/or equipment. DEF assures that persons providing these services are adequately prepared to handle contaminated individuals through detailed training classes, drills and exercises. Letters of Agreement with off-site organizations and individuals for medical support are listed in Appendix B.

16.1 ON-SITE FIRST AID

First aid assistance at CR3 is designed to handle a wide range of injuries. This task is accomplished by medical response personnel.

16.1.1 Medical Response Personnel

The medical response personnel are on-site individuals trained in basic medical procedures and certified by the State of Florida Department of Health, Division of Medical as described in Section 19.0 of this Plan. Medical response personnel are trained to handle injured personnel, with or without radiological considerations.

16.1.2 First Aid Kits

First aid kits are located throughout the Plant. The kits are maintained by plant staff personnel.

16.1.3 On-Site Medical Emergency Communications

An emergency phone system is available for reporting medical emergencies. This system enables an individual to report an emergency by dialing "555" on any PAX or “5555” on any conventional intra-Plant phone at CR3, which activates a dedicated emergency telephone in the Control Room. Other communications systems for medical emergencies are available as discussed in Section 10.0 of this Plan.

16.2 MEDICAL TRANSPORTATION

Transportation of injured personnel is available via local emergency medical services, other DEF vehicles, or private vehicles.

16.3 OFF-SITE MEDICAL SUPPORT

The following sections identify medical facilities capable of handling various types of injuries.

16.3.1 Seven Rivers Regional Medical Center

SRRMC is capable of treating patients with injuries of a non-radiological or radiological nature.

16.3.2 Off-Site Medical Support Plans

SRRMC will provide for hospital treatment, medical examinations, and laboratory services for those DEF employees, and other persons designated by DEF.

When local facilities are considered inadequate because of the nature or severity of the injury sustained, the injured person may be referred to a trauma center in Florida or to Oak Ridge, Tennessee - REAC/TS for hospitalization. Oak Ridge Associated Universities (ORAU) operates a research hospital in Oak Ridge, Tennessee for the U.S. Department of Energy. Medical records, including bioassay records, will be maintained permanently by the hospital.

SRRMC has plans for emergency handling of patients from CR3. Agreements with the hospital include:

a. Coordinating the medical disciplines, which are committed to support the treatment of injuries involving radiation exposure and/or radioactive contamination;

b. Developing plans, procedures, and training programs for the reception, diagnosis, and treatment of injured personnel;

c. Designating the physical facilities and equipment to be used for initial emergency care and subsequent definitive care and treatment; and

d. Designating physicians and medical support personnel and alternates to handle radiation emergency patients.

TABLE 16.1

SUMMARY OF ACTIONS FOR EMERGENCY MEDICAL TREATMENT

Type of Injury	Actions [1]
Minor Injury Not Requiring Doctor	Treat on-site.
Minor Injury Requiring Medical Assistance	Notify Control Room or transport off-site.
Serious Injury	Notify Control Room, then transport to SRRMC.
Life or Death Situation	Notify Control Room, then transport to SRRMC.

Note 1 Actions applicable to contaminated and non-contaminated injuries.

17.0 RECOVERY AND RE-ENTRY PLANNING AND POST-ACCIDENT OPERATIONS

DEF has established general plans described in the following sections to yield RECOVERY from potential emergencies at CR3.

17.1 RE-ENTRY PLANS

RE-ENTRY into affected areas of CR3 may be required during the early stages of an emergency. Entry will be required for one or more of the following reasons:

a. To search for personnel not accounted for;
b. To perform operations or repairs to minimize or eliminate the source of the emergency;
c. To determine more definite emergency RCA boundaries;
d. To perform rescue operations; and
e. To save property.

Personnel performing these activities will be approved by the EC. The team will be thoroughly briefed beforehand regarding their actions while in the evacuated area. Efforts will be made to minimize exposure and all individuals will be briefed on emergency exposure and the risk involved with each mission.

Table 14.1 provides exposure guidelines for on-site emergency activities.

17.2 EMERGENCY TERMINATION AND NOTIFICATION

Termination of an emergency status is the responsibility of the EC. This decision will be based on the following considerations:

a. Conditions no longer meet an EAL and it appears unlikely that conditions will deteriorate.
b. Plant releases of radioactive materials to the environment are under control (within Tech Specs).
c. In-plant radiation levels are stable or decreasing, and are acceptable given the Plant conditions.
d. The operability and integrity of power supplies, electrical equipment and Plant instrumentation including radiation monitoring equipment is acceptable
e. All required notifications have been made.
f. Off-site conditions do not unreasonably limit access of outside support to the station and qualified personnel and support services are available.
g. Radiological and Plant conditions permit resumption of normal occupational exposure limits to continue mitigation/repair activities.

