

William States Lee III Nuclear Station

COL Application

Part 10

**Proposed License Conditions
(Including ITAAC)**

Revision 10

**Lee Nuclear Station
COL Application
Part 10, License Conditions and ITAAC**

Lee Nuclear Station 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.

SUMMARY OF COMBINED LICENSE INFORMATION HOLDER ITEMS			
COL Item No.	Subject	From DCD Tier 2 Subsection	Implementation Milestone
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</p>			

**Lee Nuclear Station
COL Application
Part 10, License Conditions and ITAAC**

SUMMARY OF COMBINED LICENSE INFORMATION HOLDER ITEMS			
COL Item No.	Subject	From DCD Tier 2 Subsection	Implementation Milestone
	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.		
3.7-3	Seismic Interaction Review	3.7.5.3	Prior to initial fuel load
	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.		
3.7-4	Reconciliation of Seismic Analyses of Nuclear Island Structures	3.7.5.4	Prior to initial fuel load
	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.		
3.9-7	As-Designed Piping Analysis	3.9.8.7	Prior to installation of the piping and connected components in their final location
	After a Combined License is issued, the following activity will be completed by the COL holder: 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 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
	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. 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.		
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.		

**Lee Nuclear Station
COL Application
Part 10, License Conditions and ITAAC**

SUMMARY OF COMBINED LICENSE INFORMATION HOLDER ITEMS			
COL Item No.	Subject	From DCD Tier 2 Subsection	Implementation Milestone
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 is to be implemented when the plant is placed into commercial operation. This program includes 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 tests 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 in the turbine rotor analysis after the fabrication of the turbine and prior to 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 #10.			
14.4-6	First-Plant-Only and Three-Plant-Only Tests	14.4.6	
NOTE – addressed by proposed License Conditions #9 and #10.			
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
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. 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			

**Lee Nuclear Station
COL Application
Part 10, License Conditions and ITAAC**

SUMMARY OF COMBINED LICENSE INFORMATION HOLDER ITEMS			
COL Item No.	Subject	From DCD Tier 2 Subsection	Implementation Milestone
<p>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"> 1. Specific minimum seismic requirements consistent with those used to define the Table 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. 2. Hardware enhancements that were determined in previous test programs and/or analysis programs will be implemented. 			
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
<p>NOTE – addressed by proposed License Condition #6.</p>			
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>			

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. COLA 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.

**Lee Nuclear Station
COL Application
Part 10, License Conditions and ITAAC**

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 license 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 onsite (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 – SNM Material Control and Accounting Program

D. Fuel Receipt – The licensee shall implement each operational program identified below prior to initial receipt of fuel onsite.

D.1 – Fire Protection (applicable portions)

D.2 – Radiation Protection (applicable portions)

D.3 – Special Nuclear Material Physical Protection Program

D.4 – 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

E.2 – 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.

F. Preoperational Testing – The licensee shall implement each operational program identified below prior to initial preoperational testing.

F.1 – Initial Test Program – Preoperational Testing

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

**Lee Nuclear Station
COL Application
Part 10, License Conditions and ITAAC**

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. EMERGENCY PLANNING ACTIONS:

PROPOSED LICENSE CONDITION:

The licensee shall submit a fully developed set of site-specific Emergency Action Levels (EALs) to the NRC in accordance with the NRC-endorsed version of NEI 07-01, Rev. 0, with no deviations. The 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 not less than 180 days prior to the date scheduled for initial fuel load.

Prior to the full participation exercise to be conducted in accordance with the requirements of Appendix E to 10 CFR Part 50, Duke Energy shall identify the specific locations of the reception centers and relocation sites and shall obtain Letters of Agreement for locations not under Duke Energy's control.

At least two (2) years prior to scheduled initial fuel load, Duke Energy 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.

Prior to the full-participation exercise to be conducted in accordance with the requirements of Appendix E to 10 CFR Part 50, Duke Energy will have available for NRC inspection Letters of Agreement with the entities listed in Appendix 7 of the Lee Nuclear Station COLA Part 5, Emergency Plan. These Letters of Agreement will detail each entity's specific emergency planning responsibilities, including response to hostile action affecting the plant site, and certify the entity's concurrence with their responsibilities.

Prior to fuel load, Duke Energy will demonstrate the integrated capability and functionality of the Emergency Operations Facility (EOF) for activation and operation of the facility to respond to emergency events at both the Lee Nuclear Station and one additional nuclear facility that is supported by the EOF. Integrated communication and data capability and functionality will include the Technical Support Centers for Lee Nuclear Station and one additional nuclear facility, and other Federal, State, and local coordination centers as appropriate.

Prior to initial operation greater than 5 percent of rated thermal power of WLS Unit 1, Duke Energy shall demonstrate that administrative and physical means have been established for alerting and providing instructions to the public within the plume exposure pathway EPZ. This includes demonstrating that the primary prompt public alert and notification system will have the capability to essentially complete the initial alerting and initiate notification of the public within the plume exposure pathway EPZ within about 15 minutes.

