



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

Ref: 10 CFR 50.9

June 14, 2016  
3F0616-02

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

Subject: Crystal River Unit 3 - NRC Commitment Change Report – June 2016

- Reference: 1. CR-3 to NRC letter, "Crystal River Unit 3 - Certification of Permanent Cessation of Power Operations and that Fuel Has Been Permanently Removed from the Reactor," dated February 20, 2013. (ADAMS Accession No. ML13056A005)
2. NRC to CR-3 letter, "Crystal River Unit 3 Nuclear Generating Plant Certification of Permanent Cessation of Operation and Permanent Removal of Fuel from the Reactor," dated March 13, 2013. (ADAMS Accession No. ML13058A380)

Dear Sir:

The purpose of this letter is to provide notification of inactivations or modifications to regulatory commitments contained in previously docketed correspondence from Duke Energy Florida, LLC., previously known as Duke Energy Florida, Inc. (DEF), to the NRC. The attached report contains the Crystal River Unit 3 (CR-3) Nuclear Operations Commitment System (NOCS) reference numbers, source of the original commitment, statement of the original commitment, statement of commitment modification, if revised, and justification for the inactivation or modification. This report is being submitted in accordance with Nuclear Energy Institute (NEI) document NEI 99-04, Revision 0, "Guidelines for Managing NRC Commitment Changes," dated July 1999.

Of the five hundred eighty five (585) CR-3 regulatory commitments that were modified or inactivated between January 5, 2014 and January 5, 2016, fifty two (52) modified or inactivated regulatory commitments meet the NEI 99-04 criteria for NRC notification. Attachment 1 contains the NRC Commitment Change Report – May 2016.

No new regulatory commitments are made in this letter.

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

Sincerely,

Terry D. Hobbs  
General Manager Decommissioning  
Crystal River Nuclear Plant

TDH/par

Attachment NRC Commitment Change Report – May 2016

xc: Regional Administrator, Region I  
NMSS Project Manager

**DUKE ENERGY FLORIDA, INC.**

**CRYSTAL RIVER UNIT 3**

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

**ATTACHMENT**

**NRC COMMITMENT CHANGE REPORT – JUNE 2016**

**Nuclear Operations Commitment System (NOCS) Number: 123**

**Source Document:**

Crystal River Unit 3 (CR-3) to NRC letter, 3F00979-22, dated September 24, 1979.

**Original Commitment:**

All personnel involved in the shipping of radioactive waste will have as a minimum eight (8) hours of classroom training in the DOT and NRC regulatory requirements, the waste burial license requirements, and in instructions and operating procedures. Training records will be maintained.

Note: Item 5 of IE Bulletin 79-19 states the following: "Provide training and periodic retraining in the DOT and NRC regulatory requirements, the waste burial license requirements, and in your instructions and operating procedures for all personnel involved in the transfer, packaging and transport of radioactive material. Maintain a record of training dates, attendees, and subject material for future inspections by NRC personnel."

**Modify/Inactivate Commitment:**

INACTIVATE: This commitment is no longer required due to other regulations controlling the activity, and a commitment is not required where there is a regulation governing the activity.

**Justification for Change:**

This 1979 NOCS commitment is now redundant with existing regulatory guidance. DOT regulations listed in 49 CFR 172, Subpart H already require training for those workers who handle radioactive waste material. These training requirements are included in the fleet shipping procedure HPS-NGGC-0001: Radioactive Material Receipt and Shipping Procedure. CR-3 is in compliance with these regulations. Worker qualifications are tracked in the qualification database. All training records are retained.

**Nuclear Operations Commitment System (NOCS) Number: 1030**

**Source Document:**

CR-3 to NRC letter, 3F0280-15, dated February 15, 1980.

**Original Commitment:**

With regard to providing an outline of the procedure for measuring in-plant iodine level (on-the-spot vs. taking the sample to the lab), FPC commits to address measuring in-plant iodine levels in EM-208, Duties of the Radiological Emergency Team. The present plans are to replace the charcoal cartridges with silver zeolite cartridges for accident iodine collection. Note: Both charcoal and silver zeolite cartridges are provided in emergency kits for the following reason: Charcoal cartridges are used for lower activity sampling, but as noble gas activity raises, silver zeolite cartridges are used. Silver zeolite cartridges are not routinely used because of their high cost and of the possibility of explosions under certain conditions. Note: EM-208 has been cancelled and is now in EM-210A.

**Modify/Inactivate Commitment:**

INACTIVATE: This commitment is no longer required due to the permanent defueled condition of CR-3.

**Justification for Change:**

Due to plant closure, this NOCS commitment no longer applies to CR-3 as all previous CR-3 iodine radionuclides of concern have all decayed. The noble gases of concern such as Xe-131, Xe-133, Kr-88, and other short lived noble gases, have also decayed. This commitment no longer applies to CR-3.

**Nuclear Operations Commitment System (NOCS) Number: 1948**

**Source Document:**

CR-3 to NRC letter, 3F0280-32, dated February 6, 1980.

**Original Commitment:**

FPC commits to maintaining the retraining schedule covering radioactive waste shipment. Retraining will be accomplished every two years. The training department will schedule the retraining and will maintain retraining records.

**Modify/Inactivate Commitment:**

INACTIVATE: This commitment is no longer required due to other regulations controlling the activity, and a commitment is not required where there is a regulation governing the activity.

**Justification for Change:**

Regulatory guidance in 49 CFR 172, Subpart H allows retraining every three years for non-air shipments of radioactive material. This NOCS commitment was made in 1980 to help ensure training does not expire and that an unaware radioactive material shipper does not ship material with expired qualifications. With new computer tracking of qualifications that were not in place in 1980, the chance of a non-qualified shipper with expired training performing a radioactive material shipment is remote. It is noted that now CR-3 radioactive material shippers also ship radioactive material via air using IATA (International Air Transport Association) regulations. IATA training is required every two years as per IATA Section 1.5 requirements. It is the practice for CR-3 radioactive material shippers to take DOT and IATA requalification training together every two years.

This commitment is redundant with existing DOT regulations.

**Nuclear Operations Commitment System (NOCS) Number: 9656**

**Source Document:**

NRC to CR-3 Letter (ODCM), 3N0592-04, dated May 4, 1992.

**Original Commitment:**

Radioactive gaseous effluent monitoring instrumentation channels shown in Table 2-3 shall be operable with the effluent release isolation alarm/trip setpoints set to ensure that the limits of specification 2.7 are not exceeded. The setpoints shall be determined in accordance with the Offsite Dose Calculation Manual (ODCM).

**Modify/Inactivate Commitment:**

INACTIVATE: This commitment is no longer required due to the permanent defueled condition of CR-3.

**Justification for Change:**

This commitment was implemented to ensure CR-3 was properly monitoring gaseous waste tanks and releases. These tanks have been abandoned as part of SAFSTOR. Due to plant shutdown, CR-3 has insignificant gaseous source term activity. This commitment no longer applies to CR-3.

**Nuclear Operations Commitment System (NOCS) Number: 9713**

**Source Document:**

NRC to CR-3 Letter (ODCM), 3N0592-04, dated May 4, 1992.

**Original Commitment:**

Waste Gas System: The Waste Gas system shall be used, as required, to reduce the radioactivity of materials in gaseous waste prior to discharge, when projected monthly air doses due to releases of gaseous effluents from the site to areas at or beyond the site boundary (See Figure 5.1-3) would exceed: 1) 0.2 mrad gamma; 2) 0.4 mrad beta

**Modify/Inactivate Commitment:**

INACTIVATE: This commitment is no longer required due to the permanent defueled condition of CR-3.

**Justification for Change:**

This commitment was implemented to ensure CR-3 was properly monitoring gaseous waste tanks and releases. These tanks have been abandoned as part of SAFSTOR. Due to plant shutdown, CR-3 has insignificant gaseous source term activity. This commitment no longer applies to CR-3.

**Nuclear Operations Commitment System (NOCS) Number: 9746**

**Source Document:**

NRC to CR-3 Letter (ODCM), 3N0592-04, dated May 4, 1992.

**Original Commitment:**

**Dose - Noble Gases**

The air dose at or beyond the site boundary (See Figure 5.1-3), due to radioactive noble gases released in gaseous effluents shall be limited to:

- A. During any calendar quarter: less than or equal to 5 mrad gamma and less than or equal to 10 mrad beta radiation, and;
- B. During any calendar year: less than or equal to 10 mrad gamma and less than or equal to 20 mrad beta radiation.

Applicability: At All Times.

- A. With the calculated air dose from radioactive noble gases in gaseous effluents exceeding any of the above limits, prepare and submit to the commission, within 30 days, a special report, pursuant to Specification 2.14 which includes:
  - 1. Identification of the cause for exceeding the limit(s);
  - 2. Corrective action taken to reduce the release of radioactive noble gases in gaseous effluents during the remainder of the current calendar quarter and during the remainder of the current calendar year so that average dose during the calendar year is less than or equal to 10 mrad gamma and 20 mrad beta radiation.

**Modify/Inactivate Commitment:**

INACTIVATE: This commitment is no longer required due to the permanent defueled condition of CR-3.

**Justification for Change:**

Due to plant shutdown, CR-3 now has an insignificant inventory of radioactive noble gases. The only noble gas left is Kr-85 which exists in very small concentrations that would not impart any measurable dose under any credible circumstance. This commitment no longer applies to CR-3.



**Nuclear Operations Commitment System (NOCS) Number: 30101**

**Source Document:**

CR-3 to NRC Letter, 3F1080-25, dated October 14, 1980.

**Original Commitment:**

If these nonradioactive systems are or become contaminated, further use of the system shall be restricted until the cause of the contamination is identified and corrected and the system has been decontaminated. Decontamination should be performed as soon as possible, however, if it is considered necessary to continue operation of the system as contaminated, an immediate safety evaluation of the operation of the system as a radioactive system must be performed in accordance with the requirements of 10 CFR 50.59. The 10 CFR 50.59 safety evaluation must consider the level of contamination (i.e., concentration and total curie inventory) and potential releases (either routine or accident) of radioactivity to the environment. The relationship of such releases to the radioactive effluent limits of 10 CFR 20 and the facility's Technical Specification and to the environmental radiation dose limits of 40 CFR 190 must also be evaluated. The record of the safety evaluation must set forth the basis and criteria on which the determination was made.

**Modify/Inactivate Commitment:**

INACTIVATE: This commitment is no longer required due to the permanent defueled condition of CR-3.

**Justification for Change:**

This commitment was originally made in 1980 to help to monitor contamination levels in clean systems to help ensure no unmonitored gaseous or liquid release occurs. The intent of this commitment no longer applies due to the plant closure and SAFSTOR condition. Most systems have been abandoned or are in the process of abandonment, especially non-contaminated secondary side systems. In general, plant contamination levels will continue to decrease as legacy contamination decays.

**Nuclear Operations Commitment System (NOCS) Number: 30102**

**Source Document:**

CR-3 to NRC Letter, 3F1080-25, dated October 14, 1980.

**Original Commitment:**

If it is determined in the 10 CFR 50.59 safety evaluation that operation of the system as a radioactive system is acceptable (i.e., does not involve an un-reviewed safety question or a change to the Technical Specification), provisions must be made to comply with the requirements of 10 CFR 20.201, General Design Criterion 64 to 10 CFR 50, Appendix I to 10 CFR 50 and the facility's Technical Specifications. In specific, any potential release points must be monitored and all releases must be controlled and maintained to "As Low As Reasonably Achievable" levels as addressed in Appendix I to 10 CFR 50 and within the corresponding environmental dose limits of 40 CFR 190. However, if, in the 10 CFR 50.59 determination, it is determined that operation of the system as a radioactive system does constitute an un-reviewed safety question or does require a change to the Technical Specification, the system shall not be operated as contaminated without commission approval.

**Modify/Inactivate Commitment:**

INACTIVATE: This commitment is no longer required due to the permanent defueled condition of CR-3.

**Justification for Change:**

This commitment was originally made in 1980 to help monitor contamination levels in clean systems to ensure no unmonitored gaseous or liquid release occurs. The intent of this commitment no longer applies due to the plant closure and SAFSTOR condition. Most systems have been abandoned or are in the process of abandonment, especially non-contaminated secondary side systems. In general, plant contamination levels will continue to decrease as legacy contamination decays.

**Nuclear Operations Commitment System (NOCS) Number: 40022**

**Source Document:**

CR-3 to NRC letter, 3F0188-21, dated January 22, 1988

**Original Commitment:**

FPC has in place and is maintaining programs to ensure that all components of safety related systems necessary for accomplishing required safety functions are identified and result in the establishment of a programmatic system which contains the 5 elements required in NRC Generic Letter 83-28 for equipment classification of programs.

**Modify/Inactivate Commitment:**

MODIFY: Remove EGR0005 as an implementing reference. Maintain MCP-0401 as an implementing reference.

**Justification for Change:**

The source document was to address issues related to reactor trip system reliability and general management capability. CR-3 has submitted certifications required under § 50.82(a)(1) and the subject part 50 license no longer permits operation of the reactor or emplacement or storage of fuel in the reactor vessel. As such, CR-3 is no longer subject to reactor power range trip events, LOCAs, ATWS, or HELB events. The only remaining design basis accidents in the FSAR is a fuel handling accident. CR-3 filed certifications under § 50.82(a)(1) and 10CFR50.49 no longer applies to CR-3 design. Therefore, removing EGR0005 as an implementing reference is acceptable. CR-3 no longer presents a credible threat to the health and safety of the public from an accident perspective. CR-3 has re-classified all active safety related equipment to non-safety. The remaining safety related SSCs are the structures that support the spent fuel pool maintaining inventory and fuel geometry.

The subject commitment was for the following:

In GL 83-28, the staff requested the licensees to implement long-term corrective actions in response to the Salem events. GL 83-28 included two major actions to improve the reliability of the reactor trip system: (1) install a plant modification that provided for the automatic actuation of the shunt trip attachment of the reactor trip breaker (RTB) following any automatic reactor trip signal, and (2) establish a comprehensive program of preventive maintenance and surveillance testing to ensure reliable RTB operation. In addition, items 4.2.3 and 4.2.4 of GL 83-28 requested licensees to perform life testing of RTBs and periodically to replace the breakers or components in accordance with their demonstrated life.

Based on abandonment of Reactor Protection System and no future reactor operations, this commitment is no longer applicable to CR-3.

