

**Levy Nuclear Plant Units 1 and 2**

**COL Application**

**Part 10**

**Proposed License Conditions  
(Including ITAAC)**

**Revision 7**

|

**Levy Nuclear Plant Units 1 and 2  
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Part 10, License Conditions and ITAAC**

## **Levy Nuclear Plant, Units 1 and 2 Proposed License Conditions**

### **1. ITAAC (Inspections, Tests, Analyses, and Acceptance Criteria):**

There are several ITAAC identified in the COLA. Once incorporated into the COL, the regulations identify the requirements that must be met. The incorporation below includes references to the sensitive unclassified non-safeguards information (including proprietary information) and safeguards information, contained in the AP1000 DCD. Such DCD information is included in this combined license application in the same manner as it is included in the AP1000 DCD, i.e., references in the DCD are included as references in the FSAR, and material incorporated by reference into the DCD is incorporated by reference into the FSAR. Appropriate agreements are in place to provide for the licensee's rights to possession (including constructive possession) and use of the withheld sensitive unclassified non-safeguards information (including proprietary information) and safeguards information referenced in the AP1000 DCD for the life of the project.

#### **PROPOSED LICENSE CONDITION:**

The ITAAC identified in the tables in Appendix B are hereby incorporated into this Combined License. After the Commission has made the finding required by 10 CFR 52.103(g), the ITAAC do not constitute regulatory requirements; except for specific ITAAC, which are the subject of a Section 103(a) hearing; their expiration will occur upon final Commission action in such proceeding.

### **2. COL HOLDER ITEMS:**

There are several COL information items that can not be resolved prior to issuance of the Combined License. The referenced AP1000 design certification has already justified why each COL Holder item (as identified in the AP1000 DCD Tier 2 Table 1.8-2) can not be resolved before the COL is issued, provides sufficient information on these items to support the NRC licensing decision, and identifies an appropriate implementation milestone. Each COL information item that cannot be resolved completely before the COL is issued is also identified as a COL Holder item in the COLA FSAR Table 1.8-202. Therefore, in accordance with the guidance in Regulatory Guide 1.206, Section C.III.4.3, the following License Condition is proposed to address these COL Holder items. Holder items (per DCD Table 1.8-2) that are addressed by the COLA are not included in the proposed condition. These include COL information item numbers 3.11-1, 9.5-6, 10.1-1, and 13.6-5.

#### **PROPOSED LICENSE CONDITION:**

Each COL Holder item identified below shall be completed by the identified implementation milestone through completion of the action therein identified.

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<b>COL Item No.</b>	<b>Subject</b>	<b>From DCD Tier 2 Subsection</b>	<b>Implementation Milestone</b>
3.6-1	As-Designed Pipe Rupture Hazards Analysis	3.6.4.1	Prior to installation of the piping and connected components in their final location
<p>After a Combined License is issued, the following activity will be completed by the COL holder. An as-designed pipe rupture hazard evaluation will be available for NRC review. The completed as-designed pipe rupture hazards evaluation will be in accordance with the criteria outlined in DCD Subsections 3.6.1.3.2 and 3.6.2.5. Systems, structures, and components identified to be essential targets and appropriate mitigation features (Reference is DCD Table 3.6-3) will be confirmed as part of the evaluation, and updated information will be provided as appropriate. A pipe rupture hazards analysis is part of the piping design. The evaluation will be performed for high and moderate energy piping to confirm the protection of systems, structures, and components (SSCs), which are required to be functional during and following a design basis event. The locations of the postulated ruptures and essential targets will be established and required pipe whip restraints and jet shield designs will be included. The evaluation will address environmental and flooding effects of cracks in high and moderate energy piping. The as-designed pipe rupture hazards evaluation is prepared on a generic basis to address COL applications referencing the AP1000 design.</p>			
3.7-3	Seismic Interaction Review	3.7.5.3	Prior to initial fuel load
<p>The seismic interaction review will be updated by the Combined License holder for as-built information. This review is performed in parallel with the seismic margin evaluation. The review is based on as-procured data, as well as the as-constructed condition. The as-built seismic interaction review is not provided with the COL application, but is completed prior to fuel load.</p>			
3.7-4	Reconciliation of Seismic Analyses of Nuclear Island Structures	3.7.5.4	Prior to initial fuel load
<p>The Combined License holder will reconcile the seismic analyses described in subsection 3.7.2 for detail design changes, such as those due to as-procured or as-built changes in component mass, center of gravity, and support configuration based on as-procured equipment information. Deviations are acceptable based on an evaluation consistent with the methods and procedure of Section 3.7 provided the amplitude of the seismic floor response spectra, including the effect due to these deviations, does not exceed the design basis floor response spectra by more than 10 percent. The Combined License holder will complete this reconciliation prior to fuel load.</p>			
3.9-7	As-Designed Piping Analysis	3.9.8.7	Prior to installation of the piping and connected components in their final location
<p>After a Combined License is issued, the following activity will be completed by the COL holder:</p> <p>The as-designed piping analysis is provided for the piping lines chosen to demonstrate all aspects of the piping design. A design report referencing the as-designed piping calculation packages, including ASME Section III piping analysis, support evaluations and piping component fatigue analysis for Class 1 piping using the methods and criteria outlined in DCD</p>			

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Table 3.9-19 is made available for NRC review. The availability of the piping design information and design reports for the piping packages is identified to the NRC.			
4.4-2	Confirm Assumptions for Safety Analyses DNBR Limits	4.4.7	Prior to initial fuel load
<p>Combined License applicants referencing the AP1000 certified design will address changes to the reference design of the fuel, burnable absorber rods, rod cluster control assemblies, or initial core design from that presented in the DCD.</p> <p>Following selection of the actual plant operating instrumentation and calculation of the instrumentation uncertainties of the operating plant parameters as discussed in subsection 7.1.6, Combined License applicants will calculate the design limit DNBR values using the RTDP with these instrumentation uncertainties and confirm that either the design limit DNBR values as described in Section 4.4 remain valid, or that the safety analysis minimum DNBR bounds the new design limit DNBR values plus DNBR penalties, such as rod bow penalty.</p>			
5.3-1	Reactor Vessel Pressure – Temperature Limit Curves	5.3.6.1	Prior to initial fuel load
The COL Holder shall update the P/T limits using the PTLR methodologies approved in the AP1000 DCD using the plant-specific material properties or confirm that the reactor vessel material properties meet the specifications and use the Westinghouse generic PTLR curves.			
5.3-4	Reactor Vessel Materials Properties Verification	5.3.6.4.1	Prior to initial fuel load
The Combined License holder will complete prior to fuel load verification of plant-specific belt line material properties consistent with the requirements in subsection 5.3.3.1 and Tables 5.3-1 and 5.3-3. The verification will include a pressurized thermal shock evaluation based on as-procured reactor vessel material data and the projected neutron fluence for the plant design objective of 60 years. This evaluation report will be submitted for NRC staff review.			
9.1-7	Coupon Monitoring Program	9.1.6	Prior to commercial operation
A spent fuel rack Metamic coupon monitoring program will be implemented when the plant is placed into commercial operation. This program will include tests to monitor bubbling, blistering, cracking, or flaking; and a test to monitor for corrosion, such as weight loss measurements and/or visual examination. The program will also include testing to monitor changes in physical properties of the absorber material, including neutron attenuation and thickness measurements.			
10.2-1	Turbine Maintenance and Inspection	10.2.6	Prior to initial fuel load
The Combined License holder will submit to the NRC staff for review prior to fuel load, and then implement a turbine maintenance and inspection program. The program will be consistent with the maintenance and inspection program plan activities and inspection intervals identified in subsection 10.2.3.6. The Combined License holder will have available plant-specific turbine rotor test data and calculated toughness curves that support the material property assumptions			

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	in the turbine rotor analysis after the fabrication of the turbine and prior to fuel load.		
13.6-5	Cyber Security Program	13.6.1	Prior to initial fuel load
	The Combined License holder will develop and implement a cyber security program prior to initial fuel load.		
14.4-2	Test Specifics and Procedures	14.4.2	Prior to initial fuel load
	NOTE –addressed by proposed License Condition #6.		
14.4-3	Conduct of Test Program	14.4.3	
	NOTE – addressed by proposed License Conditions #3 and #6.		
14.4-4	Review and Evaluation of Test Results	14.4.4	
	NOTE – addressed by proposed License Condition #9.		
14.4-6	First-Plant-Only and Three-Plant-Only Tests	14.4.6	
	NOTE – addressed by proposed License Conditions #7 and #9.		
15.0-1	Documentation of Plant Calorimetric Uncertainty Methodology	15.0.15.1	
	NOTE – addressed by proposed ITAAC Table 2.5.4-2, item 4.		
19.59.10-1	As-Built SSC HCLPF Comparison to Seismic Margin Evaluation	19.59.10.5	Prior to initial fuel load
	<p>The Combined License holder referencing the AP1000 certified design will review differences between the as-built plant and the design used as the basis for the AP1000 seismic margins analysis prior to fuel load. A verification walkdown will be performed with the purpose of identifying differences between the as-built plant and the design. Any differences will be evaluated and the seismic margins analysis modified as necessary to account for the plant-specific design, and any design changes or departures from the certified design. Spacial interactions are addressed by COL information item 3.7-3. Details of the process will be developed by the Combined License holder.</p> <p>The Combined License holder referencing the AP1000 certified design should compare the as-built SSC HCLPFs to those assumed in the AP1000 seismic margin evaluation prior to fuel load. Deviations from the HCLPF values or assumptions in the seismic margin evaluation due to the as-built configuration and final analysis should be evaluated to determine if vulnerabilities have been introduced. The requirements to which the equipment is to be purchased are included in the equipment specifications. Specifically, the equipment specifications include:</p> <ol style="list-style-type: none"> <li>1. Specific minimum seismic requirements consistent with those used to define the Table</li> </ol>		

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	<p>19.55-1 HCLPF values. This includes the known frequency range used to define the HCLPF by comparing the required response spectrum (RRS) and test response spectrum (TRS). The test response spectra are chosen so as to demonstrate that no more than one percent rate of failure is expected when the equipment is subjected to the applicable seismic margin ground motion for the equipment identified to be applicable in the seismic margin insights of the site-specific PRA. The range of frequency response that is required for the equipment with its structural support is defined.</p> <p>2. Hardware enhancements that were determined in previous test programs and/or analysis programs will be implemented.</p>		
19.59.10-2	Evaluation of As-Built Plant Versus Design in AP1000 PRA and Site-Specific PRA External Events	19.59.10.5	Prior to initial fuel load
<p>The Combined License holder referencing the AP1000 certified design will review differences between the as-built plant and the design used as the basis for the AP1000 PRA and Table 19.59-18 prior to fuel load. The plant-specific PRA-based insight differences will be evaluated and the plant-specific PRA model modified as necessary to account for the plant-specific design and any design changes or departures from the design certification PRA.</p>			
19.59.10-3	Internal Fire and Internal Flood Analyses	19.59.10.5	Prior to initial fuel load
<p>The Combined License holder referencing the AP1000 certified design will review differences between the as-built plant and the design used as the basis for the AP1000 internal fire and internal flood analysis prior to fuel load. Plant-specific internal fire and internal flood analyses will be evaluated and the analyses modified as necessary to account for the plant-specific design and any design changes or departures from the certified design.</p>			
19.59.10-4	Implement Severe Accident Management Guidance	19.59.10.5	Prior to startup testing
NOTE - addressed by proposed License Condition #6.			
19.59.10-5	Equipment Survivability	19.59.10.5	Prior to initial fuel load
<p>The Combined License holder referencing the AP1000 certified design will perform a thermal lag assessment of the as-built equipment listed in Tables 6b and 6c in Attachment A of APP-GW-GLR-069 to provide additional assurance that this equipment can perform its severe accident functions during environmental conditions resulting from hydrogen burns associated with severe accidents. This assessment is performed prior to fuel load and is required only for equipment used for severe accident mitigation that has not been tested at severe accident conditions. The Combined License holder will assess the ability of the as-built equipment to perform during severe accident hydrogen burns using the Environment Enveloping method or the Test Based Thermal Analysis method discussed in EPRI NP-4354.</p>			

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**3. OPERATIONAL PROGRAM IMPLEMENTATION:**

The provisions of the regulations address implementation milestones for some operational programs. The NRC will use license conditions to ensure implementation for those operational programs whose implementation is not addressed in the regulations. FSAR Subsection 13.4, Table 13.4-201, identifies several programs required by regulations that must be implemented by a milestone to be identified in a license condition.

**PROPOSED LICENSE CONDITION:**

The licensee shall implement the programs or portions of programs identified below on or before the associated milestones identified below.

- A. Construction Initiation – The licensee shall implement each operational program identified below prior to initiating construction of nuclear safety or security related structures, systems, or components.
  - None Identified.
  
- B. 18 Months Prior to Fuel Load – The licensee shall implement each operational program identified below at least 18 months prior to scheduled date of initial fuel load.
  - B.1 – Reactor Operator Training
  
- C. Receipt of Materials – The licensee shall implement each operational program identified below prior to initial receipt of byproduct, source, or special nuclear materials on-site (excluding Exempt Quantities as described in 10 CFR 30.18).
  - C.1 – Radiation Protection (applicable portions)
  - C.2 – Fire Protection Program (applicable portions)
  - C.3 – Non Licensed Plant Staff Training Program (applicable portions)
  - C.4 – Deleted
  - C.5 – Deleted
  - C.6 – Deleted
  - C.7 – SNM Material Control and Accounting Program
  
- D. Fuel Receipt – The licensee shall implement each operational program identified below prior to initial receipt of fuel on-site.
  - D.1 – Fire Protection (applicable portions)
  - D.2 – Radiation Protection (applicable portions)
  - D.3 – Special Nuclear Material Physical Protection Program
  - D.4 – Deleted
  - D.5 – Deleted
  
- E. Construction Testing – The licensee shall implement each operational program identified below prior to initial construction testing.
  - E.1 – Initial Test Program – Construction Testing
  
- F. Preoperational Testing – The licensee shall implement each operational program identified below prior to initial preoperational testing.
  - F.1 – Initial Test Program – Preoperational Testing

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- G. Fuel Loading – The licensee shall implement each operational program identified below prior to initial fuel load.
  - G.1 – Environmental Qualification
  - G.2 – Pre-Service Testing
  - G.3 – Process and Effluent Monitoring and Sampling
  - G.4 – Radiation Protection (applicable portions)
  - G.5 – Motor-Operated Valve Testing
  - G.6 – Fire Protection
  - G.7 – Deleted
  - G.8 – Containment Leakage Rate Testing
  - G.9 – Physical Security
  - G.10 – Cyber Security
  
- H. Startup Testing – The licensee shall implement each operational program identified below prior to initial startup testing.
  - H.1 – Initial Test Program – Startup Testing
  
- I. MODE 4 – Not used.
  