The EC is also responsible for providing notification of the emergency termination and initiation of RECOVERY operations to the NRC, State of Florida (SWOT), the CR3 ERO, and other organizations that may be providing on-site support.

17.3 RECOVERY OPERATIONS

RECOVERY operations begin immediately following emergency termination.

17.3.1 Recovery Plan

RECOVERY operations will address the specific emergency circumstances. RECOVERY planning includes equipment to be repaired or replaced, licensing implications, special training requirements, offsite support, and determination of causes and consequences. Site procedures addressing RECOVERY operations provide an outline for a short term RECOVERY plan.

The General Manager Decommissioning shall be responsible for the development and implementation of the RECOVERY plan and shall provide for detailed monitoring of the implementation and status reporting. The General Manager Decommissioning also has the authority to revise or halt activities as circumstances dictate.

18.0 DRILLS AND EXERCISES

18.1 PLANNING DRILLS AND EXERCISES

Periodic drills and exercises are conducted to test the state of emergency preparedness of CR3 and response organizations. Drills and exercises shall be conducted to meet all or part of the following objectives:

a. Assure that the participants are proficient in performing their respective duties and responsibilities;

b. Evaluate the adequacy of the CR3 PDEP and the methods used in the Emergency Plan Implementing Procedures;

c. Test communications networks and systems; and

d. Check the availability and operability of emergency supplies and equipment

The General Manager Decommissioning is responsible for oversight of the planning, scheduling, and coordination of all emergency preparedness-related drills and exercises and shall ensure that all or part of the following guidelines are utilized:

a. Personnel are assigned to prepare a scenario;

b. Efforts are coordinated with other participating emergency personnel, organizations, and agencies;

c. A date is scheduled for drill/exercise execution and observers are assigned;

d. A critique of the drill/exercise is conducted;

e. Personnel are assigned to correct any deficiencies;

f. Deficiencies are corrected; and

g. Documentation is prepared for record retention of training conducted.

Scheduled drills and exercises will be held involving appropriate emergency personnel. These drills and exercises shall be conducted, simulating as closely as possible actual emergency conditions, and may be scheduled such that one or more drills or exercises are held simultaneously. Drill and exercise scenarios can involve participation of several emergency teams and all or specific parts of the ERO, including varying degrees of participation by response organizations.

18.2 SCENARIO DEVELOPMENT

A scenario will be prepared for each drill and exercise. The scenario shall include, but not be limited to, the following:

a. The basic objective(s) of the drill or exercise;

b. The date(s), time period, location(s), and participating organizations;

c. The simulated event;

d. A time schedule of real and simulated initiating event; and

e. A summary describing the conduct of the drill or exercise. Items which may be addressed include simulated casualties, off-site organization assistance, rescue of personnel, use of protective clothing, deployment of Radiological Monitoring Personnel; and

f. Information describing conduct of the drill or exercise, such as ground rules, instructions for Controllers, etc.

Drill and exercise scenarios will be developed that incorporate a wide range of scenario elements.

18.3 DRILL AND EXERCISE REQUIREMENTS

18.3.1 Training Drills

Training drills serve as elements of training programs in which individuals demonstrate their ability to perform assigned emergency functions. During a training drill, on-the-spot correction of erroneous performance should be made and a demonstration of the proper performance should be offered. Problems should be noted for discussion as part of the training drill critique. Training drills shall be conducted at the frequencies indicated below:

a. Communication Drills

- Monthly – Communication between CR3 and the State of Florida EOC shall be demonstrated.

  These drills shall also include the aspect of understanding the content of messages.

b. Medical Emergency Drills

- Annually - The drill will involve medical response personnel and include a simulated contaminated individual and may also allow provisions for participation by local support agencies (i.e., ambulance and off-site medical facilities). The off-site portions of the drill may be performed as part of the Biennial Exercise.

c. Radiological Monitoring

- Annually - A drill involving radiation monitoring personnel will include monitoring of accessible areas within the Plant and include area radiation monitoring and air sampling techniques. The drill will also allow provisions for evaluating communications and recordkeeping performed by members of the emergency team.
- Semi-Annually - Health Physics drills will involve response to, and analysis of, simulated elevated airborne samples and direct radiation measurements in the environment.
- Annually – An analysis of liquid samples with actual or simulated elevated radiation levels will be included in a health physics drill.