**Nuclear Operations Commitment System (NOCS) Number: 40164**

**Source Document:**

CR-3 to NRC letter, 3F0688-02, dated June 01, 1988

**Original Commitment:**

Long term plan for boric acid corrosion damage prevention: Post refuel VII inspection requirements, including priorities and inspection intervals, will be based upon the potential consequences of corrosion damage, past performance of components previously inspected, accessibility, and personnel safety. Design changes or operating procedure changes will be considered to minimize the need for future inspections and maintenance activities.

FPC shall maintain, in auditable form, records of the program and results obtained from implementation of the program and shall make such records available to NRC inspectors upon request

**Modify/Inactivate Commitment:**

INACTIVATE: This commitment is no longer required due to the permanent defueled condition of CR-3.

**Justification for Change:**

Generic letter 88-05 addressed the concern with small borated water leaks from the reactor coolant pressure boundary causing corrosion on susceptible materials that if left unidentified could result in potentially adverse consequences on the RC pressure boundary. Due to decommissioning, CR-3 is no longer authorized to operate the reactor or emplace or retain fuel in the reactor vessel as defined in Duke Energy's letter to the NRC (3F0213-07) and NRC's response letter (3N0313-01). With this decision to decommission in place the risk of RC pressure boundary leakage is eliminated therefore this NOCS commitment is no longer applicable.

**Nuclear Operations Commitment System (NOCS) Number: 40220**

**Source Document:**

CR-3 to NRC letter, 3F0189-02, dated January 04, 1989

**Original Commitment:**

Loss of Decay Heat removal – Response NO. 6

In accordance with approved procedures, the following pumps can be used to add inventory to the RCS:

1. The Waste Transfer Pumps supply water from the Reactor Coolant Bleed Tanks to the purification loop mentioned above, increasing RCS inventory.
2. The Boric Acid Pumps supply highly borated water from the boric acid storage tanks to the DH purification loop, increasing RCS inventory.
3. The Spent Fuel Pumps can transfer water from the Spent Fuel Cooling System to the Decay Heat Removal; System, increasing inventory.
4. The Demineralized Water Pumps can transfer water from Storage Tanks to the DH purification loop, increasing inventory.
5. The Makeup (High Pressure Injection) Pumps can inject water directly into the RCS from either the Makeup Tank or the Borated Water Storage Tank. These pumps are normally tagged out of service when the RCS is cooled down and drained.

**Modify/Inactivate Commitment:**

INACTIVATE: This commitment is no longer required due to the permanent defueled condition of CR-3.

**Justification for Change:**

This commitment is associated with a response to a GL 88-17 action to provide at least two available or operable means of adding inventory to the RCS that are in addition to pumps that are a part of the normal DHR systems. CR-3 is no longer authorized to operate the reactor or place or retain fuel in the reactor vessel as defined in Duke Energy's letter to the NRC (3F0213-07) and NRC response (3N0313-01). By permanently removing fuel from the reactor, Modes 1 through 6 will never be achieved and this required commitment is not applicable.

**Nuclear Operations Commitment System (NOCS) Number: 40356**

**Source Document:**

CR-3 to NRC letter, 3F0888-17, dated August 29, 1988

**Original Commitment:**

Procedure Generation Package (PGP) for Emergency Operating Procedures (EOP)

- B.1.A The plant-specific writers' guide has been revised to provide additional guidance in this area (guidance for the writer on whether to include information in the body of the EOP or as an enclosure).
- B.1.B The plant-specific writers' guide describes the contents of the "conditions" section.
- B.2.C The plant-specific writers' guide has been revised to delete the reference to "Flow Charts".
- B.1.D The plant-specific writers' guide has been revised to include additional guidance on the subject of place keeping.
- B.1.E Appendix 4 of the writers' guide has been revised to include the words –"Depressurize, align, reduce, cycle, and defeat".
- B.3.A The writers' guide contains standards for reproduction.
- B.3.B Approval, control, and revision of EOPs is contained in plant administrative instructions.

**Modify/Inactivate Commitment:**

INACTIVATE: This commitment is no longer required due to the permanent defueled condition of CR-3.

**Justification for Change:**

This commitment was generated from a request for additional information associated with a response to Generic Letter 82-33, "Supplement 1 to NUREG-0737 - Requirements for Emergency Response Capability" requires each licensee to submit to the NRC a PGP which includes:

- Plant-specific technical guidelines with justification for differences from the Generic Technical Guidelines (GTG)
- A writer's guide
- A description of the program to be used for the validation and verification of the EOPs
- A description of the training program for the upgraded EOPs

From the PGP, plant specific EOPs were developed that would provide the operator with directions to mitigate the consequences of a broad range of accidents and multiple failures. Part of the requirements of the GL was associated with training. The EOP training program, associated with implementation, should be expanded to include sufficient detail to determine that the trainees will be capable of executing the EOPs as individuals and as teams under operational conditions. Part of this commitment stated that:

"all upgraded EOP's are included in each annual Licensed Operator requalification program. New Operators receive classroom and simulator training on all the upgraded EOP's. All EOPs are covered on a regular basis in both Licensed Operator Requalification training and in replacement operator training"

IOC TRX-00-0103 documents the elimination of the training requirements from the commitment based on using the Systematic Approach to Training Process approved by the NRC (3N0488-27). Also the CR-3 Licensed Operator Training Program will be transitioned to a Certified Fuel Handler Training Program (3F0413-07).

CR-3 is not authorized to operate the reactor or place or retain fuel in the reactor vessel as defined in Duke Energy's letter to the NRC (3F0213-07) and NRC's response (3N0313-01). CR-3 FSAR Rev. 34 eliminated all accidents that would be applicable for use with the EOPs. CR-3 EOPs have been placed in a VOID status per RDC-0002 and will never be required to be revised. Therefore, this commitment can be inactivated because the EOP and support documentation that makeup the Plant-Specific Technical Guidelines are not applicable with the fuel removed from the reactor.

**Nuclear Operations Commitment System (NOCS) Number: 40415**

**Source Document:**

CR-3 to NRC letter, 3F0489-08, dated April 17, 1989

**Original Commitment:**

Spent Fuel Cooling Pumps

On the basis of design reviews and vendor contacts, SFP-1A and SFP-1B have been evaluated for minimum flow considerations relative to single pump and parallel pump operation.

The pump minimum flow currently recommended by the vendor, Ingersoll-Rand, for continuous operation is 750 gpm. A review of SFP-1A, 1B operating modes indicates two cases (i.e., filling and draining the fuel transfer canal) where this recommended flow may not be met. To ensure a flow rate greater than or equal to (GT/EQ) 750 gpm is maintained for these cases requires procedure changes to revise the position of certain SF system valves. These changes do not impact the safety function of the system. During parallel operation the expected flow rate is GT/EQ 750 gpm per pump. With changes to the operating procedure, a flow rate GT/EQ 750 gpm can be achieved during all modes.

**Modify/Inactivate Commitment:**

INACTIVATE: This commitment is no longer required due to the permanent defueled condition of CR-3.

**Justification for Change:**

This commitment is associated with a response to a GL 88-04 to ensure the SF pump minimum flow requirements are met. CR-3 is no longer authorized to operate the reactor or place or retain fuel in the reactor vessel as defined in Duke Energy's letter to the NRC (3F0213-07) and NRC response (3N0313-01). By permanently removing fuel from the reactor, Modes 1 through 6 will never be achieved. This eliminates the requirement to transfer spent fuel from the Spent Fuel Pool to the Reactor Building. Also EC 94476 installed a barrier in the RB side deep end of the refueling canal. Installing the barrier eliminates the use of the transfer tube and the requirement to fill and drain the fuel transfer canal. Also the existing low decay heat conditions for the Spent Fuel assemblies, eliminates the requirements to operate the SF pumps in parallel. Therefore, this commitment can be inactivated.



**Nuclear Operations Commitment System (NOCS) Number: 40426**

**Source Document:**

NRC to CR-3 letter, 3N0490-05, dated April 06, 1990

**Original Commitment:**

From SER for CR-3 Procedures Generation Package.

The Staff (NRC) requests that FPC maintain records of all revisions to the Procedure Generation Package and EOPs in an auditable form.

**Modify/Inactivate Commitment:**

INACTIVATE: This commitment is no longer required due to the permanent defueled condition of CR-3.

**Justification for Change:**

This commitment is associated with the conclusion of a Safety Evaluation where the NRC stated that all revisions to the Procedure Generation Package (PGP) should be reflected in plant EOPs within a reasonable period of time. Generic Letter 82-33, "Supplement 1 to NUREG-0737 - Requirements for Emergency Response Capability" requires each licensee to submit to the NRC a PGP which includes:

- Plant-specific technical guidelines with justification for differences from the Generic Technical Guidelines (GTG)
- A writer's guide
- A description of the program to be used for the validation and verification of the EOPs
- A description of the training program for the upgraded EOPs

From the PGP, plant specific EOPs were developed that would provide the operator with directions to mitigate the consequences of a broad range of accidents and multiple failures. CR-3 is not authorized to operate the reactor or place or retain fuel in the reactor vessel as defined in Duke Energy's letter to the NRC (3F0213-07) and NRC's response (3N0313-01). CR-3 FSAR Rev. 34 eliminates all accidents that would be applicable for use with the EOPs. CR-3 EOPs have been placed in a VOID status per RDC-0002 and will never be required to be revised. Therefore, this commitment can be inactivated because the EOP and support documentation that make up the Plant-Specific Technical Guidelines are not applicable with the fuel removed from the reactor.

**Nuclear Operations Commitment System (NOCS) Number: 40440**

**Source Document:**

CR-3 to NRC letter, 3F0992-05, dated September 18, 1992

**Original Commitment:**

The MOV program manual is being revised to incorporate the latest industry information and lessons learned with respect to selecting and setting valve operator switches. Procedures will be reviewed and revised to include the revised switch settings. The MOV program will include the periodic monitoring of MOV performance and adjustment of switch settings.

**Modify/Inactivate Commitment:**

INACTIVATE: This commitment is no longer required due to the permanent defueled condition of CR-3.

**Justification for Change:**

These NOCS for the MOV program were created as a result of the implementation of Generic letters 89-10 and 96-05.

By letter from the NRC to Florida Power Corporation (FPC) 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" (ADAMS Accession No. ML13058A380), the NRC acknowledged CR-3's certification of permanent cessation of power operation and permanent removal of fuel from the reactor vessel. Accordingly, pursuant to 10 CFR 50.82(a)(2), the 10 CFR Part 50 license for CR-3 no longer authorizes operation of the reactor or emplacement or retention of fuel in the reactor vessel.

**Generic letter 89-10**, Safety Related Motor-Operated Valve Testing and Surveillance, recommended that the licensee develop a program to ensure motor-operated valves in specified systems are selected, set, and maintained so the MOV will operate under design basis conditions.

The term safety related refers to those systems and components that are relied upon to remain functional during and following design basis events to ensure the integrity of the reactor coolant pressure boundary, the capability to shut down the reactor and maintain it in a safe shutdown condition, and the capability to prevent or mitigate the consequences of accidents that could result in the potential offsite exposures comparable to the guidelines of 10 CFR Part 100.

**Generic Letter 96-05** requested licensee to establish a program or ensure the effectiveness of its current program to verify on a periodic basis the safety related MOVs will continue to be capable of performing their safety related functions.

Engineering Change 94154 declassified all motor operated valves to a non-safety classification.

On October 30 2013, per the directions in the MOV program manual (IAW Generic Letter 96-05), a Maintenance Rule Expert Panel was convened and approved the removal of all MOV from the MOV program.

The MOV program is no longer applicable to Crystal River 3 and will be retired, as a result of the actions described above.

**Nuclear Operations Commitment System (NOCS) Number: 40508**

**Source Document:**

CR-3 to NRC letter, 3F0990-10, dated September 24, 1990

**Original Commitment:**

FPC conducted a re-evaluation of our vendor interface program in response to concerns raised during a 1989 procurement and vendor interface inspection. FPC's Nuclear Procurement & Storage Manual (NP&SM) addresses the quality assurance aspects of procurement and vendor services. It is coordinated with FPC's overall QA program to assure reliable equipment is provided. Our vendor interface program contains the following key elements which are consistent with the positions in Generic Letter 90-03.

1. The program with B&W covers all the safety-related components within the NSSS scope of supply. FPC receives all B&W issued information pertinent to its safety-related equipment. The current program does not assure formal communication of revised test procedures and updated replacement parts information. The technical information program with B&W will be revised to include these items.
2. Technical information submittal agreements have been established with Colt Industries and Asea Brown Boveri to submit all pertinent information related to the diesel generators and electrical switchgear, respectively. This program includes provisions for assuring receipt of all technical information provided by these vendors.
3. FPC will identify a list of key vendors with which to maintain periodic contact.  
Note: see responses to generic letter 90-03 for implementation information.

**Modify/Inactivate Commitment:**

INACTIVATE: This commitment is no longer required due to the permanent defueled condition of CR-3.

**Justification for Change:**

This commitment is no longer required due to the permanent defueled condition of CR-3. The requirements of Generic Letter 90-03 apply to safety related Nuclear Steam Supply Systems (NSSS) and other key safety related components as determined by the licensee. With the approval of EC 94154, the only safety related components at CR-3 are the spent fuel pool liners (including sealing devices such as FHX-31 and FHX-34), SFST-1A/1B structures, Auxiliary Building structure and the spent fuel pool storage racks (FHX-28, FHX-30). None of these components are related to NSSS. They are all structural components and there are no applicable vendor manuals associated with them. As such, Duke Energy has determined that the requirements of Generic Letter 90-03 will not be implemented for these components. Therefore, in the absence of any safety related NSSS components and determination by Duke Energy that there are no other key safety related components to which the requirements of Generic Letter 90-03 will be applied, the requirements for vendor interface are no longer applicable. Vendor manuals and vendor information will continue to be controlled by procedure EGR0006, Vendor Manual Program, to assure vendor information received is properly reviewed and dispositioned.

**Nuclear Operations Commitment System (NOCS) Number: 40622**

**Source Document:**

CR-3 to NRC letter, 3F0191-12, dated January 15, 1991

**Original Commitment:**

Work on all MOV valves, including RCV-14 is performed in accordance with approved plant preventative and corrective maintenance. The MOV program manual describes the functional responsibilities as they pertain to motor-operated valves. Individual procedures govern the process and perform the actual corrective and preventative maintenance tasks.

**Modify/Inactivate Commitment:**

INACTIVATE: This commitment is no longer required due to the permanent defueled condition of CR-3.

**Justification for Change:**

These NOCS for the MOV program were created as a result of the implementation of Generic letters 89-10 and 96-05.