- J. Initial Criticality – The licensee shall implement each operational program identified below prior to initial criticality.
  - J.1 – Reactor Vessel Material Surveillance
  
- K. Waste Shipment – The licensee shall implement each operational program identified below prior to initial radioactive waste shipment.
  - K.1 – Radiation Protection

**4. POST-COL TESTING:**

COLA FSAR Subsection 3.8.5.11 specifies certain post COL testing that must be completed 180-days prior to construction.

**PROPOSED LICENSE CONDITION:**

The licensee will complete 180-days prior to construction, the 90-day test report for the Strength Verification and Constructability Testing in accordance with the criteria outlined in FSAR Subsection 3.8.5.11.3 and make it available to the NRC.

**5. SECURITY PROGRAM:**

**A. SECURITY PROGRAM IMPLEMENTATION:**

An implementation license condition approved in the SRM regarding SECY-05-0197 applies to the Security Program.

**PROPOSED LICENSE CONDITION:**

The licensee shall maintain in effect the provisions of the physical security plan, security personnel training and qualification plan, safeguards contingency plan, and cyber security plan, and all amendments made pursuant to the authority of 10 CFR 50.90, 50.54(p), 52.97,



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and Section VIII of Appendix D to Part 52 when nuclear fuel is onsite (protected area), and continuing until all nuclear fuel is permanently removed from the site.

**B. SPECIAL NUCLEAR MATERIAL PHYSICAL PROTECTION:**

A license condition is proposed to address when the boundary for physical protection of new fuel as SNM is required to be extended from the controlled access area (CAA) in accordance with the requirements of 10 CFR 73.67 to the operational protected area (PA) in accordance with 10 CFR 73.55.

**PROPOSED LICENSE CONDITION:**

The licensee shall receive and store new fuel as SNM in a controlled access area (CAA) in accordance with the requirements of 10 CFR 73.67, until such time as an operational protected area (PA) that satisfies the requirements of 10 CFR 73.55(e)(8) is established. If new fuel is already stored in a CAA that is within the boundary of the proposed PA, then upon declaration of an operational PA, the remaining requirements of 10 CFR 73.55 shall be implemented. The PA shall be established and declared operational prior to initial fuel load.

**6. OPERATIONAL PROGRAM READINESS:**

The NRC inspection of operational programs will be the subject of the following license condition in accordance with SECY-05-0197.

**PROPOSED LICENSE CONDITION:**

The licensee shall submit to the appropriate Director of the NRC, a schedule, no later than 12 months after issuance of the COL, that supports planning for and conduct of NRC inspections of operational programs listed in the operational program FSAR Table 13.4-201. The schedule shall be updated every 6 months until 12 months before scheduled fuel loading, and every month thereafter until either the operational programs in the FSAR table have been fully implemented, or the plant has been placed in commercial service, whichever comes first. This schedule shall also address:

- a. the emergency planning implementation procedures to the NRC consistent with 10 CFR Part 50, Appendix E, Section V.
- b. the implementation of site specific Severe Accident Management Guidance.
- c. the reactor vessel pressurized thermal shock evaluation at least 18 months prior to initial fuel load.
- d. the approved preoperational and startup test procedures (including the site-specific startup administration manual (procedure) prior to initiating the plant initial test program) in accordance with FSAR Subsection 14.2.3.
- e. the flow accelerated corrosion (FAC) program implementation, including the construction phase activities.

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- f. full implementation of the operational and programmatic elements of responding to an event associated with a loss of large areas of the plant due to explosions or fire, prior to initial fuel load.
- g. the spent fuel rack Metamic coupon monitoring program implementation.
- h. the implementation of construction and inspection procedures for steel concrete composite (SC) construction activities for seismic Category I nuclear island modules (including shield building SC modules) before and after concrete placement, and inspection of such construction before and after concrete placement.
- i. the availability of documented instrumentation uncertainties to calculate a power calorimetric uncertainty, prior to initial fuel load.
- j. the availability of administrative controls to implement maintenance and contingency activities related to the power calorimetric uncertainty instrumentation, prior to initial fuel load.

**7. FIRST-PLANT-ONLY AND FIRST-THREE-PLANT-ONLY TESTING:**

Certain design features of the AP1000 plant will be subjected to special tests to establish unique phenomenological performance parameters of the AP1000 design. Because of the standardization of the AP1000 design, these special tests (designated as first-plant-only tests and first-three-plant-only tests) are not required on subsequent plants. Once these tests are completed by the first plant (or first three plants) and appropriate documentation identified, the subsequent plants need only reference the applicable documentation to show that the first plant (or first three plants) completed the required testing. Accordingly, the following license condition is proposed:

First-Plant-Only and First-Three-Plant-Only Testing

A licensee shall provide written identification of the applicable references for documentation for the completion of the testing to the Director of the Office of New Reactors (or equivalent NRC management) within thirty (30) calendar days of the licensee confirmation of acceptable test results..

Subsequent plant licensees crediting completion of testing by the first-plant or by the first-three-plants shall provide a report referencing the applicable documentation identified by the first (or first three) plant(s) confirming the testing to the Director of the Office of New Reactors (or equivalent NRC management). This report shall be provided to NRC either prior to initiation of pre-operational testing, or within sixty (60) days of the identification of the documentation for the completion of the testing by the first plant (or third plant, as appropriate), whichever is later.

**8. STARTUP TESTING:**

COLA FSAR Section 14.2 specifies certain startup tests that must be completed after fuel load. Operating licenses typically have included the following condition related to startup testing.

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**PROPOSED LICENSE CONDITION:**

Any changes to the Initial Startup Test Program described in Chapter 14 of the FSAR made in accordance with the provisions of 10 CFR 50.59 or Section VIII of Appendix D to 10 CFR Part 52 shall be reported in accordance with 50.59(d) within one month of such change.

**9. STARTUP PROGRAM TEST RESULTS:**

Certain milestones within the startup testing phase of the initial test program (i.e., pre-critical testing, criticality testing, and low-power [ $<5\%$  RTP] testing) are controlled through license conditions to ensure that relevant test results are reviewed, evaluated, and approved by the designated licensee management before proceeding with the power ascension test phase. Accordingly, the following license conditions are proposed:

Pre-operational Testing

Following completion of pre-operational testing, the licensee shall review and evaluate individual test results. Test exceptions or results which do not meet acceptance criteria are identified to the affected and responsible organizations, and corrective actions and retests, as required, are performed.

Pre-critical and Criticality Testing

1. Following completion of pre-critical and criticality testing, the licensee shall review and evaluate individual test results. Test exceptions or results which do not meet acceptance criteria are identified to the affected and responsible organizations, and corrective actions and retests, as required, are performed.
2. The licensee shall provide written notification to the Director of the Office of New Reactors (or equivalent NRC management) within fourteen (14) calendar days of completion of the pre-critical and criticality testing.

Low-Power ( $<5\%$  RTP) Testing

1. Following completion of low-power ( $<5\%$  RTP) testing, the licensee shall review and evaluate individual test results. Test exceptions or results which do not meet acceptance criteria are identified to the affected and responsible organizations, and corrective actions and retests, as required, are performed.
2. The licensee shall provide written notification to the Director of the Office of New Reactors (or equivalent NRC management) within fourteen (14) calendar days of completion of the low-power testing.

At-Power (5%–100% RTP) Testing

1. Following completion of at-power testing (at or above 5% RTP up to and including testing at 100% RTP), the licensee shall review and evaluate individual test results. Test exceptions or results which do not meet acceptance criteria are identified to the affected and responsible organizations, and corrective actions and retests, as required, are performed.
2. The licensee shall provide written notification to the Director of the Office of New Reactors (or equivalent NRC management) within fourteen (14) calendar days of completion of the at-power testing.

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**10. ENVIRONMENTAL PROTECTION PLAN:**

Operating licenses typically have included the following condition related to environmental protection.

**PROPOSED LICENSE CONDITION:**

The issuance of this COL, subject to the Environmental Protection Plan and the conditions for the protection of the environment set forth herein, is in accordance with the National Environmental Policy Act of 1969, as amended, and with applicable sections of 10 CFR Part 51, "Environmental Protection Regulations for Domestic Licensing and Related Regulatory Functions," as referenced by Subpart C of 10 CFR Part 52, "Early Site Permits; Standard Design Certifications; and Combined Licenses for Nuclear Power Plants," and all applicable requirements therein have been satisfied.

**11. EMERGENCY PLANNING ACTIONS:**

The COL Application does not contain final versions of some implementation aspects of emergency planning such as EALs and Letters of Agreement because the information will not be developed until it is necessary to implement those aspects of the plan. Thus, COL applicants are proposing the following license condition.

**PROPOSED LICENSE CONDITION:**

- A. Duke Energy Florida (DEF) shall submit a fully developed set of site-specific Emergency Action Levels (EALs) for Levy Units 1 [Unit 2] to the NRC in accordance with NEI 07-01 revision 0, with no deviations. These EALs shall have been discussed and agreed upon with State and local officials. These fully developed EALs shall be submitted to the NRC for confirmation at least 180 days prior to initial fuel load.
- B. Deleted.
- C. Prior to the full-participation exercise to be conducted in accordance with the requirements of Appendix E to 10 CFR Part 50, DEF will have available for NRC inspection the Letters of Agreement established with the following entities:
  - a. Florida Division of Emergency Management
  - b. Citrus County, Florida Emergency Management Agency
  - c. Levy County, Florida Emergency Management Agency
  - d. Marion County, Florida Emergency Management Agency
  - e. Citrus Memorial Hospital
  - f. Seven Rivers Regional Medical Center
  - g. Citrus County, Department of Public Safety Fire Rescue Division
  - h. Nature Coast Emergency medical Services Fire Department

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These Letters of Agreement shall specify the emergency measures to be provided in support of the LNP emergency organization to include response to a hostile action event at the site; the mutually acceptable criteria and availability of adequate resources for their implementation; and arrangements for the exchange of information.

- D. Prior to the full-participation exercise to be conducted in accordance with the requirements of Appendix E to 10 CFR Part 50, DEF will demonstrate the integrated capability and functionality of the Emergency Operations Facility for simultaneous-dual activation of the Facility by the LNP and Crystal River Unit 3 Emergency Response Organizations for a simulated emergency condition. Integrated communication and data capability and functionality will include the LNP and Crystal River Technical Support Center, NRC site-teams, NRC Incident Response Centers, and other Federal, State, and local coordination centers as appropriate.
- E. DEF shall distribute the initial LNP public information publications, consistent with the LNP Emergency Plan, within 180 days prior to fuel load at LNP. DEF must coordinate the development, initial and annual redistribution, and maintenance of this information with CR3 as long as the NRC requires CR3 to distribute public information publications.
- F. At least two (2) years prior to scheduled initial fuel load, DEF shall have performed an assessment of emergency response staffing in accordance with NEI 10-05, "Assessment of On-Shift Emergency Response Organization Staffing and Capabilities", Revision 0.

**12. FUKUSHIMA RESPONSE ACTIONS:**

The implementation of applicable Fukushima response actions not completed prior to license issuance will be the subject of the following license condition:

**PROPOSED LICENSE CONDITION:**

**A. MITIGATION STRATEGIES FOR BEYOND-DESIGN-BASIS EXTERNAL EVENTS**

Prior to initial fuel load, the Licensee shall address the following requirements using the guidance contained in JLD-ISG-2012-01, Compliance with Order EA-12-049, Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events, Revision 0:

- a. The Licensee shall develop, implement, and maintain guidance and strategies to maintain or restore core cooling, containment and spent fuel pool cooling capabilities following a beyond-design-basis external event.
- b. These strategies must be capable of mitigating a simultaneous loss of all ac power and loss of normal access to the normal heat sink and have adequate capacity to address challenges to core cooling, containment, and spent fuel pool cooling capabilities at all units on the LNP site.
- c. The Licensee must provide reasonable protection for the associated equipment from external events. Such protection must demonstrate that there is adequate capacity to address challenges to core cooling, containment, and spent fuel pool cooling capabilities at all units on the LNP site.

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- d. The Licensee must be capable of implementing the strategies in all modes.
- e. Full compliance shall include procedures, guidance, training, and acquisition, staging, or installing of equipment needed for the strategies.

The Licensee shall, at least one (1) year before the latest date set forth in the schedule for completing the inspections, tests, and analyses in the ITAAC submitted in accordance with 10 CFR 52.99(a), develop an overall integrated plan, including a description of how compliance with the requirements described in this license condition will be achieved.

**B. RELIABLE SPENT FUEL POOL LEVEL INSTRUMENTATION**

Prior to initial fuel load, DEF shall fully implement the following requirements for spent fuel pool level indication using the guidance contained in JLD-ISG-2012-03, Compliance with Order EA-12-051, Reliable Spent Fuel Pool Instrumentation, Revision 0.

The spent fuel pool instrumentation shall be maintained available and reliable through the development and implementation of a training program. The training program shall include provisions to ensure trained personnel can route the temporary power lines from the alternate power source to the appropriate connection points and connect the alternate power source to the safety-related level instrument channels.

**C. EMERGENCY PLANNING ACTIONS**

The Licensee will fully implement the following requirements for emergency planning actions related to communications and staffing.

Communications:

At least two (2) years before the latest date set forth in the schedule for completing the inspections, tests, and analyses in the ITAAC submitted in accordance with 10 CFR 52.99(a), the Licensee shall have performed an assessment of on-site and off-site communications systems and equipment relied upon during an emergency event to ensure communications capabilities can be maintained during an extended loss of ac power. The communications capability assessment shall be performed in accordance with NEI 12-01, "Guideline for Assessing Beyond Design Basis Accident Response Staffing and Communications Capabilities," Revision 0.

At least one hundred eighty (180) days before the date scheduled for initial fuel load, set forth in the notification submitted in accordance with 10 CFR 52.103(a), the Licensee shall complete implementation of corrective actions identified in the communications capability assessment described above, including any related emergency plan and implementing procedure changes and associated training.

Staffing:

At least two (2) years before the latest date set forth in the schedule for completing the inspections, tests, and analyses in the ITAAC submitted in accordance with 10CFR52.99(a), the

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Licensee shall have performed assessments of the on-site and augmented staffing capability to satisfy the regulatory requirements for responding to a multi-unit event. The staffing assessments shall be performed in accordance with NEI 12-01, Revision 0.

At least 180 days before the date scheduled for initial fuel loading set forth in the notification submitted in accordance with 10 CFR 52.103(a), the Licensee shall revise the LNP Emergency Plan to include the following:

- Incorporation of corrective actions identified in the staffing assessments required by this condition; and
- Identification of how the augmented staff will be notified given degraded communications capabilities.