18.3.1 Training Drills (Continued)

d. Fire Drills

- These drills shall be conducted at a FREQUENCY designated by, and in accordance with the Fire Protection Plan.

e. Assembly and Accountability Drills

- Annually - An assembly and accountability drill shall be conducted. The drill shall include identifying the locations of all individuals onsite. Successful demonstration of assembly and accountability as a part of the Biennial Exercise shall serve as the successful completion of this drill requirement in that calendar year.

f. Staff Augmentation Drills

- Annually - A staff augmentation drill involving the minimum ERO positions shall be conducted between 6 p.m. and 4 a.m. or on the weekend. The drill shall be unannounced and can be conducted via phone contact, staffing of the facility or as part of a training drill.

Drill requirements may be satisfied as part of the Biennial Exercise. A critique shall be conducted as soon as practical after each drill or exercise. The critique shall evaluate the ability of the organization to respond to a simulated emergency situation.

18.3.2 Biennial Exercises

A Biennial Exercise is conducted every two (2) years and tests the capability and a major portion of the basic elements existing within emergency preparedness plans and organizations. The Biennial Exercise limits the on-the-spot-corrections used in training drills.

The Biennial Exercise is an event that tests the integrated capability and a major portion of the basic elements existing within emergency preparedness plans and organizations. If requested, the State of Florida, the Citrus County Sheriff's Office and local support organizations (firefighting, ambulance and medical services) will be invited to participate to verify this capability to respond to an emergency scenario requiring response. The exercise may satisfy the requirement for certain drills as required by Section 18.3.1.

18.3.2 Biennial Exercises (Continued)

The scenario should be varied such that all major elements of the Plan are tested within an eight (8) year period. These elements include management and coordination of emergency response, accident assessment, and system repair and corrective action.

A remedial exercise will be conducted if it is determined that the emergency plan was not satisfactorily tested during the biennial exercise such that the NRC cannot find reasonable assurance that adequate protective measures can be taken in the event of a radiological emergency.

18.4 CRITIQUES

Emergency Preparedness shall conduct a critique as soon as practicable after training drills and exercises to evaluate the ability of the participating organizations to respond as indicated in this Plan. Recommendations for revisions to the CR3 PDEP, the implementing procedures and/or the upgrading of emergency equipment and supplies as a result of the drill or exercise should be forwarded to the Emergency Planning Coordinator who shall review, coordinate, and assure that appropriate changes are implemented to correct any deficiencies.

A written evaluation shall result from the critique of the Biennial Exercise. The General Manager Decommissioning shall assure that deficiencies are corrected and implemented, and that documentation is prepared and submitted to the Operations and Maintenance Manager for upgrade of the appropriate training program.

19.0 EMERGENCY RESPONSE ORGANIZATION TRAINING

All personnel at CR3 who fill required positions in the ERO will take part in a training program to assure adequate preparedness to assist in an emergency situation. Specific off-site support resources that may be called upon for emergency assistance will also be invited to participate in appropriate training programs. In general, these training programs provide for the indoctrination of DEF employees and off-site resources to familiarize each individual/organization with their responsibility during an emergency. The Training Program is used to assure all Plant employees, contractor personnel, and Plant visitors receive appropriate initial indoctrination, training, and requalification.

In conjunction with Plant indoctrination, which familiarizes personnel with Plant layout, structures, and systems, specific training programs are in effect for the medical response personnel, emergency mitigation personnel, radiation monitoring personnel, Fire Brigade, and Emergency Coordinators. Table 19.1 provides a summary of the required initial training topics for these personnel. Requalification training topics are based on student and drill feedback, audits, identified deficiencies from drills, and results of the program review by the Emergency Planning Coordinator. Management is responsible for maintaining appropriate records of emergency preparedness training conducted for the on-site organizations.

Separate training programs will be utilized for non-DEF support resources and will include appropriate DEF interface. Records of this training will be maintained by DEF and the appropriate organization.

19.1 EMERGENCY RESPONSE ORGANIZATION TRAINING PROGRAM

19.1.1 Medical Response Personnel

All medical response personnel are, at a minimum, certified by the State of Florida as Emergency Medical Technicians. Training topics are established as per the State certification requirements.

19.1.2 Emergency Mitigation Coordinator

The initial training for the Emergency Mitigation Coordinator consists of the emergency mitigation personnel topics listed in Table 19.1. Personnel will be retrained annually on topics that are determined as discussed in Section 19.0.

