

Bellefonte Nuclear Plant, Units 3 & 4

COL Application

Part 10

**Proposed License Conditions
(Including ITAAC)**

Revision 2

**Bellefonte Nuclear Plant, Units 3 & 4
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BLN 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.

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	Pipe Break Hazards Analysis	3.6.4.1	Prior to initial fuel load
<p>After a Combined License is issued, the following activity will be completed by the COL holder:</p> <p>A pipe rupture hazard analysis is part of the piping design. It is used to identify postulated break locations and layout changes, support design, whip restraint design, and jet shield design. The final design for these activities will be completed prior to fabrication and installation of the piping and connected components. The as-built reconciliation of the pipe break hazards analysis in accordance with the criteria outlined in subsections 3.6.1.3.2 and 3.6.2.5 will be completed prior to fuel load.</p>			
3.7-3	Seismic Interaction Review	3.7.5.3	Prior to initial fuel load
<p>The seismic interaction review will be updated by the Combined License holder for as-built information. This review is performed in parallel with the seismic margin evaluation. The review is based on as-procured data, as well as the as-constructed condition. The as-built</p>			

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SUMMARY OF COMBINED LICENSE INFORMATION HOLDER ITEMS			
COL Item No.	Subject	From DCD Tier 2 Subsection	Implementation Milestone
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.			
3.9-2	Design Specification and Reports	3.9.8.2	Prior to initial fuel load
After a Combined License is issued, the following activities are completed by the COL holder: Reconciliation of the as-built piping (verification of the thermal cycling and stratification loadings considered in the stress analysis discussed in subsection 3.9.3.1.2) is completed by the COL holder after the construction of the piping systems and prior to fuel load.			
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 RDTP 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.			
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.			

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COL Item No.	Subject	From DCD Tier 2 Subsection	Implementation Milestone
9.1-7	Coupon Monitoring Program	9.1.6	Prior to commercial operation
A spent fuel rack Metamic coupon monitoring program will be implemented when the plant is placed into commercial operation. This program will include tests to monitor bubbling, blistering, cracking, or flaking; and a test to monitor for corrosion, such as weight loss measurements and/or visual examination. The program will also include testing to monitor changes in physical properties of the absorber material, including neutron attenuation and thickness measurements.			
10.2-1	Turbine Maintenance and Inspection	10.2.6	Prior to initial fuel load
The Combined License holder will submit to the NRC staff for review prior to fuel load, and then implement a turbine maintenance and inspection program. The program will be consistent with the maintenance and inspection program plan activities and inspection intervals identified in subsection 10.2.3.6. The Combined License holder will have available plant-specific turbine rotor test data and calculated toughness curves that support the material property assumptions 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	Prior to initiating test program
A site-specific startup administration manual (procedure), which contains the administration procedures and requirements that govern the activities associated with the plant initial test program, as identified in FSAR Section 14.2, is provided prior to initiating the plant initial test program.			
14.4-4	Review and Evaluation of Test Results	14.4.4	Prior to initial fuel load
The Combined License holder is responsible for review and evaluation of individual test results as well as final review of overall test results and for review of selected milestones or hold points within the test phases. Test exceptions or results which do not meet acceptance criteria are identified to the affected and responsible design organizations, and corrective actions and retests, as required, are performed.			
14.4-6	First-Plant-Only and Three-Plant-Only Tests	14.4.6	Prior to preoperational testing
The COL holder for the first plant and the first three plants will perform the tests listed in subsection 14.2.5. For subsequent plants, either tests listed in subsection 14.2.5 shall be performed, or the COL applicant shall provide a justification that the results of the first-plant-only tests or first-three-plant tests are applicable to the subsequent plant. The Combined License holder(s) for the first AP1000 plant (or first three plants) available for testing will perform the tests defined during preoperational and startup testing as identified in subsections 14.2.9 and 14.2.10. Combined License holders referencing the results of the tests will provide the report as necessary. The schedule for providing this information will be provided prior to preoperational testing.			