**13. RADWASTE BUILDING RADIOACTIVITY LIMITS**

**PROPOSED LICENSE CONDITION:**

Prior to initial fuel load, the licensee shall develop, implement, and maintain procedural controls limiting radionuclide inventory in each of the Radwaste Building Monitor Tanks, and separately in each of up to three (3) Radwaste Building mobile radwaste processing systems to below  $A_2$  quantities for radionuclides specified in Appendix A to 10 CFR Part 71 (Tables A-1 and A-3), as described in FSAR Subsection 13.5.2.2.5. The procedures shall also ensure that any additional equipment located in the RWB is limited to the  $A_2$  quantities and that the total cumulative radioactive inventory contained in unpackaged wastes (including liquid waste, wet waste, solid waste, gaseous waste, activated or contaminated metals and components, and contaminated waste present at any time in the Radwaste Building) is limited so that an unmitigated release, occurring over a two hour time period, would not result in a dose of greater than 500 millirem at the protected area boundary or an unmitigated exposure, occurring over a two hour time period, would not result in a dose of greater than 5 rem to site personnel located 10 feet from the total cumulative radioactive inventory.

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**Appendix A: Environmental Protection Plan (Nonradiological)**

**1.0 Objectives of the Environmental Protection Plan**

The purpose of the Environmental Protection Plan (EPP) is to provide for protection of nonradiological environmental resources during construction and operation of the nuclear facility. The principal objectives of the EPP are as follows:

- (1) Verify that the facility is operated in an environmentally acceptable manner, as established by the Final Environmental Impact Statement (FEIS) and other NRC environmental impact assessments.
- (2) Coordinate NRC requirements and maintain consistency with other Federal, State and local requirements for environmental protection.
- (3) Keep NRC informed of the environmental effects of facility construction and operation and of actions taken to control those effects.

Environmental concerns identified in the FEIS, which relate to water quality matters, are regulated by way of the licensee's NPDES permit.

**2.0 Environmental Protection Issues**

In the FEIS dated [month year], the staff considered the environmental impacts associated with the construction and operation of the Levy Nuclear Plant, Units 1 and 2 (LNP 1 and 2). Certain environmental issues were identified which required study or license conditions to resolve environmental concerns and to assure adequate protection of the environment.

**2.1 Aquatic Issues**

No specific nonradiological aquatic impact issues were identified by NRC staff in the FEIS.

**2.2 Terrestrial Issues**

No specific nonradiological terrestrial impact issues were identified by NRC staff in the FEIS.

**3.0 Consistency Requirements**

**3.1 Plant Design, Construction, and Operation Activities**

The licensee may make changes in station design or operation or perform tests or experiments affecting the environment provided such activities do not involve an unreviewed environmental question and do not involve a change in the EPP\*. Changes in station design or operation or performance of tests or experiments which do not affect the environment are not subject to the requirements of this EPP. Activities governed by Section 3.3 are not subject to the requirements of this section.



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Before engaging in additional construction or operational activities, which may significantly affect the environment, the licensee shall prepare and record an environmental evaluation of such activity. Activities are excluded from this requirement if all measurable nonradiological environmental effects are confined to the on-site-areas previously disturbed during site preparation and plant construction. When the evaluation indicates that such activity involves an unreviewed environmental question, the licensee shall provide a written evaluation of such activity and obtain prior NRC approval. When such activity involves a change in the EPP, such activity and change to the EPP may be implemented only in accordance with an appropriate license amendment as set forth in Section 5.3 of this EPP.

A proposed change, test, or experiment shall be deemed to involve an unreviewed environmental question if it concerns: (1) a matter which may result in a significant increase in any adverse environmental impact previously evaluated in the FEIS, environmental impact appraisals, or in any decisions of the Atomic Safety and Licensing Board; or (2) a significant change in effluents or power level; or (3) a matter, not previously reviewed and evaluated in the documents specified in (1) of this Subsection, which may have a significant adverse environmental impact.

The licensee shall maintain records of changes in facility design or operation and of tests and experiments carried out pursuant to this Subsection. These records shall include written evaluations which provide bases for the determination that the change, test, or experiment does not involve an unreviewed environmental question or constitute a decrease in the effectiveness of this EPP to meet the objectives specified in Section 1.0. The licensee shall include as part of the Annual Environmental Operating Report (per Subsection 5.4.1 of this EPP) brief descriptions, analyses, interpretations, and evaluations of such changes, tests, and experiments.

\* This provision does not relieve the licensee of the requirements of 10 CFR 50.59.

### 3.2 Reporting Related to the NPDES Permit and State Certification

Changes to, or renewals of, the NPDES Permits or the State certification shall be reported to the NRC within 30 days following the date the change or renewal is approved. If a permit or certification, in part or in its entirety, is appealed and stayed, the NRC shall be notified within 30 days following the date the stay is granted.

The licensee shall notify the NRC of changes to the effective NPDES Permit proposed by the licensee by providing NRC with a copy of the proposed change at the same time it is submitted to the permitting agency. The licensee shall provide the NRC a copy of the application for renewal of the NPDES Permit at the same time the application is submitted to the permitting agency.

### 3.3 Changes Required for Compliance with Other Environmental Regulations

Changes in plant design or operation and performance of tests or experiments which are required to achieve compliance with other Federal, State, and local environmental regulations are not subject to the requirements of Section 3.1 of this EPP.

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**4.0 Environmental Conditions**

4.1 Unusual or Important Environmental Events

The licensee shall evaluate and report to the NRC Operations Center within 24 hours (followed by a written report in accordance with Section 5.4 of this EPP) any occurrence of an unusual or important event that indicates or could result in significant environmental impact causally related to the construction activities or plant operation. The following are examples of unusual or important environmental events: on-site plant or animal disease outbreaks, mortality or unusual occurrence of any species protected by the Endangered Species Act of 1973, unusual fish kills, unusual increase in nuisance organisms or conditions, and unanticipated or emergency discharge of waste water or chemical substances.

Routine monitoring programs are not required to implement this condition.

4.2 Environmental Monitoring

4.2.1 Aquatic Monitoring

No specific nonradiological aquatic monitoring requirements were identified by NRC staff in the FEIS.

4.2.2 Terrestrial Monitoring

No specific nonradiological terrestrial monitoring requirements were identified by NRC staff in the FEIS.

**5.0 Administrative Procedures**

5.1 Review and Audit

The licensee shall provide for review and audit of compliance with the EPP. The audits shall be conducted independently; they may not be conducted by the individual or groups responsible for performing the specific activity. A description of the organizational structure utilized to achieve the independent review and audit function and results of the audit activities shall be maintained and made available for inspection.

5.2 Records Retention

The licensee shall make and retain records associated with this EPP in a manner convenient for review and inspection and shall make them available to the NRC on request.

The licensee shall retain records of construction and operation activities determined to potentially affect the continued protection of the environment for the life of the station. The licensee shall retain all other records relating to this EPP for five years or, where applicable, in accordance with the requirements of other agencies.

5.3 Changes in the Environmental Protection Plan

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Requests for changes in the EPP shall include an assessment of the environmental impact of the proposed change and a supporting justification. Implementation of such changes in the EPP shall not commence prior to NRC approval of the proposed changes in the form of a permit amendment incorporating the appropriate revision to the EPP.

#### 5.4 Reporting Requirements

##### 5.4.1 Routine Reports

An Annual Nonradiological Environmental Report describing implementation of this EPP for the previous year shall be submitted to the NRC prior to June 1 of each year. The initial report shall be submitted prior to June 1 of the year following issuance of the operating license.

The report shall include summaries and analyses of the results of the environmental protection activities required by Section 4.2 of this EPP for the report period, including a comparison with related preoperational studies, operational controls (as appropriate), and previous nonradiological environmental monitoring reports, and an assessment of the observed impacts of the plant operation on the environment. If harmful effects or evidence of trends toward irreversible damage to the environment are observed, the licensee shall provide a detailed analysis of the data and a proposed course of mitigating action.

The Annual Nonradiological Environmental Report shall also include:

- (1) A list of EPP noncompliances and the corrective actions taken to remedy them.
- (2) A list of changes in station design or operation, tests, and experiments made in accordance with Section 3.1 of this EPP, which involved a potentially significant unreviewed environmental question.
- (3) A list of nonroutine reports submitted in accordance with Subsection 5.4.2 of this EPP.

In the event that some results are not available by the report due date, the report shall be submitted noting and explaining the missing results. The missing results shall be submitted as soon as possible in a supplementary report.

##### 5.4.2 Nonroutine Reports

The licensee shall submit a written report to the NRC within 30 days of occurrence of any event described in Section 4.1 of this plan. The report should:

- (1) Describe, analyze, and evaluate the event, including the extent and magnitude of the impact, and site preparation and preliminary construction activities underway at the time of the event,
- (2) Describe the likely cause of the event.
- (3) Indicate the action taken to correct the reported event.

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- (4) Indicate the corrective action taken to preclude repetition of the event and to prevent similar occurrences involving similar site preparation and preliminary construction activities.
- (5) Indicate the agencies notified and their preliminary responses.

For events reportable under this subsection that also require reports to other Federal, State or local agencies, the licensee shall report in accordance with those reporting requirements in lieu of the requirements of this subsection. The licensee shall provide the NRC with a copy of such report at the same time it submits it to the other agency.

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**Appendix B. Inspections, Tests, Analyses and Acceptance Criteria**

AP1000 DCD Tier 1 ITAAC

The Tier 1 information (including the ITAAC) of the referenced DCD is incorporated by reference with the following departures and/or supplements.

Passive Containment Cooling System ITAAC

Passive Containment Cooling system components are added to support the capability of the Passive Residual Heat Removal Heat Exchanger (PRHR HX) to enable the reactor to achieve a safe shutdown condition of 420° F within 36 hours. Component numbers for downspout screens are added to DCD Tier 1 Table 2.2.3-1 and component numbers for downspout piping are added to DCD Tier 1 Table 2.2.3-2 to provide assurance that ITAAC design commitments will be met. These tables, with the subject component numbers added, are provided in the attached Tables 2.2.3-1 and 2.2.3-2, with a LMA of LNP DEP 3.2-1.

Physical Security ITAAC

The physical security ITAAC that are in the scope of the Westinghouse AP1000 standard design are included in the referenced DCD Tier 1 Subsection 2.6.9 as incorporated by reference above. Site-specific physical security ITAAC that are outside the scope of the Westinghouse AP1000 standard design in DCD Tier 1 Subsection 2.6.9 are provided in the attached Table 2.6.9-2. Include these ITAAC after the DCD Tier 1 Table 2.6.9-1 ITAAC.

Nuclear Island Nonradioactive Ventilation System ITAAC

Revise the sixth and seventh sentences of the Design Description information in DCD Tier 1 Section 2.7.1 to read as follows:

In addition, the VBS isolates the HVAC penetrations in the main control room boundary on "High-2" particulate or iodine radioactivity in the main control room supply air duct or on a loss of ac power for more than 10 minutes. The Sanitary Drainage System (SDS) also isolates a penetration in the main control room boundary on "High-2" particulate or iodine radioactivity in the main control room supply air duct or on a loss of ac power for more than 10 minutes.

Main Control Room Emergency Habitability System (VES) ITAAC

VES components are identified as the preferred, safety-related connection point for post-72 hour supplemental air. Component numbers for temporary instrument isolation valves are added to DCD Tier 1 Table 2.2.5-1, with a LMA of LNP DEP 6.4-2. The heat load values for the Main Control Room Envelope (MCRE) shown in Tier 1 Table 2.2.5-4, with a LMA of LNP DEP 6.4-2, are revised to correct for the most limiting design basis event and to account for actual equipment in the AP1000 design.

In addition, shielding is added below the VES filter in order to ensure main control room doses are below an acceptable level during VES operation. Item 7.e is added to the Design Description information in DCD Tier 1 Section 2.2.5 to read as follows:

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- e) The system provides shielding below the VES filter that is sufficient to ensure main control room doses are below an acceptable level during VES operation.

An MCR filter shielding component is added to DCD Tier 1, Table 2.2.5-1 and Table 2.2.5-5, with a LMA of LNP DEP 6.4-1.

These changes described above are made to provide assurance that ITAAC design commitments will be met. These tables, with the subject information added, are provided as Tables 2.2.5-1, 2.2.5-4 and 2.2.5-5.

#### Protection and Safety Monitoring System (PMS) ITAAC

New load shed panels are added to automatically de-energize non-essential equipment in the Main Control Room Envelope (MCRE) to ensure the MCRE is maintained within human performance limits. The electrical load de-energization feature is added to Tier 1 Tables 2.5.2-3 and 2.5.2-4, with a LMA of LNP DEP 6.4-2.

These changes are made to provide assurance that ITAAC design commitments will be met. These tables, with the subject information added, are provided as Tables 2.5.2-3 and 2.5.2-4, with a LMA of LNP DEP 6.4-2.

#### Containment Hydrogen Control System ITAAC

The ITAAC Acceptance Criteria for the in-containment PXS compartment vents are revised to reflect the current plant configuration. The ITAAC acceptance criteria for Table 2.3.9-3, Item 3, are clarified to read as shown in the attached Table 2.3.9-3, with a LMA of LNP DEP 6.2-1.

#### Plant Specific ITAAC

Add the following information to the information provided in the referenced DCD Tier 1 following Section 2.3.29:

##### 2.3.30 Storm Drain System

No entry for this system.

##### 2.3.31 Raw Water System

No entry for this system.

##### 2.3.32 Yard Fire Water System

No entry for this system.

Add the following information to the information provided in the referenced DCD Tier 1 Section 2.5.4, as a new item 4 under the Design Description section:

4. The plant operating instrumentation installed for feedwater flow measurement is one that has been specifically approved by the NRC; the power calorimetric uncertainty

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calculation includes uncertainties for the associated instrumentation based on an NRC approved methodology; and the calculated calorimetric values are bounded by the uncertainty value assumed for the initial reactor power in the safety analysis.

Add the following information to the information provided in the referenced DCD Tier 1 Section 2.5.4, as a new, final line item in Table 2.5.4-2:

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
4. The plant calorimetric uncertainty and plant instrumentation performance is bounded by the 1% calorimetric uncertainty value assumed for the initial reactor power in the safety analysis.	Inspection will be performed of the plant operating instrumentation installed for feedwater flow measurement, its associated power calorimetric uncertainty calculation, and the calculated calorimetric values.	<p>a) The as-built system takes input for feedwater flow measurement from a Caldon [Cameron] LEFM CheckPlus™ System;</p> <p>b) the power calorimetric uncertainty calculation documented for that instrumentation is based on an accepted Westinghouse methodology and the uncertainty values for that instrumentation are not lower than those for the actual installed instrumentation; and</p> <p>c) the calculated calorimetric power uncertainty measurement values are bounded by the 1% uncertainty value assumed for the initial reactor power in the safety analysis.</p>

Add the following information to the information provided in the referenced DCD Tier 1 following Section 2.5.10:

2.5.11 Meteorological and Environmental Monitoring System

No entry for this system.

2.5.12 Closed Circuit TV System

No entry for this system.