19.1.3 Emergency Mitigation Personnel

The initial training for emergency mitigation personnel consists of topics listed in Table 19.1. Personnel will be retrained annually on topics that are determined as discussed in Section 19.0.

19.1.4 Radiation Controls Coordinator

The initial training for the Radiation Controls Coordinator consists of the radiation monitoring personnel topics listed in Table 19.1. Personnel will be retrained annually on topics that are determined as discussed in Section 19.0.

19.1.5 Radiation Monitoring Personnel

The initial training for radiation monitoring personnel consists of topics listed in Table 19.1. In addition, training is accomplished by performing tasks on a routine basis which involve dose assessments and radiation surveys. Personnel will be retrained annually on topics that are determined as discussed in Section 19.0.

19.1.6 Fire Brigade

The training for Fire Brigade members is directed by the Fire Protection Plan and includes initial training, continuing training and drill participation requirements.

19.1.7 Emergency Coordinators

The initial training for ECs consists of topics listed in Table 19.1. The training is designed to give the EC the necessary information, experience, and training required to maintain overall control of EMERGENCY ACTIONS at the Energy Complex during an emergency at CR3. Most ECs will be provided training as part of the Certified Fuel Handler Training Program. Other ECs who are unable to attend the Certified Fuel Handler Continuing Training Program will receive training on an annual basis.

19.1.8 Medical Support Personnel [R2]

Medical Support training is provided in conjunction with SRRMC and local emergency medical services. The training for medical support personnel consists of topics listed in Table 19.1.

TABLE 19.1

EMERGENCY RESPONSE ORGANIZATION TRAINING PROGRAMS

I. Medical Response Personnel

A. As required by State certification requirements

II. Emergency Mitigation Personnel (including Emergency Mitigation Coordinator)**

A. Respiratory Protection
B. Conduct of Emergency Repair
C. RE-ENTRY Procedures
D. Communications
E. Accident Assessment Guideline and Abnormal Procedure Training
F. Review of applicable drill-identified deficiencies and Human Performance Concerns

III. Radiation Monitoring Personnel (including Radiation Controls Coordinator)**

A. Respiratory Protection/SCBA*
B. Use of Radiation Protection Procedures
C. RE-ENTRY Procedures
D. Use of Emergency Survey Equipment
E. Communications
F. Field Surveys
G. The Role of Dose Assessment in an Emergency
H. Computerized and Initial Dose Assessment Methods
I. Coordinated Dose Assessment During an Emergency
J. Potential Sources of Radioactive Releases
K. Monitoring of Radioactive Releases
L. Review of applicable drill-identified deficiencies and Human Performance Concerns

IV. Fire Brigade

See Fire Protection Plan

V. Emergency Coordinators

A. Introduction to Emergency Planning and Regulatory Perspectives
B. Role of Management During an Emergency
C. Communications
D. Review of applicable drill-identified deficiencies and Human Performance Concerns

VI. State and Local Support Services

A. Radiation Fundamentals
B. Fundamentals of Nuclear Fuel Storage
C. Fundamentals of Radiation Detection and Measurement
D. Management of Radiation Injuries
E. Radiation Protection and Decontamination
F. Warning and Communication Procedures

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* Self-Contained Breathing Apparatus (SCBA) training is conducted independently.

** Respiratory Protection/SCBA training is not necessary for the Emergency Mitigation Coordinator or the Radiation Controls Coordinator, since these positions provide direction only and do not implement any actions in the field.

20.0 RESPONSIBILITY FOR THE PLANNING EFFORT: DEVELOPMENT, PERIODIC REVIEW AND DISTRIBUTION OF EMERGENCY PLANS

20.1 EMERGENCY PLANNING COORDINATION

The General Manager Decommissioning has overall authority and responsibility for emergency response planning. CR3 Emergency Preparedness develops and updates emergency plans and coordinates these plans with other response organizations. In the event that licensing actions by the NRC or changes in the State agencies or other off-site resources impact this Plan, Emergency Preparedness is responsible for identifying the particular impact and necessary revisions to the Plan. The Emergency Planning Coordinator reports to the Operations and Maintenance Manager and is designated as having lead responsibility for these functions.

The Emergency Planning Coordinator training will consist of periodic reviews of federal Emergency Preparedness requirements and guidance documents and various site-specific documents related to Emergency Preparedness. Training is supplemented primarily by on-the-job activities and attendance of short courses, seminars, or executive conferences that relate specifically to emergency preparedness.