By letter from the NRC to Florida Power Corporation (FPC) 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" (ADAMS Accession No. ML13058A380), the NRC acknowledged CR-3's certification of permanent cessation of power operation and permanent removal of fuel from the reactor vessel. Accordingly, pursuant to 10 CFR 50.82(a)(2), the 10 CFR Part 50 license for CR-3 no longer authorizes operation of the reactor or emplacement or retention of fuel in the reactor vessel.

**Generic letter 89-10**, Safety Related Motor-Operated Valve Testing and Surveillance, recommended that the licensee develop a program to ensure motor-operated valve in specified systems are selected, set, and maintained so the MOV will operate under design basis conditions.

The term safety related refers to those systems and components that are relied upon to remain functional during and following design basis events to ensure the integrity of the reactor coolant pressure boundary, the capability to shut down the reactor and maintain it in a safe shutdown condition, and the capability to prevent or mitigate the consequences of accidents that could result in the potential offsite exposures comparable to the guidelines of 10 CFR Part 100.

**Generic Letter 96-05** requested licensee to establish a program or ensure the effectiveness of its current program to verify on a periodic basis the safety related MOVs will continue to be capable of performing their safety related functions.

Engineering Change 94154 declassified all motor-operated valves to a non-safety classification. On October 30 2013, per the directions in the MOV program manual (IAW Generic Letter 96-05), a Maintenance Rule Expert Panel was convened and approved the removal of all MOV from the MOV program.

The MOV program is no longer applicable to Crystal River 3 and will be retired, as a result of the actions described above.

**Nuclear Operations Commitment System (NOCS) Number: 40712**

**Source Document:**

CR-3 to NRC letter, 3F0492-06, dated April 13, 1992

**Original Commitment:**

NRC Generic Letter 89-10 requires testing of MOVs based on the maximum design differential pressure. Design differential pressure was determined based on available design documents and administrative controls through procedures. If a procedure is changed and the use of a valve or administrative controls are revised (i.e., LO/LC removed) the NPSE MOV Engineer must be notified.

**Modify/Inactivate Commitment:**

INACTIVATE: This commitment is no longer required due to the permanent defueled condition of CR-3.

**Justification for Change:**

These NOCS for the MOV program were created as a result of the implementation of Generic letters 89-10 and 96-05.

By letter from the NRC to Florida Power Corporation (FPC) 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" (ADAMS Accession No. ML13058A380), the NRC acknowledged CR-3's certification of permanent cessation of power operation and permanent removal of fuel from the reactor vessel. Accordingly, pursuant to 10 CFR 50.82(a)(2), the 10 CFR Part 50 license for CR-3 no longer authorizes operation of the reactor or emplacement or retention of fuel in the reactor vessel.

**Generic letter 89-10**, Safety Related Motor-Operated Valve Testing and Surveillance, recommended that the licensee develop a program to ensure motor-operated valve in specified systems are selected, set, and maintained so the MOV will operate under design basis conditions.

The term safety related refers to those systems and components that are relied upon to remain functional during and following design basis events to ensure the integrity of the reactor coolant pressure boundary, the capability to shut down the reactor and maintain it in a safe shutdown condition, and the capability to prevent or mitigate the consequences of accidents that could result in the potential offsite exposures comparable to the guidelines of 10 CFR Part 100.

**Generic Letter 96-05** requested licensee to establish a program or ensure the effectiveness of its current program to verify on a periodic basis the safety related MOVs continue to be capable of performing their safety related functions.

Engineering Change 94154 declassified all motor-operated valves to a non-safety classification.

On October 30 2013, per the directions in the MOV program manual (IAW Generic Letter 96-05), a Maintenance Rule Expert Panel was convened and approved the removal of all MOV from the MOV program.

The MOV program is no longer applicable to Crystal River 3 and will be retired, as a result of the actions described above.

**Nuclear Operations Commitment System (NOCS) Number: 62372**

**Source Document:**

CR-3 to NRC letter, 3F1095-08, dated October 8, 1995

**Original Commitment:**

FPC has elected to utilize an optical disk imaging system for storage and retrieval of quality assurance records. This system is in addition to hardcopy storage and storage on microfilm, but will be our primary means of records storage. We have addressed each of the appropriate quality controls noted in Generic Letter 88-18 in implementing procedures.

**Modify/Inactivate Commitment:**

INACTIVATE: Optical disk storage of records is no longer used at CR-3.

**Justification for Change:**

Optical disk storage of Quality Assurance (QA) records has not been used at CR-3 since the implementation of the RMS records system. Permanent QA records are currently stored on microfilm, not optical disk. The NGG records procedure (RDC-NGGC-0001) removed the section pertaining to optical disk storage in 2006 but the NOCS commitment remained active in error in our tracking database. The CR-3 site specific procedure retained the commitment number reference, also in error.



**Nuclear Operations Commitment System (NOCS) Number: 62391**

**Source Document:**

CR-3 to NRC letter, 3F1295-11, dated December 6, 1995

**Original Commitment:**

The Intake structure, intake flumes, and RW pits are inspected on a refueling cycle interval. Time frequency of pit cleanings will be based on operational experience.

**Modify/Inactivate Commitment:**

INACTIVATE: This commitment is no longer required due to the permanent defueled condition of CR-3.

**Justification for Change:**

These commitments are associated with Generic Letter 89-13 "Service Water System Problems Affecting Safety-Related Equipment". Since CR-3 has entered its decommissioning phase, Engineering Change 94154 has declassified CR-3's cooling water systems and the systems they support to non-safety. Since Generic Letter 89-13 addresses cooling water systems affecting safety related equipment it is no longer applicable to CR-3.

**Nuclear Operations Commitment System (NOCS) Number: 62932**

**Source Document:**

CR-3 to NRC letter, 3F1295-11, dated December 6, 1995

**Original Commitment:**

The control technique implemented at CR-3 to minimize macroscopic fouling of the Service Water Heat Exchangers (SWHE) and Decay Heat Closed Cycle Heat Exchangers (DCHE) is frequent regular maintenance (FRM). The SWHEs are opened, inspected, and cleaned at a periodicity that minimizes the fouling of the heat exchanger tubesheets and tubes.

**Modify/Inactivate Commitment:**

INACTIVATE: This commitment is no longer required due to the permanent defueled condition of CR-3.

**Justification for Change:**

These commitments are associated with Generic Letter 89-13 "Service Water System Problems Affecting Safety-Related Equipment". Since CR-3 has entered its decommissioning phase Engineering Change 94154 has declassified CR-3's cooling water systems and the systems they support to non-safety. Since Generic Letter 89-13 addresses cooling water systems affecting safety related equipment it is no longer applicable to CR-3.

**Nuclear Operations Commitment System (NOCS) Number: 62393**

**Source Document:**

CR-3 to NRC letter, 3F1295-11, dated December 6, 1995

**Original Commitment:**

The existing program monitors blockage and compares as-found data to established criteria for removing macrofouling in additional SWHEs if required.

**Modify/Inactivate Commitment:**

INACTIVATE: This commitment is no longer required due to the permanent defueled condition of CR-3.

**Justification for Change:**

These commitments are associated with Generic Letter 89-13 "Service Water System Problems Affecting Safety-Related Equipment". Since CR-3 has entered its decommissioning phase Engineering Change 94154 has declassified CR-3's cooling water systems and the systems they affect to non-safety. Since Generic Letter 89-13 addresses cooling water systems affecting safety related equipment it is no longer applicable to CR-3.

**Nuclear Operations Commitment System (NOCS) Number: 62394**

**Source Document:**

CR-3 to NRC letter, 3F1295-11, dated December 6, 1995

**Original Commitment:**

The control technique implemented at CR-3 to minimize macrofouling of the Service Water Heat Exchangers (SWHEs) and Decay Heat Closed Cycle Heat Exchangers (DCHE) is frequent regular maintenance (FRM).

Due to infrequent operation of Raw Water (RW) in the DC systems as compared to continuous flow of RW through the SWHEs, the DCHEs are opened, inspected, and cleaned on a less frequent, but regular interval.

**Modify/Inactivate Commitment:**

INACTIVATE: This commitment is no longer required due to the permanent defueled condition of CR-3.

**Justification for Change:**

These commitments are associated with Generic Letter 89-13 "Service Water System Problems Affecting Safety-Related Equipment". Since CR-3 has entered its decommissioning phase Engineering Change 94154 has declassified CR-3's cooling water systems and the systems they support to non-safety. Since Generic Letter 89-13 addresses cooling water systems affecting safety related equipment it is no longer applicable to CR-3.

**Nuclear Operations Commitment System (NOCS) Number: 62395**

**Source Document:**

CR-3 to NRC letter, 3F1295-11, dated December 6, 1995

**Original Commitment:**

Raw Water Pump (RWP) discharge pressure limits have been established to alert operators that excessive macrofouling of the SWHEs is occurring.

**Modify/Inactivate Commitment:**

INACTIVATE: This commitment is no longer required due to the permanent defueled condition of CR-3.

**Justification for Change:**

These commitments are associated with Generic Letter 89-13 "Service Water System Problems Affecting Safety-Related Equipment". Since CR-3 has entered its decommissioning phase Engineering Change 94154 has declassified CR-3's cooling water systems and the systems they support to non-safety. Since Generic Letter 89-13 addresses cooling water systems affecting safety related equipment it is no longer applicable to CR-3.

**Nuclear Operations Commitment System (NOCS) Number: 62396**

**Source Document:**

CR-3 to NRC letter, 3F1295-11, dated December 6, 1995

**Original Commitment:**

Similar Pressure limits (similar to the RW Pump discharge pressure limits) will be established for the DCHEs. This action will alert operators that excessive macrofouling of the DCHEs is occurring.

**Modify/Inactivate Commitment:**

INACTIVATE: This commitment is no longer required due to the permanent defueled condition of CR-3.

**Justification for Change:**

These commitments are associated with Generic Letter 89-13 "Service Water System Problems Affecting Safety-Related Equipment". Since CR-3 has entered its decommissioning phase Engineering Change 94154 has declassified CR-3's cooling water systems and the systems they support to non-safety. Since Generic Letter 89-13 addresses cooling water systems affecting safety related equipment it is no longer applicable to CR-3.

**Nuclear Operations Commitment System (NOCS) Number: 62398**

**Source Document:**

CR-3 to NRC letter, 3F1295-11, dated December 6, 1995

**Original Commitment:**

CR-3 has an ongoing program for RW piping liner inspection. Readily available RW spool pieces are periodically inspected when the SWHEs and DCHes are opened for maintenance.

**Modify/Inactivate Commitment:**

INACTIVATE: This commitment is no longer required due to the permanent defueled condition of CR-3.

**Justification for Change:**

These commitments are associated with Generic Letter 89-13 "Service Water System Problems Affecting Safety-Related Equipment". Since CR-3 has entered its decommissioning phase Engineering Change 94154 has declassified CR-3's cooling water systems and the systems they support to non-safety. Since Generic Letter 89-13 addresses cooling water systems affecting safety related equipment it is no longer applicable to CR-3.

**Nuclear Operations Commitment System (NOCS) Number: 62399**

**Source Document:**

CR-3 to NRC letter, 3F1295-11, dated December 6, 1995

**Original Commitment:**

Raw Water spool pieces identified with liner delaminations are periodically ultrasonically tested to verify minimum wall thickness. Various inspection methods are used to ensure liner wall thickness erosion is repaired prior to a significant impact on system flow. The following inspection methods may be used but are not limited to: visual, ultrasonic, and cameras mounted on robotic mechanisms.

**Modify/Inactivate Commitment:**

INACTIVATE: This commitment is no longer required due to the permanent defueled condition of CR-3.

**Justification for Change:**

These commitments are associated with Generic Letter 89-13 "Service Water System Problems Affecting Safety-Related Equipment". Since CR-3 has entered its decommissioning phase Engineering Change 94154 has declassified CR-3's cooling water systems and the systems they support to non-safety. Since Generic Letter 89-13 addresses cooling water systems affecting safety related equipment it is no longer applicable to CR-3.



**Nuclear Operations Commitment System (NOCS) Number: 62692**

**Source Document:**

CR-3 to NRC letter, 3F0697-10, dated June 14, 1997

**Original Commitment:**

The use, maintenance, and testing of FWP-7 will be controlled by plant procedures that will be approved prior to CR-3 restart to ensure availability and reliability is appropriately addressed commensurate with its importance.

**Modify/Inactivate Commitment:**

INACTIVATE: This commitment is no longer required due to the permanent defueled condition of CR-3.

**Justification for Change:**

This commitment is associated with maintaining FWP-7 available and reliable to mitigate consequence associated with a Small Break Loss of Coolant Accident and "A" Batteries failure. CR-3 is no longer authorized to operate the reactor or emplace or retain fuel in the reactor vessel as defined in Duke Energy's letter to the NRC (3F0213-07). The FSAR Chapter 14 Accidents have been revised to remove all accidents except a Fuel Handling Accident (Ref FSAR Rev. 34.3). CP-500, Rev 14 removed the applicability of the NOCS requirement. REG 745926 evaluated the CP-500 Rev. 14, Special Actions and Reporting Requirements, changes and the requirement to inactivate this NOCS. With permanent removal of fuel from the Reactor Vessel, eliminating the possibility of a SBLOCA, this commitment is not applicable and can be inactivated.

**Nuclear Operations Commitment System (NOCS) Number: 62722**

**Source Document:**

CR-3 to NRC letter, 3F1297-44, dated December 20, 1997

**Original Commitment:**

These thermocouples will be required to be operable during Modes 1 through 4, whenever the decay heat generation rate is greater than 2 Megawatts thermal. The thermocouples will be added to NOD-31, "Equipment Reliability Improvement Policy," to maintain this equipment commensurate with their recognized importance to safety.

**Modify/Inactivate Commitment:**

INACTIVATE: This commitment is no longer required due to the permanent defueled condition of CR-3.

**Justification for Change:**

This commitment is associated with maintaining Decay Heat (DH) Dropline and Auxiliary Pressurizer Spray (APS) line thermocouples operable during Modes 1 through 4. The thermocouples are used as an indicator of flow through the DH Dropline or the APS line, to facilitate methods of mitigating the consequences of Boron Precipitation in the Reactor Vessel during an accident. Licensing Condition 2.C.(11) identify the DH Dropline and APS line thermocouple as part of the CR-3 operating license. The proposed changes under LAR #316, removed these restrictions (Ref 3F1013-01). The DH System along with the APS portion is out of service and is in the process of being abandoned per AI-9003 process (Ref DTO AR 642168 and REG 689505). This commitment is only applicable with fuel in the Reactor Vessel and the RCS pressurized. CP-500 Rev 14 removed the applicability of the NOCS requirement. REG 745926 evaluated the CP-500 Rev. 14 changes and the requirement to inactivate this NOCS. With permanent removal of fuel from the Reactor Vessel and Operating License changes under LAR #316, this commitment is not applicable.