Add the following information to the information provided in the referenced DCD Tier 1 Section 2.6.1, as new item 4.g under the Design Description section:

- 4.g The ECS provides an alarm in the MCR and automatic protection actuation if an undervoltage condition is detected on any one or more AC phases of either switchgear ECS-ES-1 or ECS-ES-2.

Add the following information to the information provided in the referenced DCD Tier 1 Section 2.6.1, as new item 4.g in Table 2.6.1-4:

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Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
4.g) The ECS provides an alarm in the MCR and automatic protection actuation if an undervoltage condition is detected on any one or more AC phases of either switchgear ECS-ES-1 or ECS-ES-2.	<p>i) Testing of the as-built ECS will be conducted by simulating an undervoltage condition on ECS-ES-1 and ECS-ES-2 to confirm that an MCR alarm is generated when one or more ECS bus phase voltages is below setpoint on either switchgear ECS-ES-1 or ECS-ES-2.</p> <p>ii) Testing of the as-built ECS will be conducted by simulating an undervoltage condition on ECS-ES-1 and ECS-ES-2 to confirm that loss of one or more ECS bus phases automatically actuates the electrical protection function logic.</p>	<p>i) Undervoltage relays on ECS-ES-1 and ECS-ES-2 provide alarm when one or more AC phases on the 6.9 kV buses are below setpoint.</p> <p>ii) Undervoltage relays on ECS-ES-1 and ECS-ES-2 initiate protective action when one or more AC phases on the 6.9 kV buses are below setpoint.</p>

Add the following information to the information provided in the referenced DCD Tier 1 following Section 2.6.11:

**2.6.12 Transmission Switchyard and Offsite Power System**

**Inspection, Test, Analysis and Acceptance Criteria**

Table 2.6.12-1 provides a definition of the inspections, tests, and/or analyses, together with associated acceptance criteria for the offsite power system.

**2.6.13 Offsite Retail Power System**

No entry for this system.

The following non-system based site specific ITAAC are provided:

Include the following non-system ITAAC after DCD Tier 1 Section 3.7.

**Emergency Planning ITAAC**

The emergency planning ITAAC are included in attached Table 3.8-1.

**Waterproof Membrane**

The waterproof membrane ITAAC are included in the attached Table 3.8-2.

**Roller Compacted Concrete**

The roller compacted concrete ITAAC are included in attached Table 3.8-3.



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Turbine Building, Radwaste Building, and Annex Building Drilled Shaft Foundations

The ITAAC that are applicable to the drilled shaft foundations that support these buildings are included in attached Table 3.8-4.

Pipe Rupture Hazard Analysis ITAAC

The ITAAC for Pipe Rupture Hazard Analysis are included in attached Table 3.8-5.

Piping Design ITAAC

The ITAAC for Piping Design are included in attached Table 3.8-6.

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<b>Table 2.2.3-1</b>									
Equipment Name	Tag No.	ASME Code Section III	Seismic Cat. I	Remotely Operated Valve	Class 1E/ Qual. Harsh Envir.	Safety-Related Display	Control PMS/ DAS	Active Function	Loss of Motive Power Position
Passive Residual Heat Removal Heat Exchanger (PRHR HX)	PXS-ME-01	Yes	Yes	-	- / -	-	- / -	-	-
Accumulator Tank A	PXS-MT-01A	Yes	Yes	-	- / -	-	- / -	-	-
Accumulator Tank B	PXS-MT-01B	Yes	Yes	-	- / -	-	- / -	-	-
Core Makeup Tank (CMT) A	PXS-MT-02A	Yes	Yes	-	- / -	-	- / -	-	-
CMT B	PXS-MT-02B	Yes	Yes	-	- / -	-	- / -	-	-
IRWST	PXS-MT-03	No	Yes	-	- / -	-	- / -	-	-
IRWST Screen A	PXS-MY-Y01A	No	Yes	-	- / -	-	- / -	-	-
IRWST Screen B	PXS-MY-Y01B	No	Yes	-	- / -	-	- / -	-	-
IRWST Screen C	PXS-MY-Y01C	No	Yes	-	- / -	-	- / -	-	-
Containment Recirculation Screen A	PXS-MY-Y02A	No	Yes	-	- / -	-	- / -	-	-
Containment Recirculation Screen B	PXS-MY-Y02B	No	Yes	-	- / -	-	- / -	-	-
pH Adjustment Basket 3A	PXS-MY-Y03A	No	Yes	-	- / -	-	- / -	-	-
pH Adjustment Basket 3B	PXS-MY-Y03B	No	Yes	-	- / -	-	- / -	-	-
pH Adjustment Basket 4A	PXS-MY-Y04A	No	Yes	-	- / -	-	- / -	-	-
pH Adjustment Basket 4B	PXS-MY-Y04B	No	Yes	-	- / -	-	- / -	-	-
Downspout Screen 1A	PXS-MY-Y81	No	Yes	-	- / -	-	- / -	-	-
Downspout Screen 1B	PXS-MY-Y82	No	Yes	-	- / -	-	- / -	-	-

Note: Dash (-) indicates not applicable.

LNP DEP 3.2-1

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Table 2.2.3-1 (cont.)										
Equipment Name	Tag No.	ASME Code Section III	Seismic Cat. I	Remotely Operated Valve	Class 1E/ Qual. Harsh Envir.	Safety-Related Display	Control PMS/ DAS	Active Function	Loss of Motive Power Position	
LNP DEP 3.2-1	Downspout Screen 1C	PXS-MY-Y83	No	Yes	-	- / -	-	- / -	-	-
	Downspout Screen 1D	PXS-MY-Y84	No	Yes	-	- / -	-	- / -	-	-
	Downspout Screen 2A	PXS-MY-Y85	No	Yes	-	- / -	-	- / -	-	-
	Downspout Screen 2B	PXS-MY-Y86	No	Yes	-	- / -	-	- / -	-	-
	Downspout Screen 2C	PXS-MY-Y87	No	Yes	-	- / -	-	- / -	-	-
	Downspout Screen 2D	PXS-MY-Y88	No	Yes	-	- / -	-	- / -	-	-
	CMT A Inlet Isolation Motor-operated Valve	PXS-PL-V002A	Yes	Yes	Yes	Yes/Yes	Yes (Position)	Yes/No	None	As Is
	CMT B Inlet Isolation Motor-operated Valve	PXS-PL-V002B	Yes	Yes	Yes	Yes/Yes	Yes (Position)	Yes/No	None	As Is
	CMT A Discharge Isolation Valve	PXS-PL-V014A	Yes	Yes	Yes	Yes/Yes	Yes (Position)	Yes/Yes	Transfer Open	Open
	CMT B Discharge Isolation Valve	PXS-PL-V014B	Yes	Yes	Yes	Yes/Yes	Yes (Position)	Yes/Yes	Transfer Open	Open
	CMT A Discharge Isolation Valve	PXS-PL-V015A	Yes	Yes	Yes	Yes/Yes	Yes (Position)	Yes/Yes	Transfer Open	Open
	CMT B Discharge Isolation Valve	PXS-PL-V015B	Yes	Yes	Yes	Yes/Yes	Yes (Position)	Yes/Yes	Transfer Open	Open
	CMT A Discharge Check Valve	PXS-PL-V016A	Yes	Yes	No	- / -	No	- / -	Transfer Open/ Transfer Closed	-

Note: Dash (-) indicates not applicable.

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Table 2.2.3-2 (cont.)				
Line Name	Line Number	ASME Code Section III	Leak Before Break	Functional Capability Required
IRWST screen cross-connect line	PXS-L180A, PXS-L180B	Yes	No	Yes
Containment recirculation line A	PXS-L113A, PXS-L131A, PXS-L132A	Yes	No	Yes
Containment recirculation line B	PXS-L113B, PXS-L131B, PXS-L132B	Yes	No	Yes
IRWST gutter drain line	PXS-L142A, PXS-L142B	Yes	No	Yes
	PXS-L141A, PXS-L141B	Yes	No	No
Downspout drain lines from polarcrane girder and internal stiffener to collection box A	<u>PXS-L301A, PXS-L302A, PXS-L303A, PXS-L304A, PXS-L305A, PXS-L306A, PXS-L307A, PXS-L308A, PXS-L309A, PXS-L310A</u>	Yes	No	Yes
	<u>PXS-L301B, PXS-L302B, PXS-L303B, PXS-L304B, PXS-L305B, PXS-L306B, PXS-L307B, PXS-L308B, PXS-L309B, PXS-L310B</u>	Yes	No	Yes

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Table 2.2.5-1 (cont.)									
Equipment Name	Tag No.	ASME Code Section III	Seismic Cat. I	Remotely Operated Valve	Class 1E/Qual. for Harsh Envir.	Safety-Related Display	Control PMS	Active Function	Loss of Motive Power Position
Emergency Air Storage Tank 31	VES-MT-31	No	Yes	-	-/-	-	-	-	-
Emergency Air Storage Tank 32	VES-MT-32	No	Yes	-	-/-	-	-	-	-
Air Delivery Alternate Isolation Valve	VES-PL-V001	Yes	Yes	No	-/-	No	-	Transfer Open	-
Eductor Flow Path Isolation Valve	VES-PL-V045	Yes	Yes	No	-/-	No	-	Transfer Close	-
Eductor Bypass Isolation Valve	VES-PL-V046	Yes	Yes	No	-/-	No	-	Transfer Open	-
Pressure Regulating Valve A	VES-PL-V002A	Yes	Yes	No	-/-	No	-	Throttle Flow	-
Pressure Regulating Valve B	VES-PL-V002B	Yes	Yes	No	-/-	No	-	Throttle Flow	-
MCR Air Delivery Isolation Valve A	VES-PL-V005A	Yes	Yes	Yes	Yes/No	No	Yes	Transfer Open	Open
MCR Air Delivery Isolation Valve B	VES-PL-V005B	Yes	Yes	Yes	Yes/No	No	Yes	Transfer Open	Open
Temporary Instrument Isolation Valve A	VES-PL-V018	Yes	Yes	No	-/-	No	No	Transfer Open	-
Temporary Instrument Isolation Valve B	VES-PL-V019	Yes	Yes	No	-/-	No	No	Transfer Open	-
MCR Pressure Relief Isolation Valve A	VES-PL-V022A	Yes	Yes	Yes	Yes/No	No	Yes	Transfer Open	Open
MCR Pressure Relief Isolation Valve B	VES-PL-V022B	Yes	Yes	Yes	Yes/No	No	Yes	Transfer Open	Open

Note: Dash (-) indicates not applicable.

LNP DEP 6.4-2

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Table 2.2.5-1 (cont.)									
Equipment Name	Tag No.	ASME Code Section III	Seismic Cat. I	Remotely Operated Valve	Class 1E/Qual. for Harsh Envir.	Safety-Related Display	Control PMS	Active Function	Loss of Motive Power Position
Air Tank Safety Relief Valve A	VES-PL-V040A	Yes	Yes	No	-/-	No	-	Transfer Open	-
Air Tank Safety Relief Valve B	VES-PL-V040B	Yes	Yes	No	-/-	No	-	Transfer Open	-
Air Tank Safety Relief Valve C	VES-PL-V040C	Yes	Yes	No	-/-	No	-	Transfer Open	-
Air Tank Safety Relief Valve D	VES-PL-V040D	Yes	Yes	No	-/-	No	-	Transfer Open	-
Main Air Flow Path Isolation Valve	VES-PL-V044	Yes	Yes	No	-/-	No	-	Transfer Close	-
MCR Air Filtration Line Eductor	VES-PY-N01	Yes	Yes	-	-	-	-	-	-
MCR Air Filtration Line Charcoal Filter	VES-MY-F01	No	Yes	-	-	-	-	-	-
MCR Air Filtration Line HEPA Filter	VES-MY-F02	No	Yes	-	-	-	-	-	-
MCR Air Filtration Line Postfilter	VES-MY-F03	No	Yes	-	-	-	-	-	-
MCR Filter Shielding	12401-NS-01	No	Yes	-	-	-	-	-	-
MCR Gravity Relief Dampers	VES-MD-D001A	No	Yes	-	-	-	-	-	-

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Note: Dash (-) indicates not applicable.

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**Table 2.2.5-4**

Room Name	Room Numbers	Heat Load 0 to 24 Hours (Btu/s)	Heat Load 24 to 72 Hours (Btu/s)
MCR Envelope	12401	26.1 (hour 0 through 0.5) 15.6 (hour 0.5 through 3.5) 5.8 (hour 3.5 through 24)	2.9
I&C Rooms	12301, 12305	8.8	0
I&C Rooms	12302, 12304	13.0	4.2
dc Equipment Rooms	12201, 12205	3.7 (hour 0 through 1) 2.4 (hour 2 through 24)	0
dc Equipment Rooms	12203, 12207	5.8 (hour 0 through 1) 4.5 (hour 2 through 24)	2.0

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**Table 2.2.5-5 (cont.)  
Inspections, Tests, Analyses, and Acceptance Criteria**

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
7d) The system provides a passive recirculation flow of MCR air to maintain main control room dose rates below an acceptable level during VES operation.	Testing will be performed to confirm that the required amount of air flow circulates through the MCR passive filtration system,	The air flow rate at the outlet of the MCR passive filtration system is at least 600 cfm greater than the flow measured by VES-003A/B.
7e) Shielding below the VES Filter is capable of providing attenuation that is sufficient to ensure main control room doses are below an acceptable level during VES operation.	Inspection will be performed for the existence of a report verifying that the as-built shielding meets the requirements for functional capability.	A report exists and concludes that the as-built shielding identified in Table 2.2.5-1 meets the functional requirements and exists below the filtration unit, and within its vertical projection.
8. Safety-related displays identified in Table 2.2.5-1 can be retrieved in the MCR.	Inspection will be performed for retrievability of the safety-related displays in the MCR.	Safety-related displays identified in Table 2.2.5-1 can be retrieved in the MCR.
9.a) Controls exist in the MCR to cause remotely operated valves identified in Table 2.2.5-1 to perform their active functions.	Stroke testing will be performed on remotely operated valves identified in Table 2.2.5-1 using the controls in the MCR.	Controls in the MCR operate to cause remotely operated valves identified in Table 2.2.5-1 to perform their active safety functions.
9.b) The valves identified in Table 2.2.5-1 as having PMS control perform their active safety function after receiving a signal from the PMS.	Testing will be performed on remotely operated valves listed in Table 2.2.5-1 using real or simulated signals into the PMS.	The remotely operated valves identified in Table 2.2.5-1 as having PMS control perform the active safety function identified in the table after receiving a signal from the PMS.
10. After loss of motive power, the remotely operated valves identified in Table 2.2.5-1 assume the indicated loss of motive power position.	Testing of the remotely operated valves will be performed under the conditions of loss of motive power.	After loss of motive power, each remotely operated valve identified in Table 2.2.5-1 assumes the indicated loss of motive power position.
11. Displays of the parameters identified in Table 2.2.5-3 can be retrieved in the MCR.	Inspection will be performed for retrievability of the parameters in the MCR.	The displays identified in Table 2.2.5-3 can be retrieved in the MCR.
12. The background noise level in the MCR does not exceed 65 dB(A) at the operator workstations when VES is operating.	The as-built VES will be operated, and background noise levels in the MRC will be measured at the operator workstations with the plant not operating.	The background noise level in the MCR does not exceed 65 dB(A) at the operator workstations when the VES is operating.