20.2 PLAN/PROCEDURES REVIEW AND UPDATE

The PDEP should be reviewed and verified to be current on an annual basis by the Emergency Planning Coordinator. Revisions to the PDEP and implementing procedures identified in Appendix A will be reviewed in accordance with 10 CFR 50.54(q) requirements.

Procedures listed as implementing procedures in Appendix A shall be reviewed and verified to be current by the appropriate individual in accordance with procedures. These procedures will be updated as appropriate and will consider improvements identified during drills and training. Comments for changes to these procedures, including observer and participant comments from drill critiques, will be solicited from those who have emergency responsibilities, or other parties involved in the program. Significant changes should receive, as appropriate, an impact and/or technical review by affected departments.

20.2 PLAN/PROCEDURES REVIEW AND UPDATE (Continued)

In addition, there shall be a quarterly review and update of the notification rosters used to activate and implement the Plan. These rosters are found in various phone directories.

Review of the PDEP and the plans of support organizations shall consider applicable emergency planning criteria and regulations promulgated by the NRC, as applicable to CR3.

In addition to the above reviews and updates, the Emergency Planning Coordinator shall review and update appropriate support agreements (see Appendix B) as required. Support plans for other groups such as the fossil plant, procurement, and SRRMC may also be reviewed periodically.

20.3 TRAINING

The Emergency Planning Coordinator shall assist management in coordinating and/or providing emergency planning-related training. They shall assure that the training programs described in Section 19.0, are properly coordinated to assure adequate qualification, training, and retraining of personnel.

20.4 AUDITS

Duke Energy maintains a Corporate Nuclear Oversight Section (NOS) that will support audits of the CR-3 PDEP according to Corporate NOS audit practices and instructions, which meet the requirements of 10 CFR 50.54(t). The audits will be completed by Corporate NOS personnel and will include the review of the CR-3 PDEP, its implementing procedures and practices, training, readiness testing, equipment, and interfaces with State and local governments. The audit will be conducted as soon as reasonably practicable after a change occurs in personnel, procedures, equipment, or facilities that could adversely affect emergency preparedness, but no longer than 12 months after the change. All elements of the Emergency Preparedness program must be reviewed at least once every 24 months. The evaluation by Corporate NOS personnel ensures independence from the audited CR-3 organization.

PERMANENTLY DEFUELED EMERGENCY PLAN

APPENDIX A

IMPLEMENTING PROCEDURE LISTING

IMPLEMENTING PROCEDURES FOR THE PERMANENTLY DEFUELED EMERGENCY PLAN

Implementing procedures specifically address elements of the PDEP that directly aid in the mitigation of, or lessen the impact of, an emergency. These procedures provide direction and information used during an actual emergency in areas such as: assessment of the significance of the emergency condition, augmented staffing, responsibilities and actions of emergency and non-essential personnel, emergency notifications, and assessment of radiological releases.

Procedure No.	Title	PDEP* Cross-Reference
PDEALBM	Permanently Defueled Emergency Action Level Bases Manual	
EM-205	Personnel Emergency Responsibilities Regarding Discovery, Assembly, Evacuation, and Accountability Within the Protected Area	9.2.1, 14.2
EM-206	Emergency Plan Roster Notification	6.4
EM-211	Duties of the CR3 Nuclear Security Organization	12.1.3, 14.2
EM-501	Operation of the Emergency Support Center (ESC)	6.2.3
EM-502	Conduct of the Emergency Coordinator	6.3.2, 8.2, 9.1, 9.2, 10.1, 13.1, 14.1.2
EM-503	Conduct of the Emergency Mitigation Coordinator	
EM-504	Conduct of the Radiation Controls Coordinator	6.3.7, 6.3.10, 13.2.2, 15.2.1, Table 14.1
EM-911D	Security Threat for Decommissioned Plant	N/A
HPP-334	Offsite Radiation Monitoring and Control	N/A

***** Section(s) of the PDEP implemented by or referencing each procedure.

Additional program maintenance procedures describe routine, ongoing actions and responsibilities which enhance and support DEF's state of readiness. These procedures are not referred to for guidance during declared emergencies and address areas such as: PDEP maintenance schedules, communications system descriptions, personnel conduct, selected training procedures and emergency supply inventories.