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SUMMARY OF COMBINED LICENSE INFORMATION HOLDER ITEMS			
COL Item No.	Subject	From DCD Tier 2 Subsection	Implementation Milestone
19.59.10-1	As-Built SSC HCLPF Comparison to Seismic Margin Evaluation	19.59.10.5	Prior to initial fuel load
<p>The Combined License holder referencing the AP1000 certified design will review differences between the as-built plant and the design used as the basis for the AP1000 seismic margins analysis prior to fuel load. A verification walkdown will be performed with the purpose of identifying differences between the as-built plant and the design. Any differences will be evaluated and the seismic margins analysis modified as necessary to account for the plant specific-design, and any design changes or departures from the certified design. Spatial interactions are addressed by COL information item 3.7-3. Details of the process will be developed by the Combined License holder.</p> <p>The Combined License holder referencing the AP1000 certified design should compare the as-built SSC HCLPFs to those assumed in the AP1000 seismic margin evaluation prior to fuel load. Deviations from the HCLPF values or assumptions in the seismic margin evaluation due to the as-built configuration and final analysis should be evaluated to determine if vulnerabilities have been introduced. The requirements to which the equipment is to be purchased are included in the equipment specifications. Specifically, the equipment specifications include:</p> <ol style="list-style-type: none"> 1. Specific minimum seismic requirements consistent with those used to define the Table 19.55-1 HCLPF values. <p>This includes the known frequency range used to define the HCLPF by comparing the required response spectrum (RRS) and test response spectrum (TRS). The range of frequency response that is required for the equipment with its structural support is defined.</p> <ol style="list-style-type: none"> 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
NOTE - addressed by proposed License Condition #6.			

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

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.

A.1 – Fitness for Duty (Construction)

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 – Emergency Planning (applicable portions)

C.5 – Security Program (applicable portions)

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 – Security Program (applicable portions)

E. Construction Testing – The licensee shall implement each operational program identified below prior to initial construction testing.

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- E.1 – Initial Test Program – Construction Testing
- F. – Preoperational Testing – The licensee shall implement each operational program identified below prior to initial preoperational testing.
 - F.1 – Initial Test Program – Preoperational Testing
- 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 – Fitness for Duty (Operations)
 - G.8 – Containment Leakage Rate Testing
 - G.9 – Physical Security
 - G.10 – Cyber Security
- H. Startup Testing – The licensee shall implement each operational program identified below prior to initial startup testing
 - H.1 – Initial Test Program – Startup Testing
- I. MODE 4 – Not used.
- J. Initial Criticality – The licensee shall implement each operational program identified below prior to initial criticality.
 - J.1 – Reactor Vessel Material Surveillance
- K. Waste Shipment – The licensee shall implement each operational program identified below prior to initial radioactive waste shipment.
 - K.1 – Radiation Protection

4. EMERGENCY PLANNING ACTIONS:

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

PROPOSED LICENSE CONDITION:

- A. 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. These fully developed EALs shall be submitted to the NRC for confirmation at least 180 days prior to initial fuel load.
- B. Prior to the full participation exercise to be conducted in accordance with the requirements of Appendix E to 10 CFR Part 50, TVA shall establish Letters of Agreement with the following entities:
 - a. Alabama Department of Public Health
 - b. Alabama Emergency Management Agency
 - c. Jackson County Emergency Management Agency
 - d. DeKalb County Emergency Management Agency.

These Letters of Agreement will identify the specific nature of arrangements in support of emergency preparedness for operation of the proposed new nuclear units and certify the agency's concurrence with the emergency action levels described in Bellefonte Units 3 & 4 Combined License Application Emergency Plan Implementing Procedure, "Emergency Classification."

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C. Prior to the full participation exercise to be conducted in accordance with the requirements of Appendix E to 10 CFR Part 50, TVA shall establish Letters of Agreement with engineering and technical services firms that may be requested to provide engineering and technical support during an emergency.

These Letters of Agreement will identify the emergency response capabilities.