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<b>Table 2.3.9-3 Inspections, Tests, Analyses, and Acceptance Criteria</b>		
<b>Design Commitment</b>	<b>Inspections, Tests, Analyses</b>	<b>Acceptance Criteria</b>
1. The functional arrangement of the VLS is as described in the Design Description of this Section 2.3.9.	Inspection of the as-built system will be performed.	The as-built VLS conforms with the functional arrangement as described in the Design Description of this Section 2.3.9.
2.a) The hydrogen monitors identified in Table 2.3.9-1 are powered by the non-Class 1E dc and UPS system.	Testing will be performed by providing a simulated test signal in each power group of the non-Class 1E dc and UPS system.	A simulated test signal exists at the hydrogen monitors identified in Table 2.3.9-1 when the non-Class 1E dc and UPS system is provided the test signal.
2.b) The components identified in Table 2.3.9-2 are powered from their respective non-Class 1E power group.	Testing will be performed by providing a simulated test signal in each non-Class 1E power group.	A simulated test signal exists at the equipment identified in Table 2.3.9-2 when the assigned non-Class 1E power group is provided the test signal.
3. The VLS provides the nonsafety-related function to control the containment hydrogen concentration for beyond design basis accidents.	<ul style="list-style-type: none"> <li>i) Inspection for the number of igniters will be performed.</li> <li>ii) Operability testing will be performed on the igniters.</li> <li>iii) An inspection of the as-built containment internal structures will be performed.</li> </ul>	<ul style="list-style-type: none"> <li>i) At least 64 hydrogen igniters are provided inside containment at the locations specified in Table 2.3.9-2.</li> <li>ii) The surface temperature of the igniter exceeds 1700°F.</li> <li>iii) The equipment access opening and CMT-A opening constitute at least 98% of vent paths within Room 11206 that vent to Room 11300. The minimum distance between the equipment access opening and containment shell is at least 24.3 feet. The minimum distance between the CMT-A opening and the containment shell is at least 9.4 feet. The CMT-B opening constitutes at least 98% of vent paths within Room 11207 that vent to Room 11300 and is a minimum distance of 24.6 feet away from the containment shell. Other openings through the ceilings of these rooms must be at least 3 feet from the containment shell. An analysis exists and concludes that ignition of postulated hydrogen releases through these openings will not result in a failure of the containment shell.</li> </ul>

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<b>Table 2.3.9-3 Inspections, Tests, Analyses, and Acceptance Criteria</b>		
<b>Design Commitment</b>	<b>Inspections, Tests, Analyses</b>	<b>Acceptance Criteria</b>
	iv) An inspection will be performed of the as-built IRWST vents that are located in the roof of the IRWST along the side of the IRWST next to the containment shell.	iv) The discharge from each of these IRWST vents is oriented generally away from the containment shell.

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**Table 2.5.2-3**

**PMS Automatically Actuated Engineered Safety Features**

Safeguards Actuation  
 Containment Isolation  
 Automatic Depressurization System (ADS) Actuation  
 Main Feedwater Isolation  
 Reactor Coolant Pump Trip  
 CMT Injection  
 Turbine Trip (Isolated signal to nonsafety equipment)  
 Steam Line Isolation  
 Steam Generator Relief Isolation  
 Steam Generator Blowdown Isolation  
 Passive Containment Cooling Actuation  
 Startup Feedwater Isolation  
 Passive Residual Heat Removal (PRHR) Heat Exchanger Alignment  
 Block of Boron Dilution  
 Chemical and Volume Control System (CVS) Makeup Line Isolation  
 Steam Dump Block (Isolated signal to nonsafety equipment)  
 Main Control Room Isolation, Air Supply Initiation and Electrical Load De-energization  
 Auxiliary Spray and Letdown Purification Line Isolation  
 Containment Air Filtration System Isolation  
 Normal Residual Heat Removal Isolation  
 Refueling Cavity Isolation  
 In-Containment Refueling Water Storage Tank (IRWST) Injection  
 IRWST Containment Recirculation  
 CVS Letdown Isolation  
 Pressurizer Heater Block (Isolated signal to nonsafety equipment)  
 Containment Vacuum Relief

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**Table 2.5.2-4**

**PMS Manually Actuated Features**

<p>Reactor Trip</p> <p>Safeguards Actuation</p> <p>Containment Isolation</p> <p>Depressurization System Stages 1, 2, and 3 Actuation</p> <p>Depressurization System Stage 4 Actuation</p> <p>Feedwater Isolation</p> <p>Core Makeup Tank Injection Actuation</p> <p>Steam Line Isolation</p> <p>Passive Containment Cooling Actuation</p> <p>Passive Residual Heat Removal Heat Exchanger Alignment</p> <p>IRWST Injection</p> <p>Containment Recirculation Actuation</p> <p>Main Control Room Isolation, Air Supply Initiation and Electrical Load De-energization</p> <p>Steam Generator Relief Isolation</p> <p>Chemical and Volume Control System Isolation</p> <p>Normal Residual Heat Removal System Isolation</p> <p>Containment Vacuum Relief</p>
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TABLE 2.6.9-2 – SITE-SPECIFIC PHYSICAL SECURITY INSPECTIONS, TESTS, ANALYSES AND ACCEPTANCE CRITERIA		
Design Commitment	Inspections, Tests, and Analyses	Acceptance Criteria
1. The external walls, doors, ceiling, and floors in the location within which the last access control function for access to the protected area is performed are bullet-resistant to at least Underwriters Laboratory Ballistic Standard 752, level 4.	Type test, analysis, or a combination of type test and analysis will be performed for the external walls, doors, ceilings, and floors in the location within which the last access control function for access to the protected area is performed.	The external walls, doors, ceilings, and floors in the location within which the last access control function for access to the protected area is performed are bullet-resistant to at least Underwriters Laboratory Ballistic Standard 752, level 4.
2. Physical barriers for the protected area perimeter are not part of vital area barriers.	An inspection of the protected area perimeter barrier will be performed.	Physical barriers at the perimeter of the protected area are separated from any other barrier designated as a vital area barrier.
3. a) Isolation zones exist in outdoor areas adjacent to the physical barrier at the perimeter of the protected area that allow 20 feet of observation on either side of the barrier. Where permanent buildings do not allow a 20-foot observation and assessment distance on the inside of the protected area, the building walls are immediately adjacent to, or an integral part of, the protected area barrier.  b) The isolation zones are monitored with intrusion detection equipment that provides the capability to detect and assess unauthorized persons.	Inspections will be performed of the isolation zones in outdoor areas adjacent to the physical barrier at the perimeter of the protected area.  Inspections will be performed of the intrusion detection equipment within the isolation zones.	Isolation zones exist in outdoor areas adjacent to the physical barrier at the perimeter of the protected area and allow 20 feet of observation and assessment of the activities of people on either side of the barrier. Where permanent buildings do not allow a 20-foot observation and assessment distance on the inside of the protected area, the building walls are immediately adjacent to, or an integral part of, the protected area barrier and the 20-foot observation and assessment distance does not apply.  The isolation zones are equipped with intrusion detection equipment that provides the capability to detect and assess unauthorized persons.

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TABLE 2.6.9-2 – SITE-SPECIFIC PHYSICAL SECURITY INSPECTIONS, TESTS, ANALYSES AND ACCEPTANCE CRITERIA		
Design Commitment	Inspections, Tests, and Analyses	Acceptance Criteria
<p>4. The intrusion detection and assessment equipment at the protected area perimeter:</p> <p style="padding-left: 40px;">a) detects penetration or attempted penetration of the protected area barrier and concurrently alarms in both the Central Alarm Station and Secondary Alarm Station, and</p> <p style="padding-left: 40px;">b) remains operable from an uninterruptible power supply in the event of the loss of normal power.</p>	<p>Tests, inspections or a combination of tests and inspections of the intrusion detection and assessment equipment at the protected area perimeter and its uninterruptible power supply will be performed.</p>	<p>The intrusion detection and assessment equipment at the protected area perimeter:</p> <p style="padding-left: 40px;">a) detects penetration or attempted penetration of the protected area barrier and concurrently alarms in the Central Alarm Station and Secondary Alarm Station, and</p> <p style="padding-left: 40px;">b) remains operable from an uninterruptible power supply in the event of the loss of normal power..</p>
<p>5. Access control points are established to:</p> <p style="padding-left: 40px;">a) control personnel and vehicle access into the protected area.</p> <p style="padding-left: 40px;">b) detect firearms, explosives, and incendiary devices at the protected area personnel access points.</p>	<p>Tests, inspections, or combination of tests and inspections of installed systems and equipment at the access control points to the protected area will be performed.</p>	<p>The access control points for the protected area:</p> <p style="padding-left: 40px;">a) are configured to control personnel and vehicle access.</p> <p style="padding-left: 40px;">b) include detection equipment that is capable of detecting firearms, incendiary devices, and explosives at the protected area personnel access points.</p>
<p>6. An access control system with numbered picture badges is installed for use by individuals who are authorized access to protected areas and vital areas without escort.</p>	<p>A test of the access control system with numbered picture badges will be performed.</p>	<p>The access authorization system with numbered picture badges can identify and authorize protected area and vital area access only to those personnel with unescorted access authorization.</p>

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TABLE 2.6.9-2 – SITE-SPECIFIC PHYSICAL SECURITY INSPECTIONS, TESTS, ANALYSES AND ACCEPTANCE CRITERIA		
Design Commitment	Inspections, Tests, and Analyses	Acceptance Criteria
7. Access to vital equipment physical barriers requires passage through the protected area perimeter barrier.	Inspection will be performed to confirm that access to vital equipment physical barriers requires passage through the protected area perimeter barrier.	Vital equipment is located within a protected area such that access to vital equipment physical barriers requires passage through the protected area perimeter barrier.
8. a) Penetrations through the protected area barrier are secured and monitored.  b) Unattended openings (such as underground pathways) that intersect the protected area boundary or vital area boundary will be protected by a physical barrier and monitored by intrusion detection equipment or provided surveillance at a frequency sufficient to detect exploitation.	Inspections will be performed of penetrations through the protected area barrier.  Inspections will be performed of unattended openings that intersect the protected area boundary or vital area boundary.	Penetrations and openings through the protected area barrier are secured and monitored.  Unattended openings (such as underground pathways) that intersect the protected area boundary or vital area boundary are protected by a physical barrier and monitored by intrusion detection equipment or provided surveillance at a frequency sufficient to detect exploitation.
9. Emergency exits through the protected area perimeter are alarmed and secured with locking devices to allow for emergency egress.	Tests, inspections, or a combination of tests and inspections of emergency exits through the protected area perimeter will be performed.	Emergency exits through the protected area perimeter are alarmed and secured by locking devices that allow prompt egress during an emergency.

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Table 2.6.12-1 Offsite Power System		
Design Commitment	Inspections, Tests, and Analyses	Acceptance Criteria
1. A minimum of one offsite circuit supplies electric power from the transmission switchyard to the interface with the onsite ac power system.	Inspections of the as-built offsite circuit will be performed.	At least one offsite circuit is provided from the transmission switchyard interface to the interface with the onsite ac power system.
2. Each offsite circuit interfacing with the onsite ac power system is adequately rated to supply assumed loads during normal, abnormal and accident conditions.	Analyses of the offsite power system will be performed to evaluate the as-built ratings of each offsite circuit interfacing with the onsite ac power system against the load assumptions.	A report exists and concludes that each as-built offsite circuit is rated to supply the load assumptions, during normal, abnormal and accident conditions.
3. During steady state operation, each offsite circuit is capable of supplying required voltage to the interface with the onsite ac power system that will support operation of assumed loads during normal, abnormal and accident conditions.	Analyses of the as-built offsite circuit will be performed to evaluate the capability of each offsite circuit to supply the voltage requirements at the interface with the onsite ac power system.	A report exists and concludes that during steady state operation each as-built offsite circuit is capable of supplying the voltage at the interface with the onsite ac power system that will support operation of assumed loads during normal, abnormal and accident conditions.
4. During steady state operation, each offsite circuit is capable of supplying required frequency to the interface with the onsite ac power system that will support operation of assumed loads during normal, abnormal and accident conditions.	Analyses of the as-built offsite circuit will be performed to evaluate the capability of each offsite circuit to supply the frequency requirements at the interface with the onsite ac power system.	A report exists and concludes that during steady state operation each as-built offsite circuit is capable of supplying the frequency at the interface with onsite ac power system that will support operation of assumed loads during normal, abnormal and accident conditions.
5. The fault current contribution of each offsite circuit is compatible with the interrupting capability of the onsite ac power system short circuit interrupting devices.	Analyses of the as-built offsite circuit will be performed to evaluate the fault current contribution of each offsite circuit at the interface with the onsite ac power system.	A report exists and concludes the short circuit contribution of each as-built offsite circuit at the interface with the onsite ac power system is compatible with the interrupting capability of the onsite fault current interrupting devices



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Table 2.6.12-1 Offsite Power System		
Design Commitment	Inspections, Tests, and Analyses	Acceptance Criteria
6. The reactor coolant pumps continue to receive power from either the main generator or the grid for a minimum of 3 seconds following a turbine trip.	Analyses of the as-built offsite power system will be performed to confirm that power will be available to the reactor coolant pumps for a minimum of 3 seconds following a turbine trip when the buses powering the reactor coolant pumps are aligned to either the UATs or the RATs.	A report exists and concludes that voltage at the high-side of the GSU, and the RATs, does not drop more than 0.15 pu from the pre-trip steady-state voltage for a minimum of 3 seconds following a turbine trip when the buses powering the reactor coolant pumps are aligned to either the UATs or the RATs.