5. SECURITY PROGRAM:

A. SECURITY PROGRAM IMPLEMENTATION

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

**Lee Nuclear Station
COL Application
Part 10, License Conditions and ITAAC**

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, 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 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. an emergency response data system (ERDS) implementation program plan consistent with 10 CFR Part 50, Appendix E, Section VI.
- f. the flow accelerated corrosion (FAC) program implementation, including the construction phase activities.
- g. 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.
- h. the spent fuel rack Metamic coupon monitoring program implementation.
- i. the implementation of construction and inspection procedures for concrete filled steel plate modules activities before and after concrete placement, use of construction mock-ups, and inspection of modules before and after concrete placement as discussed in DCD Subsection 3.8.4.8.
- j. the availability of documented instrumentation uncertainties to calculate a power calorimetric uncertainty, prior to initial fuel load.
- k. the availability of administrative controls to implement maintenance and contingency activities related to the power calorimetric uncertainty instrumentation, prior to initial fuel load.

**Lee Nuclear Station
COL Application
Part 10, License Conditions and ITAAC**

7. VENDOR AE CONSTRUCTOR QUALIFICATIONS:

COLA FSAR Subsection 1.4.1 indicates that the applicant has not yet identified some of the major participants in the construction of the power plant. Thus, the technical qualifications of the NSSS vendor, architect-engineer, and constructor, and the division of responsibility among them could not be reviewed.

PROPOSED LICENSE CONDITION:

Prior to commencement of construction, the licensee shall submit a license amendment request that 1) identifies the NSSS vendor, architect-engineer, and constructor; 2) describes their technical qualifications; and 3) describes the division of responsibility among them.

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.

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. 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.

PROPOSED LICENSE CONDITION:

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 the 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.

10. 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.

PROPOSED LICENSE CONDITION:

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.

**Lee Nuclear Station
COL Application
Part 10, License Conditions and ITAAC**

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 testing (<5% 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 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.

11. ENVIRONMENTAL PROTECTION PLAN:

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

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 C.F.R. Part 51, "Environmental Protection Regulations for Domestic Licensing and Related Regulatory Functions," as referenced by Subpart C of 10 C.F.R. Part 52, "Early Site Permits; Standard Design Certifications; and Combined Licenses for Nuclear Power Plants," and all applicable requirements therein have been satisfied.

12. FUKUSHIMA ACTIONS:

A. MITIGATION STRATEGIES

PROPOSED LICENSE CONDITION:

1. 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 (SFP) 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 SFP cooling capabilities at all units on the Lee site.

**Lee Nuclear Station
COL Application
Part 10, License Conditions and ITAAC**

- 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 SFP cooling capabilities at all units on the Lee site.
 - 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.
2. 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

PROPOSED LICENSE CONDITION:

Prior to initial fuel load, the licensee shall fully implement the following requirements for SFP 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 SFP 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

PROPOSED LICENSE CONDITION:

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 10 CFR 52.99(a), the 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 will be performed in accordance with NEI 12-01, Revision 0.

**Lee Nuclear Station
COL Application
Part 10, License Conditions and ITAAC**

At least 180 days before the date scheduled for initial fuel loading set forth in the notification submitted in accordance with 10 CFR 2.103(a), the Licensee shall revise the 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

Section 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.

14. DELETED

15. REMOVAL OF LEGACY STORMWATER DRAIN LINE

Prior to fuel load, the licensee shall confirm that a single legacy Cherokee project stormwater drain line (designed to transfer stormwater from the Cherokee power block area to Hold-Up Pond A) and any associated bedding material representing a potential preferential groundwater pathway have been removed and the excavation has been backfilled with compacted native soils.

**Lee Nuclear Station
COL Application
Part 10, License Conditions and ITAAC**

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 William States Lee III, Units 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

- (1) No specific nonradiological aquatic impact issues were identified by NRC staff in the FEIS.

2.2 Terrestrial Issues

- (1) 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.

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.

**Lee Nuclear Station
COL Application
Part 10, License Conditions and ITAAC**

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) 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.

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 Subsection 5.4) 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: onsite 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.

**Lee Nuclear Station
COL Application
Part 10, License Conditions and ITAAC**

4.2 Environmental Monitoring

4.2.1 Aquatic Monitoring

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

4.2.2 Terrestrial Monitoring

(1) 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

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 Subsection 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.

**Lee Nuclear Station
COL Application
Part 10, License Conditions and ITAAC**

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 Subsection 3.1 which involved a potentially significant unreviewed environmental question.
- (3) A list of nonroutine reports submitted in accordance with Subsection 5.4.2.

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:

- (a) 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,
- (b) describe the likely cause of the event,
- (c) indicate the action taken to correct the reported event,
- (d) indicate the corrective action taken to preclude repetition of the event and to prevent similar occurrences involving similar site preparation and preliminary construction activities, and
- (e) 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.

**Lee Nuclear Station
COL Application
Part 10, License Conditions and ITAAC**

Appendix B. Inspections, Tests, Analysis 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.

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.

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 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.	a) The as-built system takes input for feedwater flow measurement from a Caldon [Cameron] LEFM CheckPlus™ System; 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 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.

**Lee Nuclear Station
COL Application
Part 10, License Conditions and ITAAC**

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:

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.	<ul style="list-style-type: none"> 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. 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. 	<ul style="list-style-type: none"> 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. 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.

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.