D. Prior to the full-participation exercise to be conducted in accordance with the requirements of Appendix E to 10 CFR Part 50, TVA shall establish Letters of Agreement with the following organizations:

- a. Institute of Nuclear Power Operations
- b. Westinghouse Electric Corporation
- c. Radiation Emergency Assistance Center/Training Site

These Letters of Agreement will identify the emergency response capabilities.

E. Prior to fuel load, TVA shall:

- a. Distribute written information to permanent residences within the plume exposure pathway Emergency Planning Zone (EPZ).
- b. Provide public postings at locations within the EPZ as agreed to with Jackson and DeKalb County Emergency Management.
- c. Distribute publications to hotels, motels, and campgrounds within the EPZ.
- d. Verify information has been published in telephone directories distributed within the EPZ.

F. Prior to the full-participation exercise required by Section IV.F.2 of Appendix E to 10 CFR Part 50, TVA shall identify the specific locations of shelter areas and reception centers, on a map, for Bellefonte Nuclear Plant workers evacuated from the site during an emergency.

5. SECURITY PROGRAM REVISIONS:

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

PROPOSED LICENSE CONDITION:

The licensee shall maintain in effect the provisions of the physical security plan, security personnel training and qualification plan, and safeguards contingency 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, and continuing until all nuclear fuel is permanently removed from the site.

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 include a submittal schedule for:

- a. the implementation of site specific Severe Accident Management Guidance.
- b. a reactor vessel pressurized thermal shock evaluation at least 18 months prior to initial fuel load.

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- c. approved preoperational and startup test procedures in accordance with FSAR Section 14.2.3.
- d. a flow accelerated corrosion (FAC) program implementation schedule, including the construction phase activities.

7. Not used

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. Not used

10. 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.

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Appendix A: Environmental Protection Plan (Nonradiological)

1.0 Objectives of the Environmental Protection Plan

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

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

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

2.0 Environmental Protection Issues

In the FEIS dated [month year], the staff considered the environmental impacts associated with the construction and operation of the Bellefonte Nuclear Plant, Units 3 and 4 (BLN). 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.

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

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

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

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4.0 Environmental Conditions

4.1 Unusual or Important Environmental Events

The licensee shall evaluate and report to the NRC Operations Center within 24 hours (followed by a written report in accordance with 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.

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.

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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.

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.

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

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Appendix B. Inspections, Tests, 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.

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.

Plant Specific ITAAC

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

2.3.30 Storm Drain System
No entry for this system.

2.3.31 Raw Water System
No entry for this system.

2.3.32 Yard Fire Water System
No entry for this system.

Add the following information to the information provided in the referenced DCD Tier 1 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 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.

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.

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TABLE 2.6.9-2 – SITE-SPECIFIC PHYSICAL SECURITY INSPECTIONS, TESTS, ANALYSES AND ACCEPTANCE CRITERIA		
Design Commitment	Inspections, Tests, and Analyses	Acceptance Criteria
1. The external walls, doors, ceiling, and floors in the location within which the last access control function for access to the protected area is performed are bullet resistant.	Type test, analysis, or a combination of type test and analysis will be performed for the walls, doors, ceilings, and floors in the location within which the last access control function for access to the protected area is performed.	A report exists and concludes that the 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.
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 to verify that physical barriers at the perimeter of the protected area are separated from any other barrier designated as a vital area barrier.	A report exists and concludes that physical barriers at the perimeter of the protected area are separated from any other barrier designated as a vital area barrier.
3. 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.	An inspection of the isolation zone will be performed to verify that the isolation zones exist in outdoor areas adjacent to the physical barrier at the perimeter of the protected area which allows 20 feet of observation of the activities of people on either side of the barrier. Where permanent buildings do not allow a 20 foot observation distance on the inside of the protected area barrier, the inspection will confirm that the building walls are immediately adjacent to, or an integral part of, the protected area barrier.	A report exists and concludes that isolation zones exist in outdoor areas adjacent to the physical barrier at the perimeter of the protected area and allow 20 feet of observation of the activities of people 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 and the 20 foot observation distance does not apply.