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Table 2.6.12-1 Offsite Power System		
Design Commitment	Inspections, Tests, and Analyses	Acceptance Criteria
<p>7) The credited GDC 17 off-site power source is monitored by an open phase condition monitoring system that can detect the following at the high voltage terminals of the transformer connecting to the off-site source, over the full range of transformer loading from no load to full load:</p> <p>(1) loss of one of the three phases of the offsite power source</p> <p style="padding-left: 20px;">a. with a high impedance ground fault condition, or</p> <p style="padding-left: 20px;">b. without a high impedance ground fault condition; or</p> <p>(2) loss of two of the three phases of the offsite power source</p> <p style="padding-left: 20px;">a. with a high impedance ground fault condition, or</p> <p style="padding-left: 20px;">b. without a high impedance ground fault condition.</p> <p>Upon detection of any condition described above, the system will actuate an alarm in the main control room.</p>	<p>i) Analysis shall be used to determine the required alarm set points for the open phase condition monitoring system to indicate the presence of open phase conditions described in the design commitment.</p> <p>ii) Testing of the credited GDC-17 off-site power source open phase condition monitoring system will be performed using simulated signals to verify that the as-built open phase condition monitoring system detects open phase conditions described in the design commitment and at the established set points actuates an alarm in the main control room.</p>	<p>i) Alarm set points for the open phase condition monitoring system to indicate the presence of open phase conditions as described in the design commitment have been determined by analysis.</p> <p>ii) Testing demonstrates the credited GDC 17 off-site power source open phase condition monitoring system detects open phase conditions described in the design commitment and at the established set points actuates an alarm in the main control room.</p>

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**Table 3.8-1  
Emergency Plan Inspections, Tests, Analyses, and Acceptance Criteria (Sheet 1 of 29)**

Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
<b>1.0 Assignment of Responsibility – Organizational Control</b>			
<p>10 CFR 50.47(b)(1) – Primary responsibilities for emergency response by the nuclear facility licensee, and by State and local organizations within the EPZs have been assigned, the emergency responsibilities of the various supporting organizations have been specifically established, and each principle response organization has staff to respond and to augment its initial response on a continuous basis.</p>	<p>1.1 The staff exists to provide 24-hour per day emergency response and manning of communications links, including continuous operations for a protracted period. [A.1.e, A.4]**</p> <p>[**References in brackets throughout this table correspond to with NUREG_0654/FEMA-REP-1 Evaluation Criteria]</p>	<p>1.1 An inspection of the emergency plan implementing procedures will be performed.</p>	<p>1.1 Emergency plan implementing procedures provide for 24-hour per day emergency response staffing and manning of communications links, including continuous operations for a protracted period.</p>
<b>2.0 Onsite Emergency Organization</b>			
<p>10 CFR 50.47(b)(2) – On-shift facility licensee responsibilities for emergency response are unambiguously defined, adequate staffing to provide initial facility accident response in key functional areas is maintained at all times, timely augmentation of response capabilities is available, and the interfaces among various onsite response activities and offsite support and response activities are specified.</p>	<p>2.1 The staff exists to provide minimum and augmented on-shift staffing levels, consistent with Table B-1 of NUREG-0654/FEMA-REP-1, Rev. 1. [B.5, B.7]</p>	<p>2.1 An inspection of the emergency plan implementing procedures will be performed.</p>	<p>2.1 Emergency plan implementing procedures provide minimum and augmented on-shift staffing levels, consistent with Table B-1 of the Levy Nuclear Plant Units 1 &amp; 2 Combined License (COL) Application Emergency Plan.</p>

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**Table 3.8-1  
Emergency Plan Inspections, Tests, Analyses, and Acceptance Criteria (Sheet 2 of 29)**

Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
<b>3.0 Emergency Classification System</b>			
10 CFR 50.47(b)(4) – A standard emergency classification and action level scheme, the bases of which include facility system and effluent parameters, is in use by the nuclear facility licensee, and State and local response plans call for reliance on information provided by facility licensees for determinations of minimum initial offsite response measures.	3.1 A standard emergency classification and emergency action level (EAL) scheme exists, and identifies facility system and effluent parameters constituting the bases for the classification scheme. [D.2]	3.1 An inspection of the Control Rooms, Technical Support Centers (TSCs), and Emergency Operations Facility (EOF) will be performed to verify that they have displays for retrieving facility system and effluent parameters are specified in the Emergency Classification and EAL scheme and the displays are functional.	3.1 The specified parameters are retrievable in the Control Rooms, TSC and EOF, and the ranges of the displays encompass the values specified in the Emergency Classification and EAL scheme.
<b>4.0 Notification Methods and Procedures</b>			
10 CFR 50.47(b)(5) – Procedures have been established for notification, by the licensee, of State and local response organizations and for notification of emergency personnel by all organizations; the content of initial and follow-up messages to response organizations and the public has been established; and means to provide early notification and clear instruction to the populace within the plume exposure pathway Emergency Planning Zone have been established.	<p>4.1 The means exists to notify responsible State and local organizations within 15 minutes after the licensee declares an emergency. [E.2]</p> <p>4.2 The means exists to notify emergency response personnel. [E.1]</p>	<p>4.1 A test will be performed to demonstrate the capabilities for providing initial notification to the offsite authorities after a simulated emergency classification.</p> <p>4.2 A test of the primary and back-up ERO notification systems will be performed.</p>	<p>4.1 The State of Florida and the counties of Levy, Citrus, and Marion receive notification within 15 minutes after the declaration of an emergency from the control room and the EOF.</p> <p>4.2 The primary and back-up ERO notification system tests result in:</p> <ul style="list-style-type: none"> <li>• Emergency response personnel receiving the notification message;</li> <li>• Mobilization communication is validated by personnel response to the notification system or by telephone;</li> <li>• Response to electronic notification and plant page system is accomplished during normal working hours, and off hours.</li> </ul>

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**Table 3.8-1  
Emergency Plan Inspections, Tests, Analyses, and Acceptance Criteria (Sheet 3 of 29)**

Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
	4.3 The means exists to notify and provide instructions to the populace within the plume exposure EPZ. [E.3]	4.3 The full test of notification capabilities will be conducted.	4.3 Notification and clear instructions to the public are successfully accomplished in accordance with the emergency plan requirements.
<b>5.0 Emergency Communications</b>			
10 CFR 50.47(b)(6) – Provisions exist for prompt communications among principal response organizations to emergency personnel and to the public.	<p>5.1 The means exists for communications among the Control Rooms, TSCs, EOF, principal State and local emergency operations centers (EOCs), and radiological field assessment teams. [F3, F.5]</p> <p>5.2 The means exists for communications from the Control Rooms, TSCs, and EOF to the NRC headquarters and regional office EOCs (including establishment of the Emergency Response Data System (ERDS) [or its successor system] between the onsite computer system and the NRC Operations Center.) [F.2.6]</p>	<p>5.1 A test will be performed of the capabilities. The test for the contact with the principal EOCs and the radiological field assessment teams will be from the Control Room and the EOF. The TSC communication with the Control Room and the EOF will be performed.</p> <p>5.2 A test is performed of the capabilities to communicate using ENS from each operating Control Room, TSC and EOF to the NRC headquarters and regional office EOCs. The Health Physics Network (HPN) is tested to ensure communications between the TSC and EOF with the NRC Operations Center. ERDS is established [or its successor system] between the onsite computer systems and the NRC Operations Center.</p>	<p>5.1 Communications (both primary and secondary methods/systems) are established between the Control Rooms, TSC and the EOF with Florida Division of Emergency Management (DEM) warning point and EOC; Levy County Warning Point and EOC; Citrus County Warning Point and EOC; and Marion County Warning Point and EOC. Communications are established between the Control Rooms, TSC and the EOF with the LNP radiological monitoring teams.</p> <p>5.2 Communications are established between the Control Rooms, TSC and EOF to the NRC headquarters and regional office EOCs utilizing the ENS. The TSC and EOF demonstrate communications with the NRC Operations Center using HPN. The access port for ERDS [or its successor system] is provided and successfully completes a transfer of data from the plant computer system to the NRC Operations Center.</p>

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**Table 3.8-1  
Emergency Plan Inspections, Tests, Analyses, and Acceptance Criteria (Sheet 4 of 29)**

Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
<b>6.0 Public Education and Information</b>			
10 CFR 50.47(b)(7) – Information is made available to the public on a periodic basis on how they will be notified and what their initial actions should be in an emergency (e.g., listening to a local broadcast station and remaining indoors), the principal points of contact with the news media for dissemination of information during an emergency (including the physical location or locations) are established in advance, and procedures for coordinated dissemination of information to the public are established.	6.1 The licensee has provided space which may be used for a limited number of the news media. [H.1.5]	6.1 A test of the facility/area provides adequate equipment to support ENC operation, including communications with the site and with the Emergency Operation Centers in the state and emergency planning zone (EPZ) counties.	6.1 The ENC includes equipment to support ENC operations, including communications with the EOF and State and EPZ County EOCs.
<b>7.0 Emergency Facilities and Equipment</b>			
10 CFR 50.47(b)(8) – Adequate emergency facilities and equipment to support the emergency response are provided and maintained.	7.1 The licensee has established a TSC and onsite OSC. [The TSC and OSC may be combined at a single location.] [H.1.2, H.1.3, Annexes 1 and 2]	7.1.1 An inspection of the as-built TSCs and OSCs will be performed, including a test of the capabilities. These facilities will meet the criteria of NUREG-0696.	7.1.1 Each TSC has at least 1875 ft <sup>2</sup> of floor space (75 ft <sup>2</sup> per person for a minimum of 25 persons).  7.1.2 The TSC is close to the control room, and the walking distance from the TSC to the control room does not exceed two minutes.  7.1.3 Communications equipment is installed, and voice transmission and reception are accomplished between the Control Rooms, TSC, OSCs, and EOF.

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Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
	<p>7.2 The licensee has established an EOF. [H.1.4]</p>	<p>7.2 An inspection of the as-built EOF will be performed, including a test of the capabilities. The EOF will meet the criteria of NUREG-0696 and 0737.</p>	<p>7.1.4 The TSC ventilation systems include a high efficiency particulate air (HEPA), and charcoal filter and radiation monitors are installed.</p> <p>7.1.5 The TSC receives, stores, processes, and displays plant and environmental information, and enables the initiation of emergency measures and the conduct of emergency assessment. These capabilities are demonstrated during testing and acceptance activities.</p> <p>7.1.6 There is an OSC located inside the Unit's Protected Area. It is separate from the Control Room and TSC within the Protected Area.</p> <p>7.1.7 Communications equipment is installed, and voice transmission and reception are accomplished between the OSC and OSC Teams, the TSC, and Control Rooms.</p> <p>7.2.1 Communications equipment is installed and voice transmission and reception are accomplished between the Control Rooms, TSC, EOF, radiological monitoring teams (RMTs), NRC, State and county agencies, and ENS.</p> <p>7.2.2 Radiological data, meteorological data, and plant system data is acquired, displayed and evaluated pertinent to offsite protective measures in the EOF.</p> <p>7.2.3 The EOF is structurally built in accordance with the Uniform Building Code.</p>

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Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
			<p>7.2.4 The EOF is environmentally controlled to provide room air temperature, humidity, and cleanliness appropriate for personnel and equipment.</p> <p>7.2.5 The EOF is provided with industrial security when it is activated to exclude unauthorized personnel and when it is idle to maintain its readiness.</p>
	<p>7.3 The means exists to initiate emergency measures, consistent with Appendix 1 of NUREG-0654/FEMA-REP-1, Rev. 1. [H.5]</p> <p>7.4 The means exists to acquire data from, or for emergency access to, offsite monitoring and analysis equipment. [H.6]</p> <p>7.5 The means exists to provide offsite radiological monitoring equipment in the vicinity of the nuclear facility. [H.7]</p> <p>7.6 The means exists to provide meteorological information, consistent with Appendix 2 of NUREG-0654/FEMA-REP-1, Rev. 1. [H.8]</p>	<p>7.3 – 7.6 A test will be performed of the capabilities.</p>	<p>7.3 The means exists to initiate emergency measures, consistent with Appendix 1 of NUREG-0654/FEMA-REP-1, Rev. 1. EALs will be classified within 15 minutes or less of initiating condition.</p> <p>7.4 The means exists to acquire data from, or for emergency access to, offsite monitoring and analysis equipment. EALs using offsite does monitoring and analysis equipment will be made within 15 minutes of initiating conditions.</p> <p>7.5 The means exists to provide offsite radiological monitoring equipment in the vicinity of LNP for environmental monitoring including radiological monitoring team dosimetry.</p> <p>7.6 The means exists to provide meteorological information, consistent with Appendix 2 of NUREG-0654/FEMA-REP-1, Rev. 1. LNP meteorological equipment will be able to assess and monitor actual or potential offsite consequences of a radiological condition related to atmospheric measurements.</p>



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Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
<b>8.0 Accident Assessment</b>			
<p>10 CFR 50.47(b)(9) – Adequate methods, systems, and equipment for assessing and monitoring actual or potential offsite consequences of a radiological emergency condition are in use.</p>	<p>8.1 The means exists to provide initial and continuing radiological assessment throughout the course of an accident. [I, I.3]</p>	<p>8.1 A test will be performed to demonstrate that the means exists to provide initial and continuing radiological assessment throughout the course of an accident through the plant computer or communications with the Control Room.</p>	<p>8.1 Using selected monitoring parameters, simulated degraded plant conditions are assessed, and protective actions are initiated in accordance with the following criteria:</p> <p>A. Accident Assessment and Classification</p> <ol style="list-style-type: none"> <li>1. Demonstrate the ability to identify initiating conditions, determine emergency action level (EAL) parameters, and correctly classify the emergency throughout the drill.</li> </ol> <p>B. Radiological Assessment and Control</p> <ol style="list-style-type: none"> <li>1. Demonstrate the ability to obtain onsite radiological surveys and samples.</li> <li>2. Demonstrate the ability to continuously monitor and control radiation exposure to emergency workers.</li> </ol>

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Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
	<p>8.2 The means exists to determine the source term of releases of radioactive material within plant systems, and the magnitude of the release of radioactive materials based on plant system parameters and effluent monitors. [1.3]</p>	<p>8.2 A test will be performed to demonstrate that the means exists to determine the source term of releases of radioactive material within plant systems, and the magnitude of the release of radioactive materials based on plant system parameters and effluent monitors.</p>	<ol style="list-style-type: none"> <li>3. Demonstrate the ability to activate:               <ol style="list-style-type: none"> <li>a. One radiological monitoring team (2 personnel) within 30 minutes of event declaration and,</li> <li>b. A second radiological monitoring team (2 personnel) within 60 minutes of event declaration.</li> </ol> </li> <li>4. Demonstrate the ability to satisfactorily collect and disseminate field team data.</li> <li>5. Demonstrate the ability to develop dose projections.</li> <li>6. Demonstrate the ability to make the decision whether to issue radioprotective drugs (KI) to emergency workers.</li> <li>7. Demonstrate the ability to develop appropriate protective action recommendations (PARs) and notify appropriate authorities within 15 minutes of development.</li> </ol> <p>8.2 Emergency plan implementing procedures provide sufficient direction to calculate the source terms and the magnitude of the release of postulated accident scenario releases.</p>