**Nuclear Operations Commitment System (NOCS) Number: 62738**

**Source Document:**

CR-3 to NRC letter, 3F1097-27, dated October 29, 1997

**Original Commitment:**

Add a discussion of the actions to be taken to handle a loss of all subcooling margin display condition to AI-505.

**Modify/Inactivate Commitment:**

INACTIVATE: This commitment is no longer required due to the permanent defueled condition of CR-3.

**Justification for Change:**

This commitment was made in response to a NRC Request for Additional Information (RAI) regarding Technical Specification Change Request Notice (TSCRN) 209, Revision 1. The response to the NRC's request clarified the design of the Subcooling Margin Monitors and the Safety Parameter Display System (SPDS). CR-3 provided additional information regarding the backup method for calculating subcooling margin. CR-3 is not authorized to operate the reactor or place or retain fuel in the reactor vessel as defined in Duke Energy's letter to the NRC (3F0213-07) and NRC's response (3N0313-01). Also the RCS System is out of service and is in the process of being abandoned under the AI-9003 process (Ref DTO AR: 647240). Therefore, the use of the Subcooling Margin Monitors will never be required.

**Nuclear Operations Commitment System (NOCS) Number: 62751**

**Source Document:**

NRC to CR-3 letter, 3N0198-20, dated January 20, 1998

**Original Commitment:**

A system of thermocouples added to the Decay Heat (DH) drop and Auxiliary Pressurizer Spray (APS) lines, capable of detecting flow initiation, shall be operable for Modes 4 through 1. Channel checks of the thermocouples shall be performed on a monthly basis to demonstrate operability. If either the DH or APS system thermocouples become inoperable, operability shall be restored within 30 days or the NRC shall be informed, in a special report within the following fourteen (14) days, of the inoperability and the plans to restore operability.

**Modify/Inactivate Commitment:**

INACTIVATE: This commitment is no longer required due to the permanent defueled condition of CR-3.

**Justification for Change:**

This commitment is associated with maintaining Decay Heat (DH) dropline and Auxiliary Pressurizer Spray (APS) line thermocouple operable during Modes 1 through 4 to meet Operating Licensing Condition 2.C. (11). The thermocouple is an indication of flow through the DH dropline or APS line, to facilitate methods of mitigating the consequences of Boron Precipitation in the Reactor Vessel during an accident. Licensing Condition 2.C.(11) identifies the DH dropline and APS line thermocouple as part of CR-3 operating license. The proposed changes under LAR #316, will remove these restrictions (Ref 3F1013-01). The DH System along with the APS portion is out of service and is in the process of being abandoned per AI-9003 process (Ref DTO AR 642168 and REG 689505). This commitment is only applicable with fuel in the Reactor Vessel and the RCS pressurized. CP-500 Rev 14 will remove the applicability of the NOCS requirement. REG 745926 evaluated the CP-500 Rev. 14 changes and the requirement to inactivate this NOCS. With permanent removal of fuel from the Reactor Vessel and Operating License changes under LAR #316, this commitment is not applicable.

**Nuclear Operations Commitment System (NOCS) Number: 62802**

**Source Document:**

CR-3 to NRC letter, 3F0998-09, dated September 10, 1998

**Original Commitment:**

Procedure OP-406 will be revised to require SFV-83 and SFV-84 be closed and locked before the fuel transfer covers are removed. Valves SFV-180 and SFV-181 will be required to be closed and locked before the 30 inch gate valves are opened.

**Modify/Inactivate Commitment:**

INACTIVATE: This commitment is no longer required due to the permanent defueled condition of CR-3.

**Justification for Change:**

This commitment is associated with additional information supplied to assist the NRC in its safety enhancement backfit analyses for the CR-3 Spent Fuel Pools as discussed in 3N0996-14. CR-3 is no longer authorized to operate the reactor or place or retain fuel in the reactor vessel as defined in Duke Energy's letter to the NRC (3F0213-07) and NRC response (3N0313-01). By permanently removing fuel from the reactor, Modes 1 through 6 will never be achieved. This eliminates the requirement to transfer spent fuel from the Spent Fuel Pool to the Reactor Building. Also, EC 94476 installed a barrier in the RB side deep end of the refueling canal. The EC also states that typically, with water in the deep end, isolation valves SFV-83 and SFV-84 are closed on the 4" drain line and the blind flange is installed on the 6" drain line. The valves and blind flange function as a barrier to contain water in the deep end during refueling activities. The drain lines will be covered to minimize the possibility of clogging those lines. Installing the barrier eliminates the use of the transfer tubes and the requirement to manipulate the referenced valves.

**Nuclear Operations Commitment System (NOCS) Number: 100242**

**Source Document:**

CR-3 to NRC letter, 3F1297-24, dated December 16, 1997

**Original Commitment:**

Upon completion of the outlier resolution, there will be no adjacent cabinets that are not bolted or otherwise attached together.

**Modify/Inactivate Commitment:**

INACTIVATE: This commitment is no longer required due to the permanent defueled condition of CR-3.

**Justification for Change:**

By letter dated March 13, 2013, the NRC acknowledged CR-3 certification of permanent cessation of power operations and permanent removal of fuel from the reactor vessel. Therefore, pursuant to 10CFR50.82(a)(2), the 10 CFR Part 50 license for CR-3 no longer authorizes operation of the reactor or emplacement or retention of fuel in the reactor vessel.

Additionally, the requirements of the commitment for GL 87-02 supplemental response to USI A-46 apply to safety related NSSS safe shutdown components. Appendix R and Safe Shutdown requirements no longer apply to CR-3.

**Nuclear Operations Commitment System (NOCS) Number: 100266**

**Source Document:**

CR-3 to NRC letter, 3F1200-03, dated December 21, 2000

**Original Commitment:**

FPC will revise MOV program documentation to reflect its participation as a member of the joint owners group (JOG) on motor-operated valve (MOV) periodic verification.

**Modify/Inactivate Commitment:**

INACTIVATE: This commitment is no longer required due to the permanent defueled condition of CR-3.

**Justification for Change:**

These NOCS for the MOV program were created as a result of the implementation of Generic Letters 89-10 and 96-05.

By letter from the NRC to Florida Power Corporation (FPC) 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" (ADAMS Accession No. ML13058A380), the NRC acknowledged CR-3's certification of permanent cessation of power operation and permanent removal of fuel from the reactor vessel. Accordingly, pursuant to 10 CFR 50.82(a)(2), the 10 CFR Part 50 license for CR-3 no longer authorizes operation of the reactor or emplacement or retention of fuel in the reactor vessel.

**Generic letter 89-10**, Safety Related Motor-Operated Valve Testing and Surveillance, recommended that the licensee develop a program to ensure motor-operated valves in specified systems are selected, set, and maintained so the MOV will operate under design basis conditions.

The term safety related refers to those systems and components that are relied upon to remain functional during and following design basis events to ensure the integrity of the reactor coolant pressure boundary, the capability to shut down the reactor and maintain it in a safe shutdown condition, and the capability to prevent or mitigate the consequences of accidents that could result in the potential offsite exposures comparable to the guidelines of 10 CFR Part 100.

**Generic Letter 96-05** requested licensee to establish a program or ensure the effectiveness of its current program to verify on a periodic basis the safety related MOVs will continue to be capable of performing their safety related functions.

Engineering Change 94154 declassified all motor operated valves to a non-safety classification. On October 30 2013, per the directions in the MOV program manual (IAW Generic Letter 96-05), a Maintenance Rule Expert Panel was convened and approved the removal of all MOVs from the MOV program.

The MOV program is no longer applicable to Crystal River 3 and will be retired, as a result of the actions described above.

**Nuclear Operations Commitment System (NOCS) Number: 100268**

**Source Document:**

CR-3 to NRC letter, 3F1200-03, dated December 21, 2000

**Original Commitment:**

FPC will revise MOV program documentation to reflect that the CR-3 MOV program satisfies the three phases described in topical report MPR-1807.

**Modify/Inactivate Commitment:**

INACTIVATE: This commitment is no longer required due to the permanent defueled condition of CR-3.

**Justification for Change:**

These NOCS for the MOV program were created as a result of the implementation of Generic Letters 89-10 and 96-05.

By letter from the NRC to Florida Power Corporation (FPC) 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" (ADAMS Accession No. ML13058A380), the NRC acknowledged CR-3's certification of permanent cessation of power operation and permanent removal of fuel from the reactor vessel. Accordingly, pursuant to 10 CFR 50.82(a)(2), the 10 CFR Part 50 license for CR-3 no longer authorizes operation of the reactor or emplacement or retention of fuel in the reactor vessel.

**Generic letter 89-10**, Safety Related Motor-Operated Valve Testing and Surveillance, recommended that the licensee develop a program to ensure motor-operated valves in specified systems are selected, set, and maintained so the MOV will operate under design basis conditions.

The term safety related refers to those systems and components that are relied upon to remain functional during and following design basis events to ensure the integrity of the reactor coolant pressure boundary, the capability to shut down the reactor and maintain it in a safe shutdown condition, and the capability to prevent or mitigate the consequences of accidents that could result in the potential offsite exposures comparable to the guidelines of 10 CFR Part 100.

**Generic Letter 96-05** requested licensee to establish a program or ensure the effectiveness of its current program to verify on a periodic basis the safety related MOVs will continue to be capable of performing their safety related functions.

Engineering Change 94154 declassified all motor operated valves to a non-safety classification. On October 30 2013, per the directions in the MOV program manual (IAW Generic Letter 96-05), a Maintenance Rule Expert Panel was convened and approved the removal of all MOVs from the MOV program.

The MOV program is no longer applicable to Crystal River 3 and will be retired, as a result of the actions described above.



**Nuclear Operations Commitment System (NOCS) Number: 100269**

**Source Document:**

CR-3 to NRC letter, 3F1200-03, dated December 21, 2000

**Original Commitment:**

FPC will revise MOV program documentation to require that FPC evaluate program changes recommended by the JOG and, as appropriate, modify the MOV testing program.

**Modify/Inactivate Commitment:**

INACTIVATE: This commitment is no longer required due to the permanent defueled condition of CR-3.

**Justification for Change:**

These NOCS for the MOV program were created as a result of the implementation of Generic Letters 89-10 and 96-05.

By letter from the NRC to Florida Power Corporation (FPC) 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" (ADAMS Accession No. ML13058A380), the NRC acknowledged CR-3's certification of permanent cessation of power operation and permanent removal of fuel from the reactor vessel. Accordingly, pursuant to 10 CFR 50.82(a)(2), the 10 CFR Part 50 license for CR-3 no longer authorizes operation of the reactor or emplacement or retention of fuel in the reactor vessel.

**Generic letter 89-10**, Safety Related Motor-Operated Valve Testing and Surveillance, recommended that the licensee develop a program to ensure motor-operated valves in specified systems are selected, set, and maintained so the MOV will operate under design basis conditions.

The term safety related refers to those systems and components that are relied upon to remain functional during and following design basis events to ensure the integrity of the reactor coolant pressure boundary, the capability to shut down the reactor and maintain it in a safe shutdown condition, and the capability to prevent or mitigate the consequences of accidents that could result in the potential offsite exposures comparable to the guidelines of 10 CFR Part 100.

**Generic Letter 96-05** requested licensee to establish a program or ensure the effectiveness of its current program to verify on a periodic basis the safety related MOVs will continue to be capable of performing their safety related functions.

Engineering Change 94154 declassified all motor operated valves to a non-safety classification. On October 30 2013, per the directions in the MOV program manual (IAW Generic Letter 96-05), a Maintenance Rule Expert Panel was convened and approved the removal of all MOVs from the MOV program.

The MOV program is no longer applicable to Crystal River 3 and will be retired, as a result of the actions described above.

**Nuclear Operations Commitment System (NOCS) Number: 100272**

**Source Document:**

CR-3 to NRC letter, 3F1200-03, dated December 21, 2000

**Original Commitment:**

FPC will revise the MOV program documentation to require that an expert panel evaluate proposed changes in test frequencies and to specify that changes in test frequencies that may be made in the future will be based on MOV risk informed ranking, the available margin and actuator performance.

**Modify/Inactivate Commitment:**

INACTIVATE: This commitment is no longer required due to the permanent defueled condition of CR-3.

**Justification for Change:**

These NOCS for the MOV program were created as a result of the implementation of Generic Letters 89-10 and 96-05.

By letter from the NRC to Florida Power Corporation (FPC) 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" (ADAMS Accession No. ML13058A380), the NRC acknowledged CR-3's certification of permanent cessation of power operation and permanent removal of fuel from the reactor vessel. Accordingly, pursuant to 10 CFR 50.82(a)(2), the 10 CFR Part 50 license for CR-3 no longer authorizes operation of the reactor or emplacement or retention of fuel in the reactor vessel.

**Generic letter 89-10**, Safety Related Motor-Operated Valve Testing and Surveillance, recommended that the licensee develop a program to ensure motor-operated valves in specified systems are selected, set, and maintained so the MOV will operate under design basis conditions.

The term safety related refers to those systems and components that are relied upon to remain functional during and following design basis events to ensure the integrity of the reactor coolant pressure boundary, the capability to shut down the reactor and maintain it in a safe shutdown condition, and the capability to prevent or mitigate the consequences of accidents that could result in the potential offsite exposures comparable to the guidelines of 10 CFR Part 100.

**Generic Letter 96-05** requested licensee to establish a program or ensure the effectiveness of its current program to verify on a periodic basis the safety related MOVs will continue to be capable of performing their safety related functions.

Engineering Change 94154 declassified all motor operated valves to a non-safety classification. On October 30 2013, per the directions in the MOV program manual (IAW Generic Letter 96-05), a Maintenance Rule Expert Panel was convened and approved the removal of all MOVs from the MOV program.

The MOV program is no longer applicable to Crystal River 3 and will be retired, as a result of the actions described above.