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TABLE 2.6.9-2 – SITE-SPECIFIC PHYSICAL SECURITY INSPECTIONS, TESTS, ANALYSES AND ACCEPTANCE CRITERIA		
Design Commitment	Inspections, Tests, and Analyses	Acceptance Criteria
4. Intrusion detection system can detect penetration or attempted penetration of the protected area barrier.	Tests, inspections or a combination of tests and inspections of the intrusion detection system will be performed to verify the system can detect penetration or attempted penetration of the protected area barrier and that subsequent alarms annunciate in both the Central Alarm Station and Secondary Alarm Station.	A report exists and concludes that the intrusion detection system can detect penetration or attempted penetration of the protected area barrier and subsequent alarms annunciate in the Central Alarm Station and Secondary Alarm Station.
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.	A test, inspection, or combination of tests and inspections of installed systems and equipment will be performed to verify that access control points to the protected area exist and that: (a) Personnel and vehicle access into the protected area is controlled. (b) Detection equipment is capable of detecting explosives, incendiary devices, and firearms at the protected area personnel access points.	A report exists and concludes that: (a) Access points for the protected area are configured to control access. (b) Detection equipment 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 without escort.	A test of the access control system with numbered picture badges will be performed to verify that unescorted access to protected areas is granted only to authorized personnel.	A report exists and concludes that the access authorization system with numbered picture badges can identify and authorize protected area access only to those personnel with unescorted access authorization.

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

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

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TABLE 3.8-1 INSPECTIONS, TESTS, ANALYSES, AND ACCEPTANCE CRITERIA (SHEET 1 of 23)

Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
1.0 Assignment of Responsibility – Organizational Control			
<p>10 CFR 50.47(b)(1) – Primary responsibilities for emergency response by the nuclear facility licensee, and by State and local organizations within the EPZs have been assigned, the emergency responsibilities of the various supporting organizations have been specifically established, and each principle response organization has staff to respond and to augment its initial response on a continuous basis.</p>	<p>1.1 The staff exists to provide 24-hour per day emergency response and manning of communications links, including continuous operations for a protracted period. [A.1.e, A.4**]</p> <p>[**References in brackets throughout this table correspond to with NUREG-0654/FEMA-REP-1 Evaluation Criteria]</p>	<p>1.1 An inspection of the emergency plan implementing procedures will be performed.</p>	<p>1.1 Emergency plan implementing procedures provide for 24-hour per day emergency response staffing and manning of communications links, including continuous operations for a protracted period.</p>

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TABLE 3.8-1 INSPECTIONS, TESTS, ANALYSES, AND ACCEPTANCE CRITERIA (SHEET 2 of 23)			
Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
2.0 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.	2.1 The staff exists to provide minimum and augmented onshift staffing levels, consistent with Table B-1 of NUREG-0654/FEMA-REP-1, Rev. 1. [B.5, B.7]	2.1 An inspection of the emergency plan implementing procedures will be performed.	2.1 Emergency plan implementing procedures provide minimum and augmented on-shift staffing levels, consistent with Table II-2 of the Bellefonte Units 3 & 4 Combined License (COL) Application Emergency Plan.

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TABLE 3.8-1 INSPECTIONS, TESTS, ANALYSES, AND ACCEPTANCE CRITERIA (SHEET 3 of 23)			
Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
3.0 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.	3.1 A standard emergency classification and emergency action level (EAL) scheme exists, and identifies facility system and effluent parameters constituting the bases for the classification scheme. [D.1**]	3.1 An inspection of the control room, technical support center (TSC), and Central Emergency Control Center (CECC) 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 Emergency Plan Implementing Procedure, “Emergency Classification.”	3.1.1 The specific parameters identified in the Emergency Action Level Thresholds in Emergency Plan Implementing Procedure, “Emergency Classification,” have been retrieved and displayed in the control room, TSC, and CECC. 3.1.2 The ranges available in the control room, TSC, and CECC encompassed the values for the specific parameters identified in the Emergency Action Level Thresholds in Emergency Plan Implementing Procedure, “Emergency Classification.”