PERMANENTLY DEFUELED EMERGENCY PLAN

APPENDIX B

AGREEMENTS WITH SUPPORTING ORGANIZATIONS

AGREEMENTS WITH SUPPORTING ORGANIZATIONS

The following agreements are reviewed annually and updated as necessary. The documents are kept on file at CR3 and maintained by the Emergency Planning Group.

1. Citrus County Sheriff's Office
2. Seven Rivers Regional Medical Center
3. Nature Coast EMS

PERMANENTLY DEFUELED EMERGENCY PLAN

APPENDIX C

CROSS-REFERENCE TO REGULATORY REQUIREMENTS

CROSS-REFERENCE TO REGULATORY REQUIREMENTS

The following table provides a cross-reference between this PDEP and applicable regulations.

Regulatory Requirement	Corresponding PDEP Section(s)
10 CFR 50.47(b)(1)	5.0
10 CFR 50.47(b)(2)	6.0
10 CFR 50.47(b)(3)	5.0, 7.0, Appendix B
10 CFR 50.47(b)(4)	8.0
10 CFR 50.47(b)(5)	9.0
10 CFR 50.47(b)(6)	10.0
10 CFR 50.47(b)(7)	11.0
10 CFR 50.47(b)(8)	12.0
10 CFR 50.47(b)(9)	13.0
10 CFR 50.47(b)(10)	14.0
10 CFR 50.47(b)(11)	15.0
10 CFR 50.47(b)(12)	16.0
10 CFR 50.47(b)(13)	17.0
10 CFR 50.47(b)(14)	18.0
10 CFR 50.47(b)(15)	19.0
10 CFR 50.47(b)(16)	20.0
10 CFR 50.47(c)(2)	2.1
10 CFR Part 50, Appendix E IV	
10 CFR Part 50, Appendix E IV.A	5.0, 6.0, 7.0
10 CFR Part 50, Appendix E IV.B	8.0, 13.0
10 CFR Part 50, Appendix E IV.C	8.0, 9.0
10 CFR Part 50, Appendix E IV.D	9.0, 10.0
10 CFR Part 50, Appendix E IV.E	12.0
10 CFR Part 50, Appendix E IV.F	18.0, 19.0
10 CFR Part 50, Appendix E IV.G	20.0
10 CFR Part 50, Appendix E IV.H	17.0
10 CFR Part 50, Appendix E IV.I	14.0
10 CFR Part 50, Appendix E V	Appendix A
10 CFR Part 50, Appendix E VI	Not Applicable

SUMMARY OF CHANGES

DRR 752017

Page / Section	Change	Reason/References
Page 2-2 Section 2.2	Add to the 'Facility Description' the 'ISFSI facility' description	ISFSI added to PDEP (LAR 318)
Page 4-3 Section 4.1	Added ISFSI definition.	ISFSI added to PDEP (LAR 318)
Page 4-5 Section 4.2	Added ISFSI abbreviation.	ISFSI added to PDEP (LAR 318)
Page 6-1 Section 6.1	Added management of the ISFSI activities to the SS/CFH	ISFSI facility added (LAR 318)
Page 6-4 Section 6.2.3.1 (old)	Removed Communicator position and re-numbered section	ERO position reduction (LAR 318)
Page 6-8 Table 6.1	Deleted reference to MCR Communicator	ERO position reduction (LAR 318)
Page 6-9 Figure 6.1	Deleted reference to MCR Communicator	ERO position reduction (LAR 318)
Page 8-1 Section 8.1	Added NEI-99-01 reference for ISFSI EAL	ISFSI EAL addition (LAR 318)
Page 8-2 Section 8.2	Added ISFSI EAL category	ISFSI EAL addition (LAR 318)
Page 10-1 Section 10.1	Replace Communicator with Emergency Coordinator as being responsible for communications	MCR Communicator eliminated (LAR 318)
Page 12-3 Section 12.2.1	Added "Portable radiation monitoring instruments are maintained to support ISFSI operations including transfer operations of the Dry Shielded Canister (DSC) to the Horizontal Storage Module (HSM) and for monitoring of the spent fuel while in storage in the HSM."	Added instrumentation available to support ISFSI operations. (LAR 318)
Page 19-1 Section 19.0	Removed words "communications personnel"	MCR Communicator eliminated. (LAR 318)
Page 19-3 Section 19.1.7 (old)	Deleted training reference for MCR Communicator and re-numbered section	ERO position reduction (LAR 318)
Page 19-4 Table 19.1	Deleted training reference for MCR Communicator and re-numbered table	ERO position reduction (LAR 318)