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Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
	<p>8.3 The means exists to continuously assess the impact of the release of radioactive materials to the environment, accounting for the relationship between effluent monitor readings, and onsite and offsite exposures and contamination for various meteorological conditions. [I.4]</p> <p>8.4 The means exists to acquire and evaluate meteorological information. [I.6]</p> <p>8.5 The means exists to determine the release rate and projected doses if the instrumentation used for assessment is off-scale or inoperable. [I.4]</p> <p>8.6 The means exist for field monitoring within the plume exposure EPZ. [I.7]</p>	<p>8.3 A test will be performed to demonstrate that the impact of a radiological release to the environment is able to be assessed by utilizing the relationship between effluent monitor readings, and onsite and offsite exposures and contamination for various meteorological conditions.</p> <p>8.4 A test will be performed to acquire and evaluate meteorological data/information.</p> <p>8.5 A test will be performed of the capabilities to determine the release rate and projected doses if the instrumentation used for assessment is off-scale or inoperable.</p> <p>8.6 A test will be performed of the capabilities for field monitoring within the plume exposure EPZ.</p>	<p>8.3 Response personnel can continuously assess the impact of the release of radioactive materials to the environment, accounting for the relationship between effluent monitor readings, and onsite and offsite exposures and contamination for various meteorological conditions under drill conditions.</p> <p>8.4 The following parameters are displayed in the Control Room, TSC and EOF:</p> <ul style="list-style-type: none"> <li>• Wind speed (at 10m and 60m)</li> <li>• Wind direction (at 10m and 60m)</li> <li>• Delta-temperature (between 10m and 60m)</li> <li>• Ambient temperature (at 10m and 60m)</li> <li>• Dew point temperature (at 10m)</li> <li>• Precipitation (at 2m)</li> </ul> <p>This data is in the format needed for the appropriate emergency plan implementing procedures.</p> <p>8.5 A drill or exercise is conducted that demonstrates the capability to determine the release rate and projected doses with the instrumentation used for assessment off-scale or inoperable.</p> <p>8.6 A drill or exercise is conducted that demonstrates the ability of the radiological monitoring teams to be dispatched and locate and monitor a radiological release within the plume exposure EPZ.</p>

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Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
	<p>8.7 The means exists to make rapid assessments of actual or potential magnitude and locations of radiological hazards through liquid or gaseous release pathways, including activation, notification means, field team composition, transportation, communication, monitoring equipment, and estimated deployment times. [I]</p> <p>8.8 The capability exists to detect and measure radioiodine concentrations in air in the plume exposure EPZ, as low as <math>10^{-7}</math> <math>\mu\text{Ci/cc}</math> (microcuries per cubic centimeter) under field conditions. [I.7.1]</p> <p>8.9 The means exists to estimate integrated dose from the projected and actual dose rates, and for comparing these estimates with the EPA protective action guides (PAGs). [I.4]</p>	<p>8.7 A test will be performed of the capabilities to make rapid assessments of actual or potential magnitude and locations of an radiological hazards through liquid or gaseous release pathways, including activation, notification means, field team composition, transportation, communication, monitoring equipment, and estimated deployment times.</p> <p>8.8 A test will be performed of the capabilities detect and measure radioiodine concentrations in air in the plume exposure EPZ, as low as <math>10^{-7}</math> <math>\mu\text{Ci/cc}</math> (microcuries per cubic centimeter) under field conditions.</p> <p>8.9 A test will be performed of the capabilities to estimate integrated dose from the projected and actual dose rates, and for comparing these estimates with the EPA protective action guides.</p>	<p>8.7 A drill or exercise is conducted that demonstrates the capability to activate the radiological monitoring team(s). The team(s) demonstrates the capability to make rapid assessment of actual or potential magnitude and locations of any radiological hazards through simulated liquid or gaseous release pathways. A qualified radiological monitoring team is capable of being notified, activated, briefed and dispatched from the EOF during a radiological release scenario. The team demonstrates conformance with procedural guidance for team composition, use of monitoring equipment, communication from the field, and locating specific sampling locations.</p> <p>8.8 A drill or exercise is conducted that demonstrates the capability of a radiological monitoring team to be dispatched during a radiological release scenario and use sampling and detection equipment for air concentrations in the plume exposure EPZ, as low as <math>10^{-7}</math> <math>\mu\text{Ci/cc}</math>.</p> <p>8.9 A drill or exercise is conducted that demonstrates the ability to estimate integrated dose from the dose assessment program and the radiological monitoring team reading during a radioactive release scenario for the following radioisotopes: Kr-88, Ru-106, I-131, I-132, I-133, I-134, I-135, Te-132, Xe-133, Xe-135, Cs-134, Cs-137, Ce-144. Results are compared with the PAGs.</p>

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Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
<b>9.0 Protective Response</b>			
<p>10 CFR 50.47(b)(10) – A range of protective actions has been developed for the plume exposure EPZ for emergency workers and the public. In developing this range of actions, consideration has been given to evacuation, sheltering, and, as a supplement to these, the prophylactic use of potassium iodide (KI), as appropriate. Guidelines for the choice of protective actions during an emergency, consistent with Federal guidance, are developed and in place, and protective actions for the ingestion exposure EPZ appropriate to the locale have been developed.</p>	<p>9.1 The means exists to warn and advise onsite individuals of an emergency, including those in areas controlled by the operator, including:[J.1.1]</p> <ol style="list-style-type: none"> <li>1. employees not having emergency assignments;</li> <li>2. visitors;</li> <li>3. contractor and construction personnel; and</li> <li>4. Other persons who may be in the public access areas, on or passing through the site, or within the owner controlled area.</li> </ol>	<p>9.1 A test will be performed of the capabilities.</p>	<p>9.1 The following objectives to warn and advise onsite individuals using the plant public address system are successfully satisfied during a drill or exercise:</p> <p>A. Demonstrate the ability to perform assembly and accountability for all onsite individuals, including those identified below, within 30 minutes of an emergency requiring protected area evacuation and accountability:</p> <ol style="list-style-type: none"> <li>1. non-essential employees;</li> <li>2. visitors;</li> <li>3. contractor and construction personnel.</li> </ol> <p>B. Demonstrate the ability to warn and advise other personnel within the owner controlled area in a timely manner (about 15 minutes).</p> <p>C. Demonstrate the ability to perform site dismissal.</p>
	<p>9.2 The means exist to radiologically monitor people evacuated from the site. [K.4]</p>	<p>9.2 A test will be performed of the capabilities.</p>	<p>9.2 A drill or exercise is conducted that demonstrates the capability to radiologically monitor people evacuated from the site. Equipment is available, and personnel have been assigned and trained to procedures that are approved and in place to accomplish this activity.</p>

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Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
	9.3 The means exists to notify and protect all segments of the transient and resident populations. [J.2.1]	9.3 A test will be performed of the capabilities.	9.3 A drill or exercise is conducted to demonstrate the capability of the Public Alert and Notification System to successfully initiate a broadcast message to notify and protect all segments of the transient and resident populations.
<b>10.0 Radiological Exposure Control</b>			
10 CFR 50.47(b)(11) – Means for controlling radiological exposures, in an emergency, are established for emergency workers. The means for controlling radiological exposures shall include exposure guidelines consistent with EPA Emergency Worker and Lifesaving Activity PAGs.	<p>10.1 The means exists to provide onsite radiation protection. [K.2]</p> <p>10.2 The means exists to provide 24-hour-per-day capability to determine the doses received by emergency personnel and maintain dose records. [K.3]</p> <p>10.3 The means exists to decontaminate relocated onsite and emergency personnel, including waste disposal. [K5.b, K.7]</p> <p>10.4 The means exists to provide onsite and contamination control measures. [K.6]</p>	<p>10.1 An analysis of site procedures will be performed.</p> <p>10.2 An analysis of emergency plan implementing procedures will be performed.</p> <p>10.3 An analysis of emergency plan implementing procedures will be performed.</p> <p>10.4 An analysis of site procedures will be performed.</p>	<p>10. 1 Site Procedures provide the means for onsite radiation protection.</p> <p>10.2 Emergency plan implementing procedures provide the means for 24-hour per-day capability to determine the doses received by emergency personnel and maintain dose records.</p> <p>10.3 Emergency plan implementing procedures provide a means to decontaminate relocated onsite and emergency personnel, including waste disposal.</p> <p>10.4 Site procedures provide the means for onsite contamination control measures.</p>

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Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
<b>11.0 Medical and Public Health Support</b>			
<p>10 CFR 50.47(b)(12) – Arrangements are made for medical services for contaminated, injured individuals.</p>	<p>11.1 Arrangements have been implemented for local and backup hospital and medical services having the capability for evaluation of radiation exposure and uptake. [L.1]</p> <p>11.2 The means exist for onsite first aid capability. [L.2]</p> <p>11.3 Arrangements have been implemented for transporting victims of radiological accidents, including contaminated injured individuals, from the site to offsite medical support facilities. [L.4]</p>	<p>11.1 An analysis of emergency plan implementing procedures will be performed.</p> <p>11.2 An analysis of station procedures and emergency plan implementing procedures will be performed.</p> <p>11.3 An analysis of emergency plan implementing procedures will be performed.</p>	<p>11.1 Arrangements have been implemented for local and backup hospital and medical services having the capability for evaluation of radiation exposure and uptake per Letter(s) of Agreement and emergency plan implementing procedures.</p> <p>11.2 The means exist for onsite first aid capability to include a designated first aid station, supplies and site medical response team per station procedures and Emergency plan implementing procedures.</p> <p>11.3 Arrangements have been implemented for transporting victims of radiological accidents, including contaminated injured individuals, from the site to offsite medical support facilities per Letter(s) of Agreement and emergency plan implementing procedures.</p>

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Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
<b>12.0 Exercises and Drills</b>			
<p>10 CFR 50.47(b)(14) – Periodic exercises are (will be) conducted to evaluate major portions of emergency response capabilities, periodic drills are (will be) conducted to develop and maintain key skills, and deficiencies identified as a result of exercises or drills are (will be) corrected.</p>	<p>12.1 Licensee conducts a full participation exercise to evaluate major portions of emergency response capabilities, which includes participation by each State and local agency within the plume exposure EPZ, and each State within the ingestion control EPZ. [N.1]</p>	<p>12.1 A full participation exercise (test) will be conducted within the specified time periods of Appendix E to 10 CFR Part 50.</p>	<p>12.1.1 The exercise is completed within the specified time periods of Appendix E to 10 CFR Part 50, onsite exercise objectives listed below have been met, and there are no uncorrected onsite exercise deficiencies.</p> <p><i>A. Accident Assessment and Classification</i></p> <p>1. Demonstrate the ability to identify initiating conditions, determine emergency action level (EAL) parameters, and correctly classify the emergency throughout the exercise in accordance with emergency plan implementing procedures.</p> <p><u>Standard Criteria:</u></p> <p>a. The appropriate EAL condition associated with a parameter or symptom was recognized.</p> <p>b. The correct emergency classification is declared within 15 minutes of the time that the EAL condition was present.</p>



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Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
			<p><i>B. Notifications</i></p> <p>1. Demonstrate the ability to alert, notify and mobilize site emergency response personnel, in accordance with emergency plan implementing procedures.</p> <p><u>Standard Criteria:</u></p> <ul style="list-style-type: none"> <li>a. Initiate a plant page announcement using the appropriate message scenario for ERO notification.</li> <li>b. Activate the computer based automated callout system at declaration of an Alert classification or higher.</li> </ul> <p>2. Demonstrate the ability to notify responsible State and local government agencies within 15 minutes and the NRC within 60 minutes after declaring an emergency, in accordance with emergency plan implementing procedures.</p> <p><u>Standard Criteria:</u></p> <ul style="list-style-type: none"> <li>a. Transmit information to state and local agencies within 15 minutes of event classification.</li> <li>b. Transmit follow-up information to state and local agencies within 60 minutes of last transmittal.</li> </ul>

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Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
			<p>c. Transmit information within 60 minutes of event classification for an initial notification to the NRC.</p> <p>3. Demonstrate the ability to warn or advise onsite individuals of emergency conditions in a timely manner (about 15 minutes), in accordance with emergency plan implementing procedures.</p> <p><u>Standard Criteria:</u></p> <p>a. Initiate notification of onsite individuals of event declaration (via plant page, telephone, etc.)</p> <p>4. Demonstrate the capability of the Public Alert and Notification System to operate properly for public notification when required, in accordance with emergency plan implementing procedures.</p> <p><u>Standard Criteria:</u></p> <p>a. Greater than 94% of ANS sirens are capable of performing their function as indicated by the feedback system. The clarifying notes listed in NEI 99-02, Regulatory Assessment Performance Indicator Guideline, will be used for this test.</p>

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Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
			<p><i>C. Emergency Response</i></p> <p>1. Demonstrate the capability to direct and control emergency operations, in accordance with emergency plan implementing procedures.</p> <p><u>Standard Criteria:</u></p> <p>a. Facility command and control is demonstrated by the Nuclear Shift Manager - Operations in the Control Room (simulator) upon event declaration, and by the Emergency Coordinator - TSC in the Technical Support Center (TSC) and the EOF Director in the Emergency Operations Facility (EOF) within 60 minutes of ERO notification.</p> <p>2. Demonstrate the ability to transfer overall command and control from the Nuclear Shift Manager - Operations in the Control Room (simulator) to the Emergency Coordinator - TSC in the TSC and EOF Director in the EOF, in accordance with emergency plan implementing procedures.</p> <p><u>Standard Criteria:</u></p> <p>a. Evaluation of briefings that were conducted prior to turnover includes current plant conditions, radiological release information, response efforts and priorities, and the formal relief of delegable and non-delegable responsibilities.</p>

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Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
			<p>3. Demonstrate the ability to maintain continuous staffing of the emergency response facilities for a protracted period, in accordance with emergency plan implementing procedures.</p> <p><u>Standard Criteria:</u></p> <p>a. Complete shift relief schedule adequate to support 24-hour staffing.</p> <p>4. Demonstrate the ability to perform assembly and accountability for all onsite individuals within 30 minutes of an emergency requiring a Protected Area evacuation and accountability, in accordance with emergency plan implementing procedures.</p> <p><u>Standard Criteria:</u></p> <p>a. All Protected Area personnel are assembled in their designated assembly area and accountability is completed within 30 minutes of an emergency requiring Protected Area evacuation and accountability.</p>

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Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
			<p><i>D. Emergency Response Facilities</i></p> <p>1. Demonstrate activation of the Operations Support Center (OSC), Technical Support Center (TSC), Emergency Operations Facility (EOF), and Emergency News Center (ENC), in accordance with emergency plan implementing procedures.</p> <p><u>Standard Criteria:</u></p> <p>a. The TSC and OSC, are activated within approximately one (1) hour of an Alert or higher emergency declaration with at least minimum staffing.</p> <p>b. The EOF is activated within approximately one (1) hour of a Site Area Emergency or higher emergency declaration with at least minimum staffing.</p> <p>c. The ENC minimum staffing positions are available within approximately two (2) hours of a Site Area Emergency or higher emergency declaration.</p> <p>2. Demonstrate the adequacy of equipment, security provisions, and habitability precautions for the TSC, OSC, EOF, and ENC, as appropriate, in accordance with emergency plan implementing procedures.</p>