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TABLE 3.8-1 INSPECTIONS, TESTS, ANALYSES, AND ACCEPTANCE CRITERIA (SHEET 4 of 23)			
Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
4.0 Notification Methods and Procedures			
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.	4.1 The means exist to notify responsible State and local organizations within 15 minutes after the licensee declares an emergency. [E.1]	4.1 A test will be performed of the capabilities.	<p>4.1.1 A report exists that confirms communications have been established between the control room and the TVA ODS.</p> <p>4.1.2 A report exists that confirms communications have been established between the ODS and the State of Alabama.</p> <p>4.1.3 A report exists that confirms communications have been established between the ODS and Jackson County.</p> <p>4.1.4 A report exists that confirms communications have been established between the ODS and DeKalb County.</p>
	4.2 The means exist to notify emergency response personnel. [E.2]	4.2 A test will be performed of the capabilities.	4.2 A report exists that confirms notification to the Bellefonte emergency response organization have been performed through the Emergency Preparedness Paging System.
	4.3 The means exist to notify and provide instructions to the populace within the plume exposure EPZ. [E.6]	NOTE: The means to notify and provide instructions to the populace within the plume exposure EPZ is addressed by Acceptance Criteria 11.1.1.2.	

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TABLE 3.8-1 INSPECTIONS, TESTS, ANALYSES, AND ACCEPTANCE CRITERIA (SHEET 5 of 23)			
Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
5.0 Emergency Communications			
10 CFR 50.47(b)(6) – Provisions exist for prompt communications among principal response organizations to emergency personnel and to the public.	5.1 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]	5.1 A test will be performed of the capabilities. 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.	5.1.1 A report exists that confirms the following communications have been established : between the following facilities: · Control room and ODS; · TSC and ODS. 5.1.2 A report exists that confirms communications have been established between the TSC and radiological monitoring teams.
	5.2 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]	5.2 A test will be performed of the capabilities. NOTE: ITAAC for these communications systems are addressed in Table 3.1-1 of Tier 1 of the AP1000 Design Control Document.	5.2.1 A report exists that confirms communications have been established from the control room, TSC, and CECC to NRC Headquarters and Region II EOC. 5.2.2 A report exists that confirms ERDS data was provided from the plant computer system to the NRC Operations Center.

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TABLE 3.8-1 INSPECTIONS, TESTS, ANALYSES, AND ACCEPTANCE CRITERIA (SHEET 6 of 23)			
Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
6.0 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.	6.1 The licensee has provided space which may be used for a limited number of the news media at the EOF. [G.3.b]	6.1 An inspection of the Joint Information Center will be performed to verify that space is provided for a limited number of the news media.	6.1 The Joint Information Center has been located in the TVA Chattanooga Complex.

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TABLE 3.8-1 INSPECTIONS, TESTS, ANALYSES, AND ACCEPTANCE CRITERIA (SHEET 7 of 23)			
Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
7.0 Emergency Facilities and Equipment			
10 CFR 50.47(b)(8) – Adequate emergency facilities and equipment to support the emergency response are provided and maintained.	7.1 The licensee has established a technical support center (TSC) and onsite operations support center (OSC). [H.1]	7.1 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.	7.1.1 The TSC has been located in the Maintenance Building. 7.1.2 The TSC includes radiation monitors and a ventilation system with a high efficiency particulate air (HEPA) and charcoal filter. 7.1.3 Back-up electrical power supply was available for the TSC. 7.1.4 The OSC is in a location separate from the control room.
	7.2 The licensee has established an emergency operations facility (EOF). [H.2]	7.2 An inspection of the CECC will be performed.	7.2.1 The CECC had at least 243 square meters (2,625 square feet). 7.2.2 Voice transmission and reception have been accomplished between the CECC and the following organizations: NRC, Jackson County, DeKalb