**Nuclear Operations Commitment System (NOCS) Number: 100273**

**Source Document:**

CR-3 to NRC letter, 3F1200-03, dated December 21, 2000

**Original Commitment:**

FPC will revise the MOV program documentation to require the following trending provisions:

- A. Data to be trended will include actuator thrust, torque, spring pack displacement, motor current, and stem factor.
- B. Data will be recorded on an initial frequency of once every three refueling outages or prior to re-lubrication of the stem.
- C. When the stem lubricant is discovered to be unsatisfactory, an “as-found” diagnostic test is performed prior to replacing the lubricant, and an “as-left” test is performed after the lubricant is replaced.
- D. Stem factor data for the MOV is evaluated to ensure it remains bounded by the operability assessment calculation.
- E. On MOVs where the torque cannot be measured, stem thrust, spring pack displacement, and motor current are monitored during “as-found” and “as-left” diagnostic testing. This data is verified to be within the bounds of the MOV operability assessment and also compared to previous test data to identify any unfavorable trends.
- F. Adverse trends are evaluated and corrective actions taken, as necessary.

**Modify/Inactivate Commitment:**

INACTIVATE: This commitment is no longer required due to the permanent defueled condition of CR-3.

**Justification for Change:**

These NOCS for the MOV program were created as a result of the implementation of Generic Letters 89-10 and 96-05.

By letter from the NRC to Florida Power Corporation (FPC) 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” (ADAMS Accession No. ML13058A380), the NRC acknowledged CR-3’s certification of permanent cessation of power operation and permanent removal of fuel from the reactor vessel. Accordingly, pursuant to 10 CFR 50.82(a)(2), the 10 CFR Part 50 license for CR-3 no longer authorizes operation of the reactor or emplacement or retention of fuel in the reactor vessel.

**Generic letter 89-10**, Safety Related Motor-Operated Valve Testing and Surveillance, recommended that the licensee develop a program to ensure motor-operated valves in specified systems are selected, set, and maintained so the MOV will operate under design basis conditions.

The term safety related refers to those systems and components that are relied upon to remain functional during and following design basis events to ensure the integrity of the reactor coolant pressure boundary, the capability to shut down the reactor and maintain it in a safe shutdown condition, and the capability to prevent or mitigate the consequences of accidents that could result in the potential offsite exposures comparable to the guidelines of 10 CFR Part 100.

**Generic Letter 96-05** requested licensee to establish a program or ensure the effectiveness of its current program to verify on a periodic basis the safety related MOVs will continue to be capable of performing their safety related functions.

Engineering Change 94154 declassified all motor operated valves to a non-safety classification. On October 30 2013, per the directions in the MOV program manual (IAW Generic Letter 96-05), a Maintenance Rule Expert Panel was convened and approved the removal of all MOVs from the MOV program.

The MOV program is no longer applicable to Crystal River 3 and will be retired, as a result of the actions described above.

**Nuclear Operations Commitment System (NOCS) Number: 100294**

**Source Document:**

CR-3 to NRC letter, 3F1000-08, dated October 03, 2000

**Original Commitment:**

Recognizing the defense in depth afforded by automatic control room isolation on high radiation, CR-3 will continue to test and maintain this feature.

**Modify/Inactivate Commitment:**

INACTIVATE: This commitment is no longer required due to the permanent defueled condition of CR-3.

**Justification for Change:**

This commitment is associated with the implementation of LAR #262 which implemented ITS changes based on dose calculation using an alternate source term (Ref ITS Amendment 199 and 3N0901-04). The LAR deleted the ITS requirement to maintain the automatic initiation of CREVS to emergency recirculation mode on high radiation. But, CR-3 recognized the importance of defense in depth for automatic Control Room Isolation on high radiation and committed to the NRC to continue to test and maintain this feature.

The FSAR Chapter 14 Accidents have been revised removing all accidents except for the Fuel Handling Accident (Ref FSAR Rev. 34.3 and REG 605718). Control Room radiation monitor RM-A5 is out of service and in the process of being abandoned per AI-9003 process (Ref DTO AR 682805 and REG 723341). Calculation N13-0001, Public and Control Room Dose from a Fuel Handling Accident, evaluated the public dose at the Exclusion Area Boundary (EAB), Low Population Zone (LPZ), and dose to operators in the Control Room for a Fuel Handling Accident in the spent fuel pools under permanent shutdown conditions. The calculation assumed that the release pathway did not consider any filters (HVAC HEPA and carbon). The conclusion of the calculation showed that the Control Room would receive 1.3E-04 rem TEDE, which is significantly less than the 10CFR 50.67 requirement of 5 rem TEDE. License Amendment Request #316 has been approved by the NRC and permits removal of all radiation monitoring in the Technical Specifications. With the justification for the abandonment of RM-A5, changes in FSAR Chapter 14 Accidents, Calculation N13-0001 and LAR #316, this commitment is no longer applicable.

**Nuclear Operations Commitment System (NOCS) Number: 100497**

**Source Document:**

CR-3 to NRC letter, 3F1295-11, dated December 06, 1995

**Original Commitment:**

CR-3 continues to maintain a proactive chemical treatment of the closed cycle systems (SW and DC).

**Modify/Inactivate Commitment:**

INACTIVATE: This commitment is no longer required due to the permanent defueled condition of CR-3.

**Justification for Change:**

These commitments are associated with Generic Letter 89-13 "Service Water System Problems Affecting Safety-Related Equipment". Since CR-3 has entered its decommissioning phase, Engineering Change 94154 has declassified CR-3's cooling water systems and the systems they support to non-safety. Since Generic Letter 89-13 addresses cooling water systems affecting safety related equipment it is no longer applicable to CR-3.

**Nuclear Operations Commitment System (NOCS) Number: 100521**

**Source Document:**

CR-3 to NRC letter, 3F0207-02, dated February 12, 2007

**Original Commitment:**

Onsite and Offsite Communications

Provide a general description of the diverse methods available to communicate with offsite personnel that could be effective for the conditions assumed. The ability to communicate with offsite personnel includes the use of the following:

Hard line telephones in diverse locations, suitcase satellite phones in the Technical Support Center (TSC) and cell phones.

Dedicated ring-down lines to state and local agencies located in the TSC, Emergency Operations Facility (offsite), Training simulator (offsite), and the Emergency Preparedness offices (offsite).

Emergency Satellite communications system (ESATCOM) (now the EMNET) located in each of the facilities listed above. This system links CR-3 to all state and local agencies and to all 67 Florida counties.

Radio communications through security channels. The radios include a 450 Mhz System along with a 800 Mhz system capable of communicating with the local law enforcement agency (LLEA). Should repeaters be lost during the initiating event, the 800 Mhz system would be unaffected due to the presence of an antenna located near Units 4 and 5, well to the north of CR-3. Radio communications include base stations, mobile stations, and hand held units.

**Modify/Inactivate Commitment:**

MODIFY: Deleting portions of the commitment that are specifically related to activities associated with large area fires or explosions.

**Justification for Change:**

Commission Interim Compensatory Measures (ICM) Order (EA-02-026), was issued following the events of September 11, 2001, as part of a comprehensive effort by the NRC, in coordination with other government agencies, to improve the capabilities of commercial nuclear reactor facilities to respond to terrorist threats. The ICM Order, required licensees to develop specific guidance and strategies to maintain or restore core cooling, containment, and spent fuel pool cooling capabilities using existing or readily available resources (equipment and personnel) that could be effectively implemented under the circumstances associated with loss of large areas of the plant due to explosions or fire, including those that an aircraft impact might create. Based on a letter dated August 27, 2007 titled "Crystal River Unit 3 Nuclear Generating Plant – Conforming License Amendment to Incorporate The Mitigation Strategies Required By Section

B.5.b. of Commission Order EA-02-026” (3N0807-07), Appendix B Section 3.2.2, the performance goal related to this commitment is “Improve the initial response of the available plant operational resources and enhance the capability for those resources to communicate with off-site resources.” A portion of the review criteria goes on to say:

- “2. Describe the approach for mustering the available plant resources in the event the control room/staff are substantially affected.
3. Describe Operations/Security pre-plans for reestablishment of communications immediately following a large fire or explosion.
  - a. For single or common control room sites, the description should provide additional detail regarding who would assume immediate responsibility for communications.
4. Describe how operations and security personnel will coordinate activities immediately following a large fire or explosion.”

NEI 06-12 states the following in the preliminary section prior to the guidance for this section: “The initial response EDMGs are intended to provide a bridge between normal operational command and control and the command and control that is provided by the emergency response organization.”

By letter from the NRC to Florida Power Corporation (FPC) 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” (ADAMS Accession No. ML 13058A380), the NRC acknowledged CR-3’s certification of permanent cessation of power operation and permanent removal of fuel from the reactor vessel. Accordingly, pursuant to 10 CFR 50.82(a)(2), the 10 CFR Part 50 license for CR-3 no longer authorizes operation of the reactor or emplacement or retention of fuel in the reactor vessel. Based on this letter, the only fuel damage that can occur would be resultant of damage to the spent fuel pool or loss of spent fuel pool cooling.

CR-3 Spent Fuel Pool Time to Uncover Fuel Analysis (F13-0003) showed a Time to Boil is 10 days with a 6.1 gpm boil-off-rate based on the existing Spent Fuel decay heat levels. The calculation also showed a 23 day time to boil down to 142.88 ft elevation and 33.5 days to 134 ft elevation. Analysis has also shown a complete loss of inventory in the Spent Fuel Pool would not result in cladding temperature above the point of the onset of rapid oxidation (a Zirconium fire) and the surface temperature of the cladding will remain below the fuel clad swell temperature, due to adequate natural circulation and heat rejection through the walls and roof of the Fuel Handling Building (Ref 3F0913-04). Also EC 92486 evaluated the time to reach 212 degrees F on July 1, 2013 with very conservative assumptions and showed 4.4 days and 19.9 days to boil the inventory to 10 ft. above the fuel storage rack. EC 92486 also identified an additional method of replenishing SF pool inventory on an extended loss of SF Pool Cooling using SF Cooling system valves located on AB elevations 143 ft. (SFV-122) and 119 ft. (SFV-129) (Ref 3F0913-04). This guidance has been incorporated in procedures AAG-005 and AAG-009. The NEI 06-12 defined external and internal strategies for SF pool makeup and SF pool spray are still available using the Portable Powered Independent Pump (PIIP) with a unlimited supply of water from the Gulf of Mexico or Fire Service System with additional water supply from other facilities (CR-1 and CR-2). Additionally, calculation N13-0002, draws the conclusion that for the worst case outside design basis loss of all inventory in the spent fuel pool, that the site dose boundary limits cannot be reached.

The commitments being eliminated by this revision are related to the initial response of the remaining operators in the time shortly after the initial large area fire or explosion. The primary



goal of this is to create a command structure with communication to be utilized during a large area fire. EM-202, duties of the Emergency Coordinator lists the following as a responsibility of the Emergency Coordinator: During certain emergencies (e.g., security-related events, large area fire), the Crystal River Energy Complex Emergency Response Coordinator may establish an Incident Command Post (ICP). In the event an ICP is established, the Emergency Coordinator may assign Operations personnel to staff the ICP to support its function and to provide liaison between CR-3 Operations and off-site response agencies (e.g., local law enforcement, fire/rescue, emergency medical, etc.) The Emergency Coordinator has overall responsibility for the site during an emergency situation and has direction to create a command structure when interfacing with offsite agencies. The EC will continue to create the appropriate command structure with available resources to provide interface with offsite agencies. Based on the condition of the plant and significant time from the onset of a B.5.b event to respond to such an event, the specific qualifications and personnel specified to staff these positions are not required. The extra planning time available removes the need for preplanning activities to occur.

NOTE: Subsequent to the processing of this commitment change, the NRC issued License Amendment 246, which permitted CR-3 to implement the Permanently Defueled Emergency Plan (PDEP). As part of the PDEP implementation, procedure EM-202 referenced in this commitment change justification was superseded by procedure EM-502, Conduct of the Emergency Coordinator. The information retained from NOCS 100521 is contained in Attachment 2 of EM-502.

**Nuclear Operations Commitment System (NOCS) Number: 100527**

**Source Document:**

CR-3 to NRC letter, 3F0207-02, dated February 12, 2007.

**Original Commitment:**

CR-3 has existing severe accident mitigation guidelines (SAMGs) which provide guidance on flooding the Reactor Building (RB) using the Fire Service (FS) system. This method connects the FS system to existing RB Leak Rate penetrations.

Independent of the above guidance, CR-3 will implement a strategy to align the portable power independent pump (PPIP) to the RB leak rate penetrations. Two installed flanges will be replaced with pre-staged fire hose connections. Two fire hoses will be connected and aligned to the RB through four manual three (3) inch valves located in the 119 foot intermediate building. Two fire hoses from the PPIP discharging against the maximum RB design pressure will result in an RB fill rate of greater than 300 GPM. The PPIP will take suction from the Gulf of Mexico. This source is adequate to provide the required flow for at least 12 hours.

**Modify/Inactivate Commitment:**

INACTIVATE: This commitment is no longer required due to the permanent defueled condition of CR-3.

**Justification for Change:**

Commission Interim Compensatory Measures (ICM) Order (EA-02-026), was issued following the events of September 11, 2001, as part of a comprehensive effort by the NRC, in coordination with other government agencies, to improve the capabilities of commercial nuclear reactor facilities to respond to terrorist threats. The ICM Order, required licensees to develop specific guidance and strategies to maintain or restore core cooling, containment, and spent fuel pool cooling capabilities using existing or readily available resources (equipment and personnel) that could be effectively implemented under the circumstances associated with loss of large areas of the plant due to explosions or fire, include those that an aircraft impact might create. Based on a letter dated August 27, 2007 titled "Crystal River Unit 3 Nuclear Generating Plant – Conforming License Amendment to Incorporate the Mitigation Strategies Required by Section B.5.b. of Commission Order EA-02-026" (3N0807-07), Appendix B Section 3.3.6, the performance goal related to this commitment is "Provide a power-independent means to inject water into the containment to flood the containment floor and cover core debris."

By letter from the NRC to Florida Power Corporation (FPC) 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" (ADAMS Accession No. ML 13058A380), the NRC acknowledged CR-3's certification of permanent cessation of power operation and permanent removal of fuel from the reactor vessel. Therefore, there is no such time that core debris may be found in the containment and this strategy is no longer needed.

**Nuclear Operations Commitment System (NOCS) Number: 100528**

**Source Document:**

CR-3 to NRC letter, 3F0207-02, dated February 12, 2007.

**Original Commitment:**

As part of B.5.b Phase 1, CR-3 developed procedural guidance for the use of water spray over the spent fuel pool (SFP), as a strategy to minimize radiological release.