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Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
			<p><u>Standard Criteria:</u></p> <ul style="list-style-type: none"> <li>a. The adequacy of the emergency equipment in the emergency response facilities, including availability and consistency with emergency plan implementing procedures, supported the accomplishment of all of the evaluated performance objectives.</li> <li>b. The Security Coordinator implements and performs all appropriate steps from the emergency plan implementing procedures for the ingress, egress, and control of onsite and offsite personnel responding to the site during the scenario.</li> <li>c. The Radiation Controls Coordinator and staff correctly implement and perform all appropriate steps from the emergency plan implementing procedures when a simulated onsite/offsite release has occurred during the scenario.</li> <li>d. Demonstrate the capability of TSC and EOF equipment and data displays to clearly identify and reflect the affected unit.</li> </ul> <p>3. Demonstrate communications from the emergency response facilities and the adequacy of communications for all emergency support resources, in accordance with emergency plan implementing procedures.</p> <p><u>Standard Criteria:</u></p> <ul style="list-style-type: none"> <li>a. Emergency response communications are available and operational.</li> </ul>

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Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
			<p>b. Communications systems are adequate to support CR, TSC, OSC, EOF, and ENC activation.</p> <p>c. Demonstrate emergency response personnel are able to operate all specified communication systems.</p> <p>d. Clear primary and backup communications links are established and maintained for the duration of the exercise.</p> <p><i>E. Radiological Assessment and Control</i></p> <p>1. Demonstrate the ability to obtain onsite radiological surveys and samples.</p> <p><u>Standard Criteria:</u></p> <p>a. RP personnel demonstrate the ability to obtain appropriate instruments (range and type) and take surveys for scenario conditions that allow EPA PAGs to be exceeded.</p> <p>b. Airborne samples are properly taken, reported and assessed and utilized when the conditions indicate the need for the information.</p> <p>2. Demonstrate the capability to establish emergency exposure guidelines consistent with EPA-400 and the ability to continuously monitor and control radiation exposure to emergency workers.</p>

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Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
			<p><u>Standard Criteria:</u></p> <ul style="list-style-type: none"> <li>a. Demonstrate the ability to determine doses received by emergency personnel and volunteers 24 hours/day and provisions for distribution of both self-reading and permanent record devices.</li> <li>b. Demonstrate that exposures are controlled to 10 CFR Part 20 limits until the Emergency Coordinator authorizes the use of emergency EPA limits.</li> <li>c. Exposure records are available, either from the ALARA computer or a hard copy dose report, and are updated and reviewed throughout the scenario.</li> </ul> <p>3. Demonstrate the methods, equipment, and expertise available to make rapid assessments of the actual or potential magnitude and locations of radiological hazards from both gaseous and liquid pathways.</p> <p><u>Standard Criteria:</u></p> <ul style="list-style-type: none"> <li>a. One radiological monitoring team (2 personnel) is ready to be deployed no later than 30 minutes from the declaration of an Alert or higher emergency.</li> <li>b. A second radiological monitoring team (2 personnel) is ready to be deployed no later than 60 minutes from the declaration of an Alert or higher emergency.</li> </ul>



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Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
			<p>4. Demonstrate the ability to satisfactorily collect and disseminate radiological monitoring team data.</p> <p><u>Standard Criteria:</u></p> <ul style="list-style-type: none"> <li>a. Offsite radiological environmental data collected is provided as dose rate and counts per minute (cpm) from the plume, both open and closed window, and air sample (gross and net cpm) for particulate and iodine, if applicable.</li> <li>b. Offsite radiological environmental data is communicated from the radiological monitoring team to the Radiation Control Coordinator.</li> </ul> <p>5. Demonstrate the ability to estimate integrated dose from projected and actual dose rates and to compare these estimates with EPA Protective Action Guidelines (PAGs).</p> <p><u>Standard Criteria:</u></p> <ul style="list-style-type: none"> <li>a. The Dose Projection Team Leader and Dose Projection Team perform dose projections in accordance with emergency plan implementing procedures, and report them to the Radiation Controls Manager.</li> </ul> <p>6. Demonstrate the availability and use of potassium iodide (KI) for onsite emergency response personnel.</p>

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**Table 3.8-1  
Emergency Plan Inspections, Tests, Analyses, and Acceptance Criteria (Sheet 24 of 29)**

Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
			<p><u>Standard Criteria:</u></p> <ul style="list-style-type: none"> <li>a. KI is considered as a potential dose reducing option for situations where airborne radioactive iodine is present.</li> <li>b. KI was administered for activities where personnel dose to the thyroid was calculated, or estimated, to be &gt; 25 Rem CDE.</li> </ul> <p>7. Demonstrate the ability to recommend protective actions to appropriate offsite authorities, in accordance with emergency plan implementing procedures.</p> <p><u>Standard Criteria:</u></p> <ul style="list-style-type: none"> <li>a. Total effective dose equivalent (TEDE) and committed dose equivalent (CDE) to the thyroid dose projections from the dose assessment model are compared to the PAGs.</li> <li>b. PARs are developed within 15 minutes of the time information of the condition warranting a PAR was available to the ERO.</li> </ul>

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Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
			<p>c. PARs are transmitted within 15 minutes of development. Changes to recommendations are communicated to offsite authorities within 15 minutes of a new PAR.</p> <p><i>F. Public Information</i></p> <p>1. Demonstrate the capability to develop and disseminate clear, accurate, and timely information to the news media, in accordance with emergency plan implementing procedures.</p> <p><u>Standard Criteria:</u></p> <p>a. Information provided to the media/public is prepared at a level that the public can understand. Visuals and handouts are provided as needed to clarify the information.</p> <p>b. Information is coordinated with Federal, State and local agencies to maintain factual consistency.</p> <p>c. Media briefings are provided within approximately 60 minutes of significant events (i.e., declaration of a Site Area Emergency or initiation of a radiological release.)</p>

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**Table 3.8-1  
Emergency Plan Inspections, Tests, Analyses, and Acceptance Criteria (Sheet 26 of 29)**

Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
			<p>2. Demonstrate the capability to establish and effectively operate rumor control in a coordinated fashion, in accordance with emergency plan implementing procedures.</p> <p><u>Standard Criteria:</u></p> <ul style="list-style-type: none"> <li>a. Calls are answered in a timely manner with the correct information.</li> <li>b. Calls are returned or forwarded, as appropriate, to demonstrate responsiveness.</li> <li>c. Rumors are identified and addressed, and recurring rumors are addressed in subsequent press briefings and news releases.</li> </ul> <p><i>G. Recovery and Reentry</i></p> <p>1. Demonstrate the ability to enter recovery and reentry conditions, in accordance with emergency plan implementing procedures.</p> <p><u>Standard Criteria:</u></p> <ul style="list-style-type: none"> <li>a. The appropriate EAL condition and emergency classification is downgraded to a lower classification or terminated.</li> <li>b. Proper notifications are made to onsite and offsite emergency response agencies, including State and local agencies.</li> </ul>

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Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
			<p><i>H. Evaluation</i></p> <p>1. Demonstrate the ability to conduct a post-exercise critique, to determine areas requiring improvement and corrective action, in accordance with emergency plan implementing procedures.</p> <p><u>Standard Criteria:</u></p> <ul style="list-style-type: none"> <li>a. An exercise time line is developed, followed by an evaluation of the objectives against the expectations of the timeline.</li> <li>b. Significant problems in achieving the objectives are discussed to ensure understanding of why objectives were not fully achieved.</li> <li>c. Areas requiring improvement are entered in the Levy Corrective Action Program.</li> </ul>

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Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
			<p>12.1.2 Onsite emergency response personnel are mobilized in sufficient numbers to fill emergency response positions and successfully perform assigned responsibilities (see Note 1).</p> <p>12.1.3 The exercise was completed within the specified time periods of Appendix E to 10 CFR Part 50, offsite exercise objectives were met, and there were no uncorrected offsite exercise deficiencies, or a license condition requires offsite deficiencies to be corrected prior to operation above 5% of rated power as described in 10 CFR 50.54(gg).</p> <p>(Note 1: The assigned responsibilities for onsite Emergency Response Organization members are identified in Sections B.1 through B.7 of the Levy COL Application Emergency Plan and Emergency Plan Implementing Procedures.)</p>
<b>13.0 Radiological Emergency Response Training</b>			
<p>10 CFR 50.47(b)(15) – Radiological emergency response training is provided to those who may be called on to assist in an emergency.</p>	<p>13.1 Site-specific emergency response training has been provided for those who may be called upon to provide assistance in the event of an emergency. [O.1]</p>	<p>13.1 An inspection of the emergency response organization training program will be performed.</p>	<p>13.1 Site-specific emergency response training has been provided for the:</p> <ul style="list-style-type: none"> <li>• LNP emergency response organization, and</li> <li>• Offsite medical, local law enforcement and firefighter personnel</li> </ul> <p>that may be called upon to provide assistance in the event of an emergency as documented on training records.</p>

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Emergency Plan Inspections, Tests, Analyses, and Acceptance Criteria (Sheet 29 of 29)**

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<b>14.0 Responsibility for the Planning Effort: Development, Periodic Review, and Distribution of Emergency Plans</b>			
10 CFR 50.47(b)(16) – Responsibilities for plan development and review and for distribution of emergency plans are established, and planners are properly trained.	14.1 The emergency response plans have been forwarded to all organizations and appropriate individuals with responsibility for implementation of the plans. [P.5]	14.1 An inspection of the distribution list will be performed.	14.1 The LNP emergency response plan was forwarded to Florida Emergency Management, Citrus County Emergency Management, Levy County Emergency Management and Marion County Emergency Management.
<b>15.0 Implementing Procedures</b>			
10 CFR Part 50, App. E.V – No less than 180 days prior to the scheduled issuance of an operating license for a nuclear power reactor or a license to possess nuclear material, the applicant’s detailed implementing procedures for its emergency plan shall be submitted to the Commission.	15.1 The licensee has submitted detailed implementing procedures for its emergency plan no less than 180 days prior to fuel load.	15.1 An inspection of the submittal letter will be performed.	15.1 Date of submittal letter from the licensee demonstrates that the detailed implementing procedures for the onsite emergency plan were submitted no less than 180 days prior to fuel load.

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**Table 3.8-2  
Waterproof Membrane Inspections, Tests, Analyses, and Acceptance Criteria (Sheet 1 of 1)**

<b>Design Commitment</b>	<b>Inspections, Tests, Analyses</b>	<b>Acceptance Criteria</b>
The friction coefficient to resist sliding is $\geq 0.55$ .	Testing will be performed to confirm that the mudmat-waterproofing-RCC interface beneath the Nuclear Island basemat has a coefficient of friction to resist sliding of $\geq 0.55$ .	A report exists and documents that the as-built waterproof system (mudmat-waterproofing-RCC interface) has a coefficient of friction of $\geq 0.55$ as demonstrated through material qualification testing.



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**Table 3.8-3  
Roller Compacted Concrete Inspections, Tests, Analyses, and Acceptance Criteria (Sheet 1 of 1)**

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
<p>The RCC Bridging mat is seismic Category I and is designed and constructed to bridge over the design basis karst feature when subjected to design basis loads as specified in the Design Description in FSAR Subsection 2.5.4.5.4 without loss of structural integrity and the safety related functions.</p>	<p>i) An inspection of the bridging mat placement will be performed. Deviations in the RCC Bridging Mat properties due to as-built conditions that fall outside the range considered in the design as described in FSAR Subsection 2.5.4.5.4 will be analyzed for the design basis karst feature when subjected to design basis loads.</p> <p>ii) An inspection of the RCC mix and bedding mix constituents will be performed in accordance with FSAR Subsection 3.8.5.11.4. Deviations from the design constituents will be evaluated against the range of properties established for these materials during the design phase.</p> <p>iii) An inspection of the as-built RCC thickness will be performed.</p>	<p>i) A report exists which reconciles deviations from design and placement process of the RCC during construction and concludes that the as-built RCC bridging mat conforms to the approved design and will bridge over a design basis karst feature when subjected to design basis loads specified in the Design Description without loss of structural integrity and the safety related functions.</p> <p>ii) A report exists which reconciles deviations in mix constituents used in construction and concludes that the as-built RCC conforms to the design requirements for these properties.</p> <p>ii) A document exists that verifies that the as-built thickness of the RCC bridging mat is at least as thick as the design requirement.</p>

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**Table 3.8-4  
Drilled Shaft Foundation Inspections, Tests, Analyses, and Acceptance Criteria (Sheet 1 of 1)**

<b>Design Commitment</b>	<b>Inspections, Tests, Analyses</b>	<b>Acceptance Criteria</b>
<p>Drilled Shaft Foundations for the Turbine, Radwaste, and Annex Buildings will preclude movement of the building foundations in excess of the separation provided between the structural elements of the Turbine, Radwaste, and Annex buildings and the nuclear island structures.</p>	<p>During construction, inspection of the physical properties of the rock socket for each drilled shaft will be performed in accordance with LNP FSAR Chapter 3 Subsection 3.8.5.9. Inspection of the as-built drilled shaft foundation physical arrangement will also be performed.</p>	<p>A report exists that reconciles the during construction physical properties of the rock socket for each drilled shaft and the as-built physical arrangement of the Turbine, Radwaste, and Annex Buildings' drilled shaft foundations with design specifications and drawings. The report concludes that the as-built drilled shaft foundation conforms to the design commitment.</p>

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**Table 3.8-5  
Pipe Rupture Hazards Analysis (Sheet 1 of 1)**

<b>Design Commitment</b>	<b>Inspections, Tests, Analyses</b>	<b>Acceptance Criteria</b>
<p>Systems, structures, and components (SSCs), that are required to be functional during and following a design basis event shall be protected against or qualified to withstand the dynamic and environmental effects associated with analyses of postulated failures in high and moderate energy piping.</p>	<p>Inspection of the as-designed pipe rupture hazard analysis report will be conducted. The report documents the analyses to determine where protection features are necessary to mitigate the consequence of a pipe break. Pipe break events involving high-energy fluid systems are analyzed for the effects of pipe whip, jet impingement, flooding, room pressurization, and temperature effects. Pipe break events involving moderate-energy fluid systems are analyzed for wetting from spray, flooding, and other environmental effects, as appropriate.</p>	<p>An as-designed pipe rupture hazard analysis report exists and concludes that the analysis performed for high and moderate energy piping confirms the protection of systems, structures, and components required to be functional during and following a design basis event.</p>

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**Table 3.8-6  
Piping Design (Sheet 1 of 1)**

<b>Design Commitment</b>	<b>Inspections, Tests, Analyses</b>	<b>Acceptance Criteria</b>
The ASME Code Section III piping is designed in accordance with ASME Code Section III requirements.	Inspection of ASME Code Design Reports (NCA- 3550) and required documents will be conducted for the set of lines chosen to demonstrate compliance.	ASME Code Design Report(s) (NCA-3550) (certified, when required by ASME Code) exist and conclude that the design of the piping for lines chosen to demonstrate all aspects of the piping design complies with the requirements of ASME Code Section III.