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

**Lee Nuclear Station
COL Application
Part 10, License Conditions and ITAAC**

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 an LMA of WLS 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.

Piping Design ITAAC

The following piping ITAAC are not included in the scope of the Westinghouse AP1000 standard design in DCD Tier 1 Section 2. Add the following to the information provided in the referenced DCD Tier 1 following Subsection 2.7:

The ITAAC for Piping Design are included in attached Table 2.8-1.

Pipe Rupture Hazard Analysis ITAAC

The following pipe rupture hazards ITAAC are not included in the scope of the Westinghouse AP1000 standard design in DCD Tier 1 Section 3. Add the following to the information provided in the referenced DCD Tier 1 Subsection 3.3:

The ITAAC for Pipe Rupture Hazard Analysis are included in attached Table 3.3-8.

Include the following non-system ITAAC after DCD Tier 1 Section 3.3:

Waterproof Membrane ITAAC

The waterproof membrane ITAAC are included in attached Table 3.3-9. Include this ITAAC after the pipe rupture hazards analysis ITAAC added as Table 3.3-8.

Emergency Planning ITAAC

The emergency planning ITAAC are included in the attached Table 3.8-1. Include these ITAAC after DCD Tier 1 Section 3.7.

**Lee Nuclear Station
COL Application
Part 10, License Conditions and ITAAC**

Table 2.2.3-1									
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.

WLS DEP 3.2-1

**Lee Nuclear Station
COL Application
Part 10, License Conditions and ITAAC**

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
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.

**Lee Nuclear Station
COL Application
Part 10, License Conditions and ITAAC**

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 polar crane 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

WLS DEP 3.2-1

**Lee Nuclear Station
COL Application
Part 10, License Conditions and ITAAC**

Table 2.6.9-2 Site-Specific Physical Security Inspections, Tests, Analyses and Acceptance Criteria (Sheet 1 of 2)		
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 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.
4. The intrusion detection and assessment equipment at the protected area perimeter: (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 (b) remains operable from an uninterruptible power supply in the event of the loss of normal power.	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.	The intrusion detection and assessment equipment at the protected area perimeter: (a) detects penetration or attempted penetration of the protected area barrier and concurrently alarms in the Central Alarm Station and Secondary Alarm Station, and (b) remains operable from an uninterruptible power supply in the event of the loss of normal power.
5. Access control points are established to: (a) control personnel and vehicle access into the protected area. (b) detect firearms, explosives, and incendiary devices at the protected area personnel access points.	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.	The access control points for the protected area: (a) are configured to control personnel and vehicle access. (b) include detection equipment that is capable of detecting firearms, incendiary devices, and explosives at the protected area personnel access points.
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.	A test of the access control system with numbered picture badges will be performed.	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.
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.

**Lee Nuclear Station
COL Application
Part 10, License Conditions and ITAAC**

Table 2.6.9-2 Site-Specific Physical Security Inspections, Tests, Analyses and Acceptance Criteria (Sheet 2 of 2)		
Design Commitment	Inspections, Tests, and Analyses	Acceptance Criteria
<p>8.a) Penetrations through the protected area barrier are secured and monitored.</p> <p>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.</p>	<p>Inspections will be performed of penetrations through the protected area barrier.</p> <p>Inspections will be performed of unattended openings that intersect the protected area boundary or vital area boundary.</p>	<p>Penetrations and openings through the protected area barrier are secured and monitored.</p> <p>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.</p>
<p>9. Emergency exits through the protected area perimeter are alarmed and secured with locking devices to allow for emergency egress.</p>	<p>Tests, inspections, or a combination of tests and inspections of emergency exits through the protected area perimeter will be performed.</p>	<p>Emergency exits through the protected area perimeter are alarmed and secured by locking devices that allow prompt egress during an emergency.</p>

**Lee Nuclear Station
COL Application
Part 10, License Conditions and ITAAC**

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
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.

**Lee Nuclear Station
COL Application
Part 10, License Conditions and ITAAC**

Table 2.6.12-1 Offsite Power System (Sheet 2 of 2)		
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="margin-left: 20px;">a. with a high impedance ground fault condition, or</p> <p style="margin-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="margin-left: 20px;">a. with a high impedance ground fault condition, or</p> <p style="margin-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>

**Lee Nuclear Station
COL Application
Part 10, License Conditions and ITAAC**

TABLE 2.8-1 Piping Design (Sheet 1 of 1)

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
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.

**Lee Nuclear Station
COL Application
Part 10, License Conditions and ITAAC**

TABLE 3.3-8 Pipe Rupture Hazards Analysis (Sheet 1 of 1)

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
<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>

**Lee Nuclear Station
COL Application
Part 10, License Conditions and ITAAC**

TABLE 3.3-9 Waterproof Membrane Inspections, Tests, Analyses, and Acceptance Criteria (Sheet 1 of 1)

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

**Lee Nuclear Station
COL Application
Part 10, License Conditions and ITAAC**

TABLE 3.3-10 Deleted

**William States Lee III Nuclear Station
COL Application, Part 10
Inspections, Tests, Analyses, and Acceptance Criteria**

TABLE 3.8-1 INSPECTIONS, TESTS, ANALYSES, AND ACCEPTANCE CRITERIA (SHEET 1 of 21)

Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
1.0 Emergency Classification System			
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.	<p>1.1 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.1**]</p> <p>[**D.1 corresponds to NUREG-0654 /FEMA-REP-1 evaluation criteria.]</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 control room, technical support center (TSC), and emergency operations facility (EOF) will be performed to verify that they have displays for retrieving facility system and effluent parameters that constitute the bases for the classification scheme in the emergency plan implementing procedure addressing “Emergency Classification.”</p>	<p>1.1.1 The specific parameters identified in the Emergency Action Thresholds in the emergency plan implementing procedure addressing “Emergency Classification” have been retrieved and displayed in the control room, TSC, and EOF.</p> <p>1.1.2 The ranges available in the control room, TSC, and EOF encompassed the values for the specific parameters identified in the Emergency Action Level Thresholds in the emergency plan implementing procedure addressing “Emergency Classification.”</p>

**William States Lee III Nuclear Station
COL Application, Part 10
Inspections, Tests, Analyses, and Acceptance Criteria**

TABLE 3.8-1 INSPECTIONS, TESTS, ANALYSES, AND ACCEPTANCE CRITERIA (SHEET 2 of 21)

Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
2.0 Notification Methods and Procedures			
<p>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>	<p>2.1 The means exist to notify responsible State and local organizations within 15 minutes after the licensee declares an emergency. [E.1]</p>	<p>2.1 A test will be performed of the capabilities.</p>	<p>2.1.1 A report exists that confirms communications have been established via the Selective Signaling Telephone System between the control room and the following:</p> <ul style="list-style-type: none"> - Cherokee County Warning Point - York County Warning Point - Cleveland County Warning Point - South Carolina Warning Point - North Carolina Emergency Operations Center Radiological Warning Point
	<p>2.2 The means exist to notify emergency response personnel. [E.2]</p>	<p>2.2 A test will be performed of the capabilities.</p>	<p>2.2 A report exists that confirms notification to the Lee Nuclear Station emergency response organization has been performed.</p>
	<p>2.3 The means exist to notify and provide instructions to the populace within the plume exposure EPZ. [E.6]</p>	<p>NOTE: The means to notify and provide instructions to the populace within the plume exposure EPZ is addressed by Acceptance Criteria 8.1.1.2.</p>	

**William States Lee III Nuclear Station
COL Application, Part 10
Inspections, Tests, Analyses, and Acceptance Criteria**

TABLE 3.8-1 INSPECTIONS, TESTS, ANALYSES, AND ACCEPTANCE CRITERIA (SHEET 3 of 21)

Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
3.0 Emergency Communications			
<p>10 CFR 50.47(b)(6) – Provisions exist for prompt communications among principal response organizations to emergency personnel and to the public.</p>	<p>3.1 The means exist for communications among the control room, TSC, EOF, principal State and local emergency operations centers (EOCs), and radiological field assessment teams. [F.1.d]</p> <p>3.2 The means exist for communications from the control room, TSC, and EOF to the NRC headquarters and regional office EOCs (including establishment of the Emergency Response Data System (ERDS) between the onsite computer system and the NRC Operations Center.) [F.1.f]</p>	<p>3.1 A test will be performed of the capabilities.</p> <p>NOTE: Additional ITAAC for the as-built TSC and OSC are addressed in Table 3.1-1 of Tier 1 of the AP1000 Design Control Document, Rev. 19.</p> <p>3.2 A test will be performed of the capabilities from the control room, TSC and EOF to the NRC, including ERDS.</p>	<p>3.1.1 A report exists that confirms communications have been established among the control room, OSC, and TSC.</p> <p>3.1.2 A report exists that confirms communications have been established among the control room, TSC, and EOF.</p> <p>3.1.3 A report exists that confirms communications via the Selective Signaling Telephone System between the TSC and the following:</p> <ul style="list-style-type: none"> - Cherokee County Warning Point - York County Warning Point - Cleveland County Warning Point - South Carolina Warning Point - North Carolina Emergency Operations Center Radiological Warning Point <p>3.1.4 A report exists that confirms communications have been established between the TSC and radiological monitoring teams.</p> <p>3.2.1 A report exists that confirms communications have been established from the control room, TSC, and EOF to NRC Headquarters and Region II EOC.</p> <p>3.2.2 A report exists that confirms ERDS data was provided from the plant computer system to NRC Headquarters and Region II EOC.</p>

**William States Lee III Nuclear Station
COL Application, Part 10
Inspections, Tests, Analyses, and Acceptance Criteria**

TABLE 3.8-1 INSPECTIONS, TESTS, ANALYSES, AND ACCEPTANCE CRITERIA (SHEET 4 of 21)

Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
4.0 Public Education and Information			
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.	4.1 The licensee has provided space which may be used for a limited number of the news media at the EOF. [G.3.b]	4.1 An inspection of the Joint Information Center will be performed to verify that space is provided for a limited number of the news media.	4.1 The Joint Information Center has been located in the Duke Energy Center at 526 South Church Street, Charlotte, NC.