This strategy will be expanded to include the potential need to spray water over a Reactor/Auxiliary Building release point in an attempt to reduce release impacts. Enhancements will be made to incorporate the use of the Portable Power Independent Pump as a method of portable sprays. The primary water source for the Portable Power Independent Pump is the Gulf of Mexico. Spray apparatus used for Phase 2 strategies will be incorporated into this strategy as well. Flow rates would have to be at least 200 gpm as outlined in the Phase 2 strategies.

The capability exists to spray any point on the Auxiliary Building and the lower portions of the Reactor Building. Although the uppermost portions of the Reactor Building may not be reached, all of the most likely RB release points (hatches and penetrations) can be reached.

**Modify/Inactivate Commitment:**

INACTIVATE: This commitment is no longer required due to the permanent defueled condition of CR-3.

**Justification for Change:**

Commission Interim Compensatory Measures (ICM) Order (EA-02-026), was issued following the events of September 11, 2001, as part of a comprehensive effort by the NRC, in coordination with other government agencies, to improve the capabilities of commercial nuclear reactor facilities to respond to terrorist threats. The ICM Order, required licensees to develop specific guidance and strategies to maintain or restore core cooling, containment, and spent fuel pool cooling capabilities using existing or readily available resources (equipment and personnel) that could be effectively implemented under the circumstances associated with loss of large areas of the plant due to explosions or fire, include those that an aircraft impact might create. Based on a letter dated August 27, 2007 titled "Crystal River Unit 3 Nuclear Generating Plant – Conforming License Amendment to Incorporate the Mitigation Strategies Required by Section B.5.b. of Commission Order EA-02-026" (3N0807-07), Appendix B Section 3.3.7, the performance goal related to this commitment is "Provide a means to reduce the magnitude of any fission product releases by spraying the release point."

By letter from the NRC to Florida Power Corporation (FPC) 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" (ADAMS Accession No. ML 13058A380), the NRC acknowledged CR-3's certification of permanent cessation of power operation and permanent removal of fuel from the reactor vessel. Accordingly, pursuant to 10 CFR

50.82(a)(2), the 10 CFR Part 50 license for CR-3 no longer authorizes operation of the reactor or emplacement or retention of fuel in the reactor vessel. Based on this letter, the only fuel damage that can occur would be resultant of damage to the spent fuel pool or loss of spent fuel pool cooling. CR-3 Spent Fuel Pool Time to Uncover Fuel Analysis (F13-0003) showed a Time to Boil is 10 days with a 6.1 gpm boil-off-rate based on the existing Spent Fuel decay heat levels. The calculation also showed a 23 day time to boil down to 142.88 ft elevation and 33.5 days to 134 ft elevation. Analysis has also shown a complete loss of inventory in the Spent Fuel Pool would not result in cladding temperature above the point of the onset of rapid oxidation (a Zirconium fire) and the surface temperature of the cladding will remain below the fuel clad swell temperature, due to adequate natural circulation and heat rejection through the walls and roof of the Fuel Handling Building (Ref 3F0913-04). Also EC 92486 evaluated the time to reach 212 degrees F on July 1, 2013 with very conservative assumptions and showed 4.4 days and 19.9 days to boil the inventory to 10 ft. above the fuel storage rack. EC 92486 also identified an additional method of replenishing SF pool inventory on an extended loss of SF Pool Cooling using SF Cooling system valves located on AB elevations 143 ft. (SFV-122) and 119 ft. (SFV-129) (Ref 3F0913-04). This guidance has been incorporated in procedures AAG-005 and AAG-009. The NEI 06-12 defined external and internal strategies for SF pool makeup and SF pool spray are still available using the Portable Powered Independent Pump (PPIP) with a unlimited supply of water from the Gulf of Mexico or Fire Service System with additional water supply from other facilities (CR-1 and CR-2). Additionally, calculation N13-0002, draws the conclusion that for the worst case outside design basis loss of all inventory in the spent fuel pool, that the site dose boundary limits cannot be reached. Therefore, based on all of these items, the time to react and the consequences from a B.5.b event based on current plant parameters, reduces the need of water scrubbing to reduce the magnitude of any fission product releases since the magnitude is calculated well below the 10 CFR Part 20 limits.

**Nuclear Operations Commitment System (NOCS) Number: 100531**

**Source Document:**

CR-3 to NRC letter, 3F0505-06, dated May 31, 2005.

**Original Commitment:**

Revise EM-911 for Emergency Response Coordinator (ERC) notification.

**Modify/Inactivate Commitment:**

INACTIVATE: This commitment is no longer required due to the permanent defueled condition of CR-3.

**Justification for Change:**

Commission Interim Compensatory Measures (ICM) Order (EA-02-026), was issued following the events of September 11, 2001, as part of a comprehensive effort by the NRC, in coordination with other government agencies, to improve the capabilities of commercial nuclear reactor facilities to respond to terrorist threats. The ICM Order, required licensees to develop specific guidance and strategies to maintain or restore core cooling, containment, and spent fuel pool cooling capabilities using existing or readily available resources (equipment and personnel) that could be effectively implemented under the circumstances associated with loss of large areas of the plant due to explosions or fire, include those that an aircraft impact might create. Based on a letter dated August 27, 2007 titled "Crystal River Unit 3 Nuclear Generating Plant – Conforming License Amendment to Incorporate the Mitigation Strategies Required by Section B.5.b. of Commission Order EA-02-026" (3N0807-07), Appendix A Section B.1.d, the performance goal related to this commitment is "Evaluate the command and control functions needed to ensure that the responding assets follow the established preplanned strategies, and that the evaluation takes into account the necessary technical assistance aspects of the command and control functions."

By letter from the NRC to Florida Power Corporation (FPC) 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" (ADAMS Accession No. ML 13058A380), the NRC acknowledged CR-3's certification of permanent cessation of power operation and permanent removal of fuel from the reactor vessel. Accordingly, pursuant to 10 CFR 50.82(a)(2), the 10 CFR Part 50 license for CR-3 no longer authorizes operation of the reactor or emplacement or retention of fuel in the reactor vessel. Based on this letter, the only fuel damage that can occur would be resultant of damage to the spent fuel pool or loss of spent fuel pool cooling. CR-3 Spent Fuel Pool Time to Uncover Fuel Analysis (F13-0003) showed a Time to Boil is 10 days with a 6.1 gpm boil-off-rate based on the existing Spent Fuel decay heat levels. The calculation also showed a 23 day time to boil down to 142.88 ft elevation and 33.5 days to 134 ft elevation. Analysis has also shown a complete loss of inventory in the Spent Fuel Pool would not result in cladding temperature above the point of the onset of rapid oxidation (a Zirconium fire) and the surface temperature of the cladding will remain below the fuel clad swell temperature, due to adequate natural circulation and heat rejection through the walls and roof of the Fuel Handling Building (Ref 3F0913-04). Also EC 92486 evaluated the time to reach

212 degrees Fahrenheit on July 1, 2013 with very conservative assumptions and showed 4.4 days and 19.9 days to boil the inventory to 10 ft. above the fuel storage rack. EC 92486 also identified an additional method of replenishing SF pool inventory on an extended loss of SF Pool Cooling using SF Cooling system valves located on AB elevations 143 ft. (SFV-122) and 119 ft. (SFV-129) (Ref 3F0913-04). This guidance has been incorporated in procedures AAG-005 and AAG-009. The NEI 06-12 defined external and internal strategies for SF pool makeup and SF pool spray are still available using the Portable Powered Independent Pump (PPIP) with a unlimited supply of water from the Gulf of Mexico or Fire Service System with additional water supply from other facilities (CR-1 and CR-2).

EM-202, duties of the Emergency Coordinator lists the following as a responsibility of the Emergency Coordinator: During certain emergencies (e.g., security-related events, large area fire), the Crystal River Energy Complex Emergency Response Coordinator may establish an Incident Command Post (ICP). In the event an ICP is established, the Emergency Coordinator may assign Operations personnel to staff the ICP to support its function and to provide liaison between CR-3 Operations and off-site response agencies (e.g., local law enforcement, fire/rescue, emergency medical, etc.). The Emergency Coordinator has overall responsibility for the site during an emergency situation and has direction to create a command structure when interfacing with offsite agencies. This meets the requirement as part of the normal emergency response and does not require this commitment. Additionally, there is significant time from the onset of a B.5.b event to respond to such an event. The extra planning time available removes the need for preplanning activities to occur.

NOTE: Subsequent to the processing of this commitment change, the NRC issued License Amendment 246, which permitted CR-3 to implement the Permanently Defueled Emergency Plan (PDEP). As part of the PDEP implementation, procedure EM-202 referenced in this commitment change justification was superseded by procedure EM-502, Conduct of the Emergency Coordinator. EM-502 continues to address responsibilities of the Emergency Coordinator and the Emergency Response Coordinator with respect to setting up and staffing an Incident Command Post.

**Nuclear Operations Commitment System (NOCS) Number: 100532**

**Source Document:**

CR-3 to NRC letter, 3F0505-06, dated May 31, 2005.

**Original Commitment:**

Evaluate and implement making the ERC the incident commander and the fire team leader (FTL) the liaison for a large area fire.

**Modify/Inactivate Commitment:**

INACTIVATE: The emergency coordinator has overall responsibility for the site during an emergency situation and has direction to create a command structure. This meets the requirement as part of the normal emergency response and does not require this commitment.

**Justification for Change:**

Commission Interim Compensatory Measures (ICM) Order (EA-02-026), was issued following the events of September 11, 2001, as part of a comprehensive effort by the NRC, in coordination with other government agencies, to improve the capabilities of commercial nuclear reactor facilities to respond to terrorist threats. The ICM Order, required licensees to develop specific guidance and strategies to maintain or restore core cooling, containment, and spent fuel pool cooling capabilities using existing or readily available resources (equipment and personnel) that could be effectively implemented under the circumstances associated with loss of large areas of the plant due to explosions or fire, include those that an aircraft impact might create. Based on a letter dated August 27, 2007 titled "Crystal River Unit 3 Nuclear Generating Plant – Conforming License Amendment to Incorporate the Mitigation Strategies Required by Section B.5.b. of Commission Order EA-02-026" (3N0807-07), Appendix A section B.1.d, the performance goal related to this commitment is "Evaluate the command and control functions needed to ensure that the responding assets follow the established preplanned strategies, and that the evaluation takes into account the necessary technical assistance aspects of the command and control functions."

By letter from the NRC to Florida Power Corporation (FPC) 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" (ADAMS Accession No. ML 13058A380), the NRC acknowledged CR-3's certification of permanent cessation of power operation and permanent removal of fuel from the reactor vessel. Accordingly, pursuant to 10 CFR 50.82(a)(2), the 10 CFR Part 50 license for CR-3 no longer authorizes operation of the reactor or emplacement or retention of fuel in the reactor vessel. Based on this letter, the only fuel damage that can occur would be resultant of damage to the spent fuel pool or loss of spent fuel pool cooling. CR-3 Spent Fuel Pool Time to Uncover Fuel Analysis (F13-0003) showed a Time to Boil is 10 days with a 6.1 gpm boil-off-rate based on the existing Spent Fuel decay heat levels. The calculation also showed a 23 day time to boil down to 142.88 ft elevation and 33.5 days to 134 ft elevation. Analysis has also shown a complete loss of inventory in the Spent Fuel Pool would not result in cladding temperature above the point of the onset of rapid oxidation (a Zirconium fire) and the surface temperature of the cladding will remain below the fuel clad

swell temperature, due to adequate natural circulation and heat rejection through the walls and roof of the Fuel Handling Building (Ref 3F0913-04). Also EC 92486 evaluated the time to reach 212 degrees F on July 1, 2013 with very conservative assumptions and showed 4.4 days and 19.9 days to boil the inventory to 10 ft. above the fuel storage rack. EC 92486 also identified an additional method of replenishing SF pool inventory on an extended loss of SF Pool Cooling using SF Cooling system valves located on AB elevations 143 ft. (SFV-122) and 119 ft. (SFV-129) (Ref 3F0913-04). This guidance has been incorporated in procedures AAG-005 and AAG-009. The NEI 06-12 defined external and internal strategies for SF pool makeup and SF pool spray are still available using the Portable Powered Independent Pump (PPIP) with a unlimited supply of water from the Gulf of Mexico or Fire Service System with additional water supply from other facilities (CR-1 and CR-2).

EM-202, duties of the Emergency Coordinator lists the following as a responsibility of the Emergency Coordinator: During certain emergencies (e.g., security-related events, large area fire), the Crystal River Energy Complex Emergency Response Coordinator may establish an Incident Command Post (ICP). In the event an ICP is established, the Emergency Coordinator may assign Operations personnel to staff the ICP to support its function and to provide liaison between CR-3 Operations and off-site response agencies (e.g., local law enforcement, fire/rescue, emergency medical, etc.). The Emergency Coordinator has overall responsibility for the site during an emergency situation and has direction to create a command structure when interfacing with offsite agencies. The EC will continue to create the appropriate command structure with available resources to provide interface with offsite agencies. Based on the condition of the plant and significant time from the onset of a B.5.b event to respond to such an event, the specific qualifications and personnel specified to staff these positions are not required. The extra planning time available removes the need for preplanning activities to occur.

NOTE: Subsequent to the processing of this commitment change, the NRC issued License Amendment 246, which permitted CR-3 to implement the Permanently Defueled Emergency Plan (PDEP). As part of the PDEP implementation, procedure EM-202 referenced in this commitment change justification was superseded by procedure EM-502, Conduct of the Emergency Coordinator. EM-502 continues to address responsibilities of the Emergency Coordinator and the Emergency Response Coordinator with respect to setting up and staffing an Incident Command Post. The role of the Emergency Response Coordinator as Incident Commander for a large area fire is also addressed in EM-913, Integrated Response for a Large Area Fire.



**Nuclear Operations Commitment System (NOCS) Number: 100533**

**Source Document:**

CR-3 to NRC letter, 3F0505-06, dated May 31, 2005.

**Original Commitment:**

Automated dialing capability for the fire brigade responders will be implemented.

**Modify/Inactivate Commitment:**

INACTIVATE: The emergency coordinator has overall responsibility for the site during an emergency situation and has direction to create a command structure. This meets the requirement as part of the normal emergency response and does not require this commitment.

**Justification for Change:**

Commission Interim Compensatory Measures (ICM) Order (EA-02-026), was issued following the events of September 11, 2001, as part of a comprehensive effort by the NRC, in coordination with other government agencies, to improve the capabilities of commercial nuclear reactor facilities to respond to terrorist threats. The ICM Order, required licensees to develop specific guidance and strategies to maintain or restore core cooling, containment, and spent fuel pool cooling capabilities using existing or readily available resources (equipment and personnel) that could be effectively implemented under the circumstances associated with loss of large areas of the plant due to explosions or fire, include those that an aircraft impact might create. Based on a letter dated August 27, 2007 titled "Crystal River Unit 3 Nuclear Generating Plant – Conforming License Amendment to Incorporate the Mitigation Strategies Required by Section B.5.b. of Commission Order EA-02-026" (3N0807-07), Appendix A section B.2.a, the performance goal related to this commitment is "Provide for the pre-defined positioning and dispersal of personnel at the site to support fire-fighting and recovery operations, in addition considerations for staff augmentation should include: (1) planning to share personnel at multi-unit facilities; (2) verifying that existing callout plans provide rapid response by teams by personnel in the areas of operations, fire-fighting, maintenance and engineering, and their reliefs (3) arranging for receiving facilities at the site should the deployment of a rapid response team be necessary, including identifying nearby landing zones for helicopters."

By letter from the NRC to Florida Power Corporation (FPC) 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" (ADAMS Accession No. ML 13058A380), the NRC acknowledged CR-3's certification of permanent cessation of power operation and permanent removal of fuel from the reactor vessel. Accordingly, pursuant to 10 CFR 50.82(a)(2), the 10 CFR Part 50 license for CR-3 no longer authorizes operation of the reactor or emplacement or retention of fuel in the reactor vessel. Based on this letter, the only fuel damage that can occur would be resultant of damage to the spent fuel pool or loss of spent fuel pool cooling. CR-3 Spent Fuel Pool Time to Uncover Fuel Analysis (F13-0003) showed a Time to Boil is 10 days with a 6.1 gpm boil-off-rate based on the existing Spent Fuel decay heat levels. The calculation also showed a 23 day time to boil down to 142.88 ft elevation and 33.5 days to 134 ft elevation. Analysis has also shown a complete loss of inventory in the Spent Fuel

Pool would not result in cladding temperature above the point of the onset of rapid oxidation (a Zirconium fire) and the surface temperature of the cladding will remain below the fuel clad swell temperature, due to adequate natural circulation and heat rejection through the walls and roof of the Fuel Handling Building (Ref 3F0913-04). Also EC 92486 evaluated the time to reach 212 degrees F on July 1, 2013 with very conservative assumptions and showed 4.4 days and 19.9 days to boil the inventory to 10 ft. above the fuel storage rack. EC 92486 also identified an additional method of replenishing SF pool inventory on an extended loss of SF Pool Cooling using SF Cooling system valves located on AB elevations 143 ft. (SFV-122) and 119 ft. (SFV-129) (Ref 3F0913-04). This guidance has been incorporated in procedures AAG-005 and AAG-009. The NEI 06-12 defined external and internal strategies for SF pool makeup and SF pool spray are still available using the Portable Powered Independent Pump (PPIP) with a unlimited supply of water from the Gulf of Mexico or Fire Service System with additional water supply from other facilities (CR-1 and CR-2).

This commitment is to have an automatic dialing feature provided for callouts of the Fire Brigade to "provide rapid response". Based on heat up times and dose consequences associated with the loss of level or cooling to the Spent Fuel Pool, a response does not need to be as timely for a recently offloaded core. EM-104, OPERATION OF THE OPERATIONAL SUPPORT CENTER (OSC), defines the method of calling out the Emergency Repairs Team members to respond to an emergency. Staffing levels are considered guidance in this procedure and total staffing is dictated by the required response directed by the TSC. Based on current callout methods and expectations of response times, this method will provide adequate personnel within the required response period.

NOTE: Subsequent to the processing of this commitment change, the NRC issued License Amendment 246, which permitted CR-3 to implement the Permanently Defueled Emergency Plan (PDEP). As part of the PDEP implementation, procedure EM-104 referenced in this commitment change justification was superseded by procedure EM-501, Operation of the Emergency Support Center (ESC). EM-501 continues to address responsibilities of the ERO in identifying and contacting supplemental support resources needed in the event of a fire.

**Nuclear Operations Commitment System (NOCS) Number: 100534**

**Source Document:**

CR-3 to NRC letter, 3F0505-06, dated May 31, 2005.

**Original Commitment:**

Develop a new CR-3 fire-fighting strategy for large area fires. Create a fire-fighting strategy document.

**Modify/Inactivate Commitment:**

INACTIVATE: This commitment is no longer required due to the permanent defueled condition of CR-3. A large area fire will no longer jeopardize safety of the public due to the amount of time it requires for the pool to reach 10 feet above the top of the fuel due to boiling and evaporation.

**Justification for Change:**

Commission Interim Compensatory Measures (ICM) Order (EA-02-026), was issued following the events of September 11, 2001, as part of a comprehensive effort by the NRC, in coordination with other government agencies, to improve the capabilities of commercial nuclear reactor facilities to respond to terrorist threats. The ICM Order, required licensees to develop specific guidance and strategies to maintain or restore core cooling, containment, and spent fuel pool cooling capabilities using existing or readily available resources (equipment and personnel) that could be effectively implemented under the circumstances associated with loss of large areas of the plant due to explosions or fire, include those that an aircraft impact might create. Based on a letter dated August 27, 2007 titled "Crystal River Unit 3 Nuclear Generating Plant – Conforming License Amendment to Incorporate the Mitigation Strategies Required by Section B.5.b. of Commission Order EA-02-026" (3N0807-07), Appendix A section B.2.c, the performance goal related to this commitment is "Evaluate the adequacy of established plant procedures or the need to establish other procedures or SAMGs like format documents that would be used to document the details of the strategies and guidance for fire-fighting and recovery operations. Included within these documents should be ways to refill coolant makeup tanks and the identification of penetrations communicating with the primary system that could be isolated remotely from the control room and/or remote locations to minimize coolant loss. An example of addressing the issue of minimizing coolant loss for BWRs is the isolation of the Reactor Water Cleanup System outlet isolation valve, which would be a recovery action either as part of pre-event notification strategy or as a potential immediate action early in the event response." Item B.2.c was deferred to Phase 3 of B.5.b implementation though the commitment was made in Phase 1. Phase 3 guidance contained in NRC letter 3N0807-07 Appendix C shows further clarification of this performance goal: "Procedures are developed for Command and Control (initial response Extensive Damage Mitigation Guidelines) and for accomplishing the following safety functions:

RCS Inventory Control  
RCS Heat Removal  
Containment Isolation  
Containment Integrity  
Release Mitigation"

By letter from the NRC to Florida Power Corporation (FPC) 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" (ADAMS Accession No. ML 13058A380), the NRC acknowledged CR-3's certification of permanent cessation of power operation and permanent removal of fuel from the reactor vessel. Accordingly, pursuant to 10 CFR 50.82(a)(2), the 10 CFR Part 50 license for CR-3 no longer authorizes operation of the reactor or emplacement or retention of fuel in the reactor vessel. Based on this letter, the only fuel damage that can occur would be resultant of damage to the spent fuel pool or loss of spent fuel pool cooling. CR-3 Spent Fuel Pool Time to Uncover Fuel Analysis (F13-0003) showed a Time to Boil is 10 days with a 6.1 gpm boil-off-rate based on the existing Spent Fuel decay heat levels. The calculation also showed a 23 day time to boil down to 142.88 ft elevation and 33.5 days to 134 ft elevation. Analysis has also shown a complete loss of inventory in the Spent Fuel Pool would not result in cladding temperature above the point of the onset of rapid oxidation (a Zirconium fire) and the surface temperature of the cladding will remain below the fuel clad swell temperature, due to adequate natural circulation and heat rejection through the walls and roof of the Fuel Handling Building (Ref 3F0913-04). Also EC 92486 evaluated the time to reach 212 degrees F on July 1, 2013 with very conservative assumptions and showed 4.4 days and 19.9 days to boil the inventory to 10 ft. above the fuel storage rack. EC 92486 also identified an additional method of replenishing SF pool inventory on an extended loss of SF Pool Cooling using SF Cooling system valves located on AB elevations 143 ft. (SFV-122) and 119 ft. (SFV-129) (Ref 3F0913-04). This guidance has been incorporated in procedures AAG-005 and AAG-009. The NEI 06-12 defined external and internal strategies for SF pool makeup and SF pool spray are still available using the Portable Powered Independent Pump (PPIP) with a unlimited supply of water from the Gulf of Mexico or Fire Service System with additional water supply from other facilities (CR-1 and CR-2).

This commitment is made to develop an initial response EDMG. The primary goal of this is to create a command structure to be utilized during a large area fire. EM-202, duties of the Emergency Coordinator lists the following as a responsibility of the Emergency Coordinator: During certain emergencies (e.g., security-related events, large area fire), the Crystal River Energy Complex Emergency Response Coordinator may establish an Incident Command Post (ICP). In the event an ICP is established, the Emergency Coordinator may assign Operations personnel to staff the ICP to support its function and to provide liaison between CR-3 Operations and off-site response agencies (e.g., local law enforcement, fire/rescue, emergency medical, etc.). The Emergency Coordinator has overall responsibility for the site during an emergency situation and has direction to create a command structure when interfacing with offsite agencies. The EC will continue to create the appropriate command structure with available resources to provide interface with offsite agencies. Based on the condition of the plant and significant time from the onset of a B.5.b event to respond to such an event, the specific qualifications and personnel specified to staff these positions are not required. The extra planning time available removes the need for preplanning activities to occur.

NOTE: Subsequent to the processing of this commitment change, the NRC issued License Amendment 246, which permitted CR-3 to implement the Permanently Defueled Emergency Plan (PDEP). As part of the PDEP implementation, procedure EM-202 referenced in this commitment change justification was superseded by procedure EM-502, Conduct of the Emergency Coordinator. EM-502 continues to address responsibilities of the Emergency Coordinator and the Emergency Response Coordinator with respect to determining strategy and resource needs in the event of a large area fire.

**Nuclear Operations Commitment System (NOCS) Number: 100535**

**Source Document:**

CR-3 to NRC letter, 3F0505-06, dated May 31, 2005.

**Original Commitment:**

Evaluate and develop, as necessary, additional accident assessment guides for alternate DC source or manually starting systems on loss of power.

**Modify/Inactivate Commitment:**

INACTIVATE: This commitment is no longer required due to the permanent defueled condition of CR-3. A large area fire will no longer jeopardize safety of the public due to the amount of time it requires for the pool to reach 10 feet above the top of the fuel due to boiling and evaporation.

**Justification for Change:**

Commission Interim Compensatory Measures (ICM) Order (EA-02-026), was issued following the events of September 11, 2001, as part of a comprehensive effort by the NRC, in coordination with other government agencies, to improve the capabilities of commercial nuclear reactor facilities to respond to terrorist threats. The ICM Order, required licensees to develop specific guidance and strategies to maintain or restore core cooling, containment, and spent fuel pool cooling capabilities using existing or readily available resources (equipment and personnel) that could be effectively implemented under the circumstances associated with loss of large areas of the plant due to explosions or fire, include those that an aircraft impact might create. Based on a letter dated August 27, 2007 titled "Crystal River Unit 3 Nuclear Generating Plant – Conforming License Amendment to Incorporate the Mitigation Strategies Required by Section B.5.b. of Commission Order EA-02-026" (3N0807-07), Appendix A section B.2.f, the performance goal related to this commitment is "Develop an additional Operational Contingency Action Guidance to be considered for compensatory functions in the event of loss of normal and emergency plant systems"

By letter from the NRC to Florida Power Corporation (FPC) 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" (ADAMS Accession No. ML 13058A380), the NRC acknowledged CR-3's certification of permanent cessation of power operation and permanent removal of fuel from the reactor vessel. Accordingly, pursuant to 10 CFR 50.82(a)(2), the 10 CFR Part 50 license for CR-3 no longer authorizes operation of the reactor or emplacement or retention of fuel in the reactor vessel. Based on this letter, the only fuel damage that can occur would be resultant of damage to the spent fuel pool or loss of spent fuel pool cooling. CR-3 Spent Fuel Pool Time to Uncover Fuel Analysis (F13-0003) showed a Time to Boil is 10 days with a 6.1 gpm boil-off-rate based on the existing Spent Fuel decay heat levels. The calculation also showed a 23 day time to boil down to 142.88 ft elevation and 33.5 days to 134 ft elevation. Analysis has also shown a complete loss of inventory in the Spent Fuel Pool would not result in cladding temperature above the point of the onset of rapid oxidation (a Zirconium fire) and the surface temperature of the cladding will remain below the fuel clad

swell temperature, due to adequate natural circulation and heat rejection through the walls and roof of the Fuel Handling Building (Ref 3F0913-04). Also EC 92486 evaluated the time to reach 212 degrees F on July 1, 2013 with very conservative assumptions and showed 4.4 days and 19.9 days to boil the inventory to 10 ft. above the fuel storage rack. EC 92486 also identified an additional method of replenishing SF pool inventory on an extended loss of SF Pool Cooling using SF Cooling system valves located on AB elevations 143 ft. (SFV-122) and 119 ft. (SFV-129) (Ref 3F0913-04). This guidance has been incorporated in procedures AAG-005 and AAG-009. The NEI 06-12 defined external and internal strategies for SF pool makeup and SF pool spray are still available using the Portable Powered Independent Pump (PIIP) with a unlimited supply of water from the Gulf of Mexico or Fire Service System with additional water supply from other facilities (CR-1 and CR-2). Additionally, calculation N13-0002, draws the conclusion that for the worst case outside design basis loss of all inventory in the spent fuel pool, that the site dose boundary limits cannot be reached. Based on the above time related to loss of cooling which would result from the loss of power conditions described in the SER, the time to mitigate a loss of power is significant enough to allow for ERO activation, staffing, planning, and actions taken prior to any significant consequences from a B.5.b event.

**Nuclear Operations Commitment System (NOCS) Number: 100536**

**Source Document:**

CR-3 to NRC letter, 3F0505-06, dated May 31, 2005.

**Original Commitment:**

Evaluate feasibility of starting an Emergency Diesel Generator (EDG) without DC power, if feasible, then develop an accident assessment guide for starting an EDG without DC power.

**Modify/Inactivate Commitment:**

INACTIVATE: This commitment is no longer required due to the permanent defueled condition of CR-3. A large area fire will no longer jeopardize safety of the public due to the amount of time it requires for the pool to reach 10 feet above the top of the fuel due to boiling and evaporation. No equipment or actions are necessary to immediately mitigate this event.