**William States Lee III Nuclear Station
COL Application, Part 10
Inspections, Tests, Analyses, and Acceptance Criteria**

TABLE 3.8-1 INSPECTIONS, TESTS, ANALYSES, AND ACCEPTANCE CRITERIA (SHEET 5 of 21)

Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
5.0 Emergency Facilities and Equipment			
10 CFR 50.47(b)(8) – Adequate emergency facilities and equipment to support the emergency response are provided and maintained.	5.1 The licensee has established a technical support center (TSC) and onsite operations support center (OSC). [H.1]	5.1 An inspection of the as-built TSC and OSC will be performed. NOTE: Additional ITAAC for the as-built TSC and OSC are addressed in Table 3.1-1 of Tier 1 of the AP1000 Design Control Document, Rev. 19.	5.1.1 The TSC has been located in the Maintenance Building. 5.1.2 The TSC includes radiation monitors and a ventilation system with a high efficiency particulate air (HEPA) and charcoal filter. 5.1.3 Back-up electrical power supply was available for the TSC. 5.1.4 The OSC was in a location separate from the control room.
	5.2 The licensee has established an emergency operations facility (EOF). [H.2]	5.2 An inspection of the EOF will be performed.	5.2.1 The EOF had at least 243 square meters (2,625 square feet). 5.2.2 Voice transmission and reception have been accomplished between the EOF and TSC. 5.2.3 A report exists that confirms voice transmission and reception have been accomplished via the Selective Signaling Telephone System between the EOF and the following: <ul style="list-style-type: none"> - Cherokee County Warning Point - York County Warning Point - Cleveland County Warning Point - South Carolina Warning Point - North Carolina Emergency Operations Center Radiological Warning Point

**William States Lee III Nuclear Station
COL Application, Part 10
Inspections, Tests, Analyses, and Acceptance Criteria**

TABLE 3.8-1 INSPECTIONS, TESTS, ANALYSES, AND ACCEPTANCE CRITERIA (SHEET 6 of 21)

Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
6.0 Accident Assessment			
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.	6.1 The means exist to provide initial and continuing radiological assessment throughout the course of an accident. [1.2]	6.1 A test of the emergency plan will be conducted by performing an exercise or drill to verify the capability to perform accident assessment.	6.1 A report exists that confirms an exercise or drill has been accomplished including use of selected monitoring parameters identified in the EAL Thresholds in the emergency plan implementing procedure addressing “Emergency Classification,” to assess simulated degraded plant and initiate protective actions in accordance with the following criteria: A. Accident Assessment and Classification 1. Initiating conditions identified, EALs parameters determined, and the emergency correctly classified throughout the drill. B. Radiological Assessment and Control 1. Onsite radiological surveys performed and samples collected. 2. Radiation exposure to emergency workers monitored and controlled. 3. Field monitoring teams assembled and deployed. 4. Field team data collected and disseminated. 5. Dose projections developed. 6. The decision whether to issue radioprotective drugs to Duke emergency workers made. 7. Protective action recommendations developed and communicated to appropriate authorities.

**William States Lee III Nuclear Station
COL Application, Part 10
Inspections, Tests, Analyses, and Acceptance Criteria**

TABLE 3.8-1 INSPECTIONS, TESTS, ANALYSES, AND ACCEPTANCE CRITERIA (SHEET 7 of 21)

Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
	<p>6.2 The means exist 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. [I.3]</p> <p>6.3 The means exist 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>6.4 The means exist to acquire and evaluate meteorological information. [I.5]</p> <p>6.5 The means exist to make rapid assessments of actual or potential magnitude and locations of any radiological hazards through liquid or gaseous release pathways, including activation, notification means, field team composition, transportation, communication, monitoring equipment, and estimated deployment times. [I.8]</p>	<p>6.2 An analysis of emergency plan implementing procedures will be performed.</p> <p>6.3 An analysis of emergency plan implementing procedures will be performed.</p> <p>6.4 An inspection of the control room, TSC, and EOF will be performed to verify the availability of the following meteorological data is available:</p> <ul style="list-style-type: none"> - Wind speed (at 10 m and 60 m) - Wind direction (at 10 m and 60 m) - Air temperature (at 10 m and 60 m) <p>6.5 An analysis of emergency plan implementing procedures will be performed.</p>	<p>6.2 A methodology has been established to determine source term of releases of radioactive materials within plant systems.</p> <p>6.3 A methodology has been provided to establish the relationship between effluent monitor readings and onsite and offsite exposures and contamination for various meteorological conditions.</p> <p>6.4 The specified meteorological data was available at the control room, TSC, and EOF.</p> <p>6.5 A methodology has been established to provide rapid assessment of the actual or potential magnitude and locations of any radiological hazards through liquid or gaseous release pathways.</p>

**William States Lee III Nuclear Station
COL Application, Part 10
Inspections, Tests, Analyses, and Acceptance Criteria**

TABLE 3.8-1 INSPECTIONS, TESTS, ANALYSES, AND ACCEPTANCE CRITERIA (SHEET 8 of 21)

Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
	<p>6.6 The capability exists to detect and measure radioiodine concentrations in air in the plume exposure EPZ, as low as 10⁻⁷ μCi/cc (microcuries per cubic centimeter) under field conditions. [I.9]</p> <p>6.7 The means exist to estimate integrated dose from the projected and actual dose rates, and for comparing these estimates with the EPA protective action guides (PAGs). [I.10]</p>	<p>6.6 A test of Duke field survey instrumentation will be performed to verify the capability to detect airborne concentrations as low as 1E-07 microcuries per cubic centimeters.</p> <p>6.7 An analysis of emergency plan implementing procedures will be performed to verify that a methodology is provided to establish means for relating contamination levels and airborne radioactivity levels to dose rates and gross radioactivity measurements for the following isotopes – 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.</p>	<p>6.6 A report exists that confirms instrumentation used for monitoring I-131 to detect airborne concentrations as low as 1E-07 microcuries per cubic centimeters has been provided.</p> <p>6.7 The means for relating contamination levels and airborne radioactivity levels to dose rates and gross radioactivity measurements for the specified isotopes has been established.</p>

**William States Lee III Nuclear Station
COL Application, Part 10
Inspections, Tests, Analyses, and Acceptance Criteria**

TABLE 3.8-1 INSPECTIONS, TESTS, ANALYSES, AND ACCEPTANCE CRITERIA (SHEET 9 of 21)

Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
7.0 Protective Response			
<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>7.1 The means exist to warn and advise onsite individuals of an emergency, including those in areas controlled by the operator, including:[J.1] a. employees not having emergency assignments; b. visitors; c. contractor and construction personnel; and d. other persons who may be in the public access areas, on or passing through the site, or within the owner controlled area.</p>	<p>7.1 A test of the onsite warning and communications capability will be performed during a drill or exercise.</p>	<p>7.1.1 A report exists that confirms that, during a drill or exercise, notification and instructions were provided to onsite workers and visitors, within the Protected Area, over the plant public announcement system.</p> <p>7.1.2 A report exists that confirms that, during a drill or exercise, audible warnings were provided to individuals outside the Protected Area, but within the Owner Controlled Area.</p>

**William States Lee III Nuclear Station
COL Application, Part 10
Inspections, Tests, Analyses, and Acceptance Criteria**

TABLE 3.8-1 INSPECTIONS, TESTS, ANALYSES, AND ACCEPTANCE CRITERIA (SHEET 10 of 21)

Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
8.0 Exercises and Drills			
<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>8.1 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>8.1 A full-participation exercise (test) will be conducted within the specified time periods of Appendix E to 10 CFR Part 50.</p>	<p>8.1.1.1 A report exists that confirms an exercise was conducted within the specified time periods of Appendix E to 10 CFR Part 50, onsite exercise objectives listed below were met, and there are no uncorrected onsite exercise deficiencies.</p> <p>8.1.1.2 A report exists that confirms the following exercise objectives were satisfied by meeting the specified performance criteria:</p> <p>A. Accident Assessment and Classification</p> <p>1. Demonstrate the ability to identify initiating conditions, determine emergency action level (EAL) parameters, and correctly classify the emergency throughout the exercise.</p> <p>Performance Criterion:</p> <p>a. Determine the correct emergency classification level based on events which were in progress, considering past events and their impact on the current conditions, within 15 minutes from the time the initiating condition(s) or EAL is identified.</p> <p>B. Notifications</p> <p>1. Demonstrate the ability to alert, notify, and mobilize site emergency response personnel.</p>

**William States Lee III Nuclear Station
COL Application, Part 10
Inspections, Tests, Analyses, and Acceptance Criteria**

TABLE 3.8-1 INSPECTIONS, TESTS, ANALYSES, AND ACCEPTANCE CRITERIA (SHEET 11 of 21)

Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
			<p>Performance Criteria:</p> <ul style="list-style-type: none"> a. Complete the designated actions in accordance with emergency plan implementing procedures and perform the announcement within 15 minutes of the initial event classification for an Alert or higher. b. Mobilize site emergency responders in accordance with emergency plan implementing procedures within 15 minutes of the initial event classification for an Alert or higher. <p>2. Demonstrate the ability to notify responsible State, local government agencies within 15 minutes and the NRC within 60 minutes after declaring an emergency.</p> <p>Performance Criteria:</p> <ul style="list-style-type: none"> a. Transmit information in accordance with approved emergency plan implementing procedures within 15 minutes of event classification. b. Transmit information in accordance with approved emergency plan implementing procedures, within 60 minutes of last transmittal for a follow-up notification to State and local authorities. <p>3. Demonstrate the ability to warn or advise onsite individuals of emergency conditions.</p>

**William States Lee III Nuclear Station
COL Application, Part 10
Inspections, Tests, Analyses, and Acceptance Criteria**

TABLE 3.8-1 INSPECTIONS, TESTS, ANALYSES, AND ACCEPTANCE CRITERIA (SHEET 12 of 21)

Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
			<p>Performance Criterion:</p> <ul style="list-style-type: none"> a. Initiate notification of onsite individuals within 15 minutes of declaration. <p>4. Demonstrate the capability of the Public Alert and Notification System to operate properly when required.</p> <p>Performance Criterion:</p> <ul style="list-style-type: none"> a. 90% of the sirens operate properly, as indicated by the feedback system. b. The EAS is activated. <p>C. Emergency Response</p> <ul style="list-style-type: none"> 1. Demonstrate the capability to direct and control emergency operations. <p>Performance Criterion:</p> <ul style="list-style-type: none"> a. Command and control is demonstrated by the control room in the early phase of the emergency, and the technical support center (TSC) within 75 minutes of declaration of an Alert or higher emergency classification. 2. Demonstrate the ability to transfer emergency direction from the control room to the TSC upon activation. <p>Performance Criteria:</p> <ul style="list-style-type: none"> a. Turnover briefings are conducted in accordance with emergency plan implementing procedures.