**Justification for Change:**

Commission Interim Compensatory Measures (ICM) Order (EA-02-026), was issued following the events of September 11, 2001, as part of a comprehensive effort by the NRC, in coordination with other government agencies, to improve the capabilities of commercial nuclear reactor facilities to respond to terrorist threats. The ICM Order, required licensees to develop specific guidance and strategies to maintain or restore core cooling, containment, and spent fuel pool cooling capabilities using existing or readily available resources (equipment and personnel) that could be effectively implemented under the circumstances associated with loss of large areas of the plant due to explosions or fire, include those that an aircraft impact might create. Based on a letter dated August 27, 2007 titled "Crystal River Unit 3 Nuclear Generating Plant – Conforming License Amendment to Incorporate the Mitigation Strategies Required by Section B.5.b. of Commission Order EA-02-026" (3N0807-07), Appendix A section B.2.g, the performance goal related to this commitment is "The purpose of this expectation is to reassess the availability of alternate capabilities and readily available equipment that may provide sources of power under the conditions generated by large fires and explosions, and to identify if additional sources exist." Item B.2.g was deferred to Phase 3 of B.5.b implementation though the commitment was made in Phase 1. Phase 3 guidance contained in NRC Letter 3N0807-07 Appendix C shows further clarification of this performance goal:

Measure	Procedures available to start EDG without dc power
Summary of Strategy	Procedures exist to start EDGs without dc power.
Measure	Procedures available to start RCIG or AFW pump without dc power
Summary of Strategy	Procedures exist to start Emergency Feedwater (EFW) without dc power.
Measure	Procedures provide for use of an onsite/offsite fire pumper to provide alternate supply of low pressure water for core cooling and makeup water to the SFP
Summary of Strategy	Procedures exist to use a fire pumper to provide alternative supply of low

	pressure water for makeup to the spent fuel pool. Use of external low pressure fire water for core cooling via the steam generators (OTSGs) will be proceduralized as part of the CR-3 response to Phase 3.
Measure	<i>This measure was addressed by the Phase 3 assessment</i> Strategies and procedures are developed to mitigate large fires and explosions that may damage the reactor core and containment
Summary of Strategy	Strategies and procedures are developed for Command and Control (initial response Extensive Damage Mitigation Guidelines) and for accomplishing the following safety functions: <ul style="list-style-type: none"> <li>RCS Inventory Control</li> <li>RCS Heat Removal</li> <li>Containment Isolation</li> <li>Containment Integrity</li> <li>Release Mitigation</li> </ul>

This commitment was to meet the first measure described in the Phase 3 measures associated with this Phase 1 item.

By letter from the NRC to Florida Power Corporation (FPC) 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” (ADAMS Accession No. ML 13058A380), the NRC acknowledged CR-3’s certification of permanent cessation of power operation and permanent removal of fuel from the reactor vessel. Accordingly, pursuant to 10 CFR 50.82(a)(2), the 10 CFR Part 50 license for CR-3 no longer authorizes operation of the reactor or emplacement or retention of fuel in the reactor vessel. Based on this letter, the only fuel damage that can occur would be resultant of damage to the spent fuel pool or loss of spent fuel pool cooling. CR-3 Spent Fuel Pool Time to Uncover Fuel Analysis (F13-0003) showed a Time to Boil is 10 days with a 6.1 gpm boil-off-rate based on the existing Spent Fuel decay heat levels. The calculation also showed a 23 day time to boil down to 142.88 ft elevation and 33.5 days to 134 ft elevation. Analysis has also shown a complete loss of inventory in the Spent Fuel Pool would not result in cladding temperature above the point of the onset of rapid oxidation (a Zirconium fire) and the surface temperature of the cladding will remain below the fuel clad swell temperature, due to adequate natural circulation and heat rejection through the walls and roof of the Fuel Handling Building (Ref 3F0913-04). Also EC 92486 evaluated the time to reach 212 degrees F on July 1, 2013 with very conservative assumptions and showed 4.4 days and 19.9 days to boil the inventory to 10 ft. above the fuel storage rack. EC 92486 also identified an additional method of replenishing SF pool inventory on an extended loss of SF Pool Cooling using SF Cooling system valves located on AB elevations 143 ft. (SFV-122) and 119 ft. (SFV-129) (Ref 3F0913-04). This guidance has been incorporated in procedures AAG-005 and AAG-009. The NEI 06-12 defined external and internal strategies for SF pool makeup and SF pool spray are still available using the Portable Powered Independent Pump (PIIP) with a unlimited supply of water from the Gulf of Mexico or Fire Service System with additional water supply from other facilities (CR-1 and CR-2). Additionally, calculation N13-0002, draws the conclusion that for the worst case outside design basis loss of all inventory in the spent fuel pool, that the site dose boundary limits cannot be reached. Based on the above time related to loss of cooling which would result from the loss of power conditions described in the SER, the time to mitigate a loss of power is significant enough to allow for ERO activation, staffing, planning, and actions taken prior to any significant consequences from a B.5.b event.



**Nuclear Operations Commitment System (NOCS) Number: 100538**

**Source Document:**

CR-3 to NRC letter, 3F0505-06, dated May 31, 2005.

**Original Commitment:**

Evaluate if Operations staff should be sheltered at diverse locations. If so, then revise applicable procedures as appropriate.

**Modify/Inactivate Commitment:**

INACTIVATE: This commitment is no longer required due to the permanent defueled condition of CR-3.

**Justification for Change:**

Commission Interim Compensatory Measures (ICM) Order (EA-02-026), was issued following the events of September 11, 2001, as part of a comprehensive effort by the NRC, in coordination with other government agencies, to improve the capabilities of commercial nuclear reactor facilities to respond to terrorist threats. The ICM Order, required licensees to develop specific guidance and strategies to maintain or restore core cooling, containment, and spent fuel pool cooling capabilities using existing or readily available resources (equipment and personnel) that could be effectively implemented under the circumstances associated with loss of large areas of the plant due to explosions or fire, include those that an aircraft impact might create. Based on a letter dated August 27, 2007 titled "Crystal River Unit 3 Nuclear Generating Plant – Conforming License Amendment to Incorporate the Mitigation Strategies Required by Section B.5.b. of Commission Order EA-02-026" (3N0807-07), Appendix A section B.2.i, the performance goal related to this commitment is "Consider equipment survivability and personnel accessibility within plant areas potentially affected by the fire or explosion." Item B.2.i was deferred to Phase 3 of B.5.b implementation though the commitment was made in Phase 1. Phase 3 guidance contained in NRC Letter 3N0807-07, Appendix C, shows further clarification of this performance goal: "Strategies and procedures are developed to mitigate large fires and explosions that may damage reactor core and containment. Strategies and procedures are developed for Command and Control (initial response Extensive Damage Mitigation Guidelines) and for accomplishing the following safety functions:

RCS Inventory Control  
RCS Heat Removal  
Containment Isolation  
Containment Integrity  
Release Mitigation"

This commitment to create procedural dispersion of Operations personnel is based on shift staffing of an operating plant. The Fire Team Leader (RO) and Shift Technical Advisor (minimum SRO CERT) are separated from the Operating crew to provide Operations insight to the Emergency Response Organization to help prevent/mitigate damage to the reactor core and containment. By letter from the NRC to Florida Power Corporation (FPC) 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" (ADAMS Accession No. ML 13058A380), the NRC acknowledged CR-3's certification of permanent cessation of power operation and permanent removal of fuel from the reactor vessel. Accordingly, pursuant to 10 CFR 50.82(a)(2), the 10 CFR Part 50 license for CR-3 no longer authorizes operation of the reactor or emplacement or retention of fuel in the reactor vessel. Based on this fact, the dispersion of Operations personnel is not required to mitigate core damage, since core damage is no longer a plausible scenario.

**Nuclear Operations Commitment System (NOCS) Number: 100539**

**Source Document:**

CR-3 to NRC letter, 3F0505-06, dated May 31, 2005.

**Original Commitment:**

Evaluate availability of offsite equipment and implement use of identified offsite equipment.

**Modify/Inactivate Commitment:**

INACTIVATE: This commitment is no longer required due to the permanent defueled condition of CR-3.

**Justification for Change:**

Commission Interim Compensatory Measures (ICM) Order (EA-02-026), was issued following the events of September 11, 2001, as part of a comprehensive effort by the NRC, in coordination with other government agencies, to improve the capabilities of commercial nuclear reactor facilities to respond to terrorist threats. The ICM Order, required licensees to develop specific guidance and strategies to maintain or restore core cooling, containment, and spent fuel pool cooling capabilities using existing or readily available resources (equipment and personnel) that could be effectively implemented under the circumstances associated with loss of large areas of the plant due to explosions or fire, include those that an aircraft impact might create. Based on a letter dated August 27, 2007 titled "Crystal River Unit 3 Nuclear Generating Plant – Conforming License Amendment to Incorporate the Mitigation Strategies Required by Section B.5.b. of Commission Order EA-02-026" (3N0807-07), Appendix A section B.2.j, the performance goal related to this commitment is "Implement strategies for relying on portable and offsite equipment (some onsite and some offsite). In the development of the strategies, consider the types of specialized tooling and materials, and their storage locations, that would be necessary to support recovery efforts. Considerations should include: (1) the use of prefabricated and pre-staged cables, adapters, jumpers, spool pieces; (2) the equipment needed for primary/secondary system cooling and venting (including for PWRs the consideration of RCP seal leakage); and (3) obtaining information from primary and secondary system instruments." Item B.2.j was deferred to Phase 3 of B.5.b implementation though the commitment was made in Phase 1. Phase 3 guidance contained in NRC Letter 3N0807-07 Appendix C shows further clarification of this performance goal: "Strategies and procedures are developed to mitigate large fires and explosions that may damage reactor core and containment. Strategies and procedures are developed for Command and Control (initial response Extensive Damage Mitigation Guidelines) and for accomplishing the following safety functions:

RCS Inventory Control  
RCS Heat Removal  
Containment Isolation  
Containment Integrity  
Release Mitigation"

This commitment created procedural guidance for Operations and ERO personnel to utilize to understand likely available equipment based on the damage assessment and plant areas damaged. The item that is the source of this commitment focuses on mitigating core damage by focusing on primary and secondary systems for core cooling along with power supplies. By letter from the NRC to Florida Power Corporation (FPC) 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" (ADAMS Accession No. ML 13058A380), the NRC acknowledged CR-3's certification of permanent cessation of power operation and permanent removal of fuel from the reactor vessel. Accordingly, pursuant to 10 CFR 50.82(a)(2), the 10 CFR Part 50 license for CR-3 no longer authorizes operation of the reactor or emplacement or retention of fuel in the reactor vessel. Based on this fact, procedural guidance is not required to mitigate core damage, since core damage is no longer a plausible scenario.

**Nuclear Operations Commitment System (NOCS) Number: 100544**

**Source Document:**

CR-3 to NRC letter, 3F0206-05, dated February 23, 2006.

**Original Commitment:**

An additional 20 radios with spare batteries and chargers will be procured for operational recovery. The additional 20 radios will be located in the offsite Emergency Operations Facility.

**Modify/Inactivate Commitment:**

INACTIVATE: This commitment is no longer necessary as there is significant time from the onset of a B.5.b event to respond to such an event. The extra planning time available removes the need for pre-staging of this equipment.

**Justification for Change:**

Commission Interim Compensatory Measures (ICM) Order (EA-02-026), was issued following the events of September 11, 2001, as part of a comprehensive effort by the NRC, in coordination with other government agencies, to improve the capabilities of commercial nuclear reactor facilities to respond to terrorist threats. The ICM Order, required licensees to develop specific guidance and strategies to maintain or restore core cooling, containment, and spent fuel pool cooling capabilities using existing or readily available resources (equipment and personnel) that could be effectively implemented under the circumstances associated with loss of large areas of the plant due to explosions or fire, include those that an aircraft impact might create. Based on a letter dated August 27, 2007 titled "Crystal River Unit 3 Nuclear Generating Plant – Conforming License Amendment to Incorporate the Mitigation Strategies Required by Section B.5.b. of Commission Order EA-02-026" (3N0807-07), Appendix A section B.2.b, the performance goal related to this commitment is "Providing communication capabilities that ensures that established communications can facilitate the focus of fire/response teams on those plant operations necessary to mitigate fuel damage."

By letter from the NRC to Florida Power Corporation (FPC) 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" (ADAMS Accession No. ML 13058A380), the NRC acknowledged CR-3's certification of permanent cessation of power operation and permanent removal of fuel from the reactor vessel. Accordingly, pursuant to 10 CFR 50.82(a)(2), the 10 CFR Part 50 license for CR-3 no longer authorizes operation of the reactor or emplacement or retention of fuel in the reactor vessel. Based on this letter, the only fuel damage that can occur would be resultant of damage to the spent fuel pool or loss of spent fuel pool cooling. CR-3 Spent Fuel Pool Time to Uncover Fuel Analysis (F13-0003) showed a Time to Boil is 10 days with a 6.1 gpm boil-off-rate based on the existing Spent Fuel decay heat levels. The calculation also showed a 23 day time to boil down to 142.88 ft elevation and 33.5 days to 134 ft elevation. Analysis has also shown a complete loss of inventory in the Spent Fuel Pool would not result in cladding temperature above the point of the onset of rapid oxidation (a Zirconium fire) and the surface temperature of the cladding will remain below the fuel clad swell temperature, due to adequate natural circulation and heat rejection through the walls and

roof of the Fuel Handling Building (Ref 3F0913-04). Also EC 92486 evaluated the time to reach 212 degrees F on July 1, 2013 with very conservative assumptions and showed 4.4 days and 19.9 days to boil the inventory to 10 ft. above the fuel storage rack. EC 92486 also identified an additional method of replenishing SF pool inventory on an extended loss of SF Pool Cooling using SF Cooling system valves located on AB elevations 143 ft. (SFV-122) and 119 ft. (SFV-129) (Ref 3F0913-04). This guidance has been incorporated in procedures AAG-005 and AAG-009. The NEI 06-12 defined external and internal strategies for SF pool makeup and SF pool spray are still available using the Portable Powered Independent Pump (PPIP) with a unlimited supply of water from the Gulf of Mexico or Fire Service System with additional water supply from other facilities (CR-1 and CR-2). Therefore, there is significant time from the onset of a B.5.b event to respond to such an event. The extra planning time available removes the need for pre-staging of this equipment.