**William States Lee III Nuclear Station
COL Application, Part 10
Inspections, Tests, Analyses, and Acceptance Criteria**

TABLE 3.8-1 INSPECTIONS, TESTS, ANALYSES, AND ACCEPTANCE CRITERIA (SHEET 13 of 21)

Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
			<ul style="list-style-type: none"> b. Documentation of transfer of duties is completed in accordance with emergency plan implementing procedures.
			<ul style="list-style-type: none"> 3. Demonstrate the ability to prepare for around-the-clock staffing requirements.
			Performance Criterion:
			<ul style="list-style-type: none"> a. Complete 24-hour staff assignments.
			<ul style="list-style-type: none"> 4. Demonstrate the ability to perform assembly and accountability within 30 minutes of an emergency requiring protected area assembly and accountability.
			Performance Criterion:
			<ul style="list-style-type: none"> a. Protected area (PA) personnel assembly and accountability completed within 30 minutes of an emergency requiring PA assembly and accountability.
			D. Emergency Response Facilities
			<ul style="list-style-type: none"> 1. Demonstrate activation of the operational support center (OSC), and full functional operation of the TSC and EOF within 75 minutes declaration of Alert or higher emergency classification.
			Performance Criterion:
			<ul style="list-style-type: none"> a. The TSC, OSC, and EOF are activated within 75 minutes of the initial notification.

**William States Lee III Nuclear Station
COL Application, Part 10
Inspections, Tests, Analyses, and Acceptance Criteria**

TABLE 3.8-1 INSPECTIONS, TESTS, ANALYSES, AND ACCEPTANCE CRITERIA (SHEET 14 of 21)

Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
			<p>2. Demonstrate the adequacy of equipment, security provisions, and habitability precautions for the TSC, OSC, and EOF as appropriate.</p> <p>Performance Criteria:</p> <p>a. Demonstrate the adequacy of the emergency equipment in the emergency response facilities as specified in emergency plan implementing procedures.</p> <p>b. The Security Force implements and follows applicable emergency plan implementing procedures.</p> <p>c. The Radiological Assessment Manager implements habitability controls in accordance with emergency plan implementing procedures if an onsite/offsite release has occurred.</p> <p>3. Demonstrate the adequacy of communications for all emergency support resources.</p> <p>Performance Criteria:</p> <p>a. Emergency response facility personnel are able to operate communication systems in accordance with emergency plan implementing procedures.</p> <p>b. Emergency response communication systems listed in emergency plan implementing procedures are available and operational for the duration of the exercise.</p>

**William States Lee III Nuclear Station
COL Application, Part 10
Inspections, Tests, Analyses, and Acceptance Criteria**

TABLE 3.8-1 INSPECTIONS, TESTS, ANALYSES, AND ACCEPTANCE CRITERIA (SHEET 15 of 21)

Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
			<p data-bbox="1373 289 1850 321">E. Radiological Assessment and Control</p> <p data-bbox="1373 350 1864 410">1. Demonstrate the ability to obtain onsite radiological surveys and samples.</p> <p data-bbox="1373 440 1629 472">Performance Criteria:</p> <p data-bbox="1373 501 1822 623">a. Radiation Protection Technicians demonstrate the ability to obtain appropriate instruments (range and type) and perform surveys.</p> <p data-bbox="1373 652 1797 745">b. Airborne samples are taken in accordance with emergency plan implementing procedures.</p> <p data-bbox="1373 774 1864 867">2. Demonstrate the ability to continuously monitor and control radiation exposure to emergency workers.</p> <p data-bbox="1373 896 1629 928">Performance Criteria:</p> <p data-bbox="1373 958 1822 1143">a. Emergency workers are issued self reading dosimeters when radiation levels require, and exposures are controlled to 10 CFR Part 20 limits (unless the Emergency Coordinator authorizes emergency limits).</p> <p data-bbox="1373 1172 1776 1205">b. Exposure records are available.</p> <p data-bbox="1373 1234 1835 1326">c. Emergency workers include Security and personnel within all emergency facilities.</p> <p data-bbox="1373 1356 1881 1448">3. Demonstrate the ability to assemble and deploy field monitoring teams within 75 minutes from the decision to do so.</p>

**William States Lee III Nuclear Station
COL Application, Part 10
Inspections, Tests, Analyses, and Acceptance Criteria**

TABLE 3.8-1 INSPECTIONS, TESTS, ANALYSES, AND ACCEPTANCE CRITERIA (SHEET 16 of 21)

Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
			<p>Performance Criterion:</p> <ul style="list-style-type: none"> a. One Field Monitoring team is ready to be deployed within 15 - 30 minutes of their arrival onsite. In addition, an offsite monitoring team must be able to be dispatched within 75 minutes of an Alert or higher emergency classification. <p>4. Demonstrate the ability to collect and disseminate field team data.</p> <p>Performance Criteria:</p> <ul style="list-style-type: none"> a. Field team collects data for dose rate and airborne radioactivity levels in accordance with emergency plan implementing procedures. b. Field team communicates data to the TSC and/or EOF in accordance with emergency plan implementing procedures. <p>5. Demonstrate the ability to develop dose projections.</p> <p>Performance Criterion:</p> <ul style="list-style-type: none"> a. Timely and accurate dose projections are performed in accordance with emergency plan implementing procedures. <p>6. Demonstrate the ability to make the decision whether to issue radioprotective drugs (KI) to onsite emergency workers.</p>

**William States Lee III Nuclear Station
COL Application, Part 10
Inspections, Tests, Analyses, and Acceptance Criteria**

TABLE 3.8-1 INSPECTIONS, TESTS, ANALYSES, AND ACCEPTANCE CRITERIA (SHEET 17 of 21)

Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
			<p>Performance Criterion:</p> <p>a. KI is issued (simulated) if the estimated dose to the thyroid will exceed 25 rem committed dose equivalent (CDE).</p> <p>7. Demonstrate the ability to develop appropriate protective action recommendations (PARs) and notify appropriate authorities within 15 minutes after development.</p> <p>Performance Criteria:</p> <p>a. Total effective dose equivalent (TEDE) and CDE dose protections from the dose assessment computer code are compared, in accordance with emergency plan implementing procedures.</p> <p>b. PARs are developed within 15 minutes of data availability.</p> <p>c. PAR's are transmitted to responsible State and local government agencies via voice or fax within 15 minutes of event classification and/or PAR development.</p> <p>F. Public Information</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>

**William States Lee III Nuclear Station
COL Application, Part 10
Inspections, Tests, Analyses, and Acceptance Criteria**

TABLE 3.8-1 INSPECTIONS, TESTS, ANALYSES, AND ACCEPTANCE CRITERIA (SHEET 18 of 21)

Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
			<p>Performance Criteria:</p> <ul style="list-style-type: none"> a. The Joint Information Center (JIC) is activated within 75 minutes following the declaration of a Site Area Emergency or higher classification or following the Emergency Coordinator's or JIC Director's instruction to do so. 2. Demonstrate the capability to establish and effectively operate rumor control in a coordinated fashion. <p>Performance Criteria:</p> <ul style="list-style-type: none"> a. Calls are answered in a timely manner with the correct information, in accordance with emergency plan implementing procedures. b. Calls are returned or forwarded, as appropriate, to demonstrate responsiveness. c. Rumors are identified and addressed in accordance with emergency plan implementing procedures. <p>G. Evaluation</p> <ul style="list-style-type: none"> 1. Demonstrate the ability to conduct a post-exercise critique, to determine areas requiring improvement and corrective action. <p>Performance Criteria:</p> <ul style="list-style-type: none"> a. An exercise time line is developed, followed by an evaluation of the objectives.

**William States Lee III Nuclear Station
COL Application, Part 10
Inspections, Tests, Analyses, and Acceptance Criteria**

TABLE 3.8-1 INSPECTIONS, TESTS, ANALYSES, AND ACCEPTANCE CRITERIA (SHEET 19 of 21)

Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
			<p>b. Significant problems in achieving the objectives are discussed to ensure understanding of why objectives were not fully achieved.</p>
			<p>c. Recommendations for improvement in non-objective areas are discussed.</p>
			<p>8.1.2.1 A report exists that confirms onsite emergency response personnel were mobilized to fill emergency response positions and there were no uncorrected onsite exercise deficiencies.</p>
			<p>8.1.2.2 A report exists that confirms onsite emergency response personnel performed their assigned responsibilities as provided in Section II.B of the Lee Combined License Application Emergency Plan and there were no uncorrected onsite exercise deficiencies.</p>
			<p>8.1.3.1 The exercise is completed within the specified time periods of Appendix E to 10 CFR Part 50, offsite exercise objectives have been met, and there are either no uncorrected offsite deficiencies, or a license condition requires offsite deficiencies to be corrected prior to operation above 5% rated power.</p>

**William States Lee III Nuclear Station
COL Application, Part 10
Inspections, Tests, Analyses, and Acceptance Criteria**

TABLE 3.8-1 INSPECTIONS, TESTS, ANALYSES, AND ACCEPTANCE CRITERIA (SHEET 20 of 21)

Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
9.0 Assignment of Responsibility – Organizational Control			
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.	9.1 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**]	9.1 An inspection of the emergency plan implementing procedures will be performed.	9.1 Emergency plan implementing procedures provide for 24-hour per day emergency response staffing and manning of communication links, including continuous operations for a protracted period.

**William States Lee III Nuclear Station
COL Application, Part 10
Inspections, Tests, Analyses, and Acceptance Criteria**

TABLE 3.8-1 INSPECTIONS, TESTS, ANALYSES, AND ACCEPTANCE CRITERIA (SHEET 21 of 21)

Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
10.0 Onsite Emergency Organization			
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.	10.1 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]	10.1 An inspection of the emergency plan implementing procedures will be performed.	10.1 Emergency plan implementing procedures provide minimum and augmented on-shift staffing levels, consistent with Table II-2 of the Lee Nuclear Station Combined License (COL) Application Emergency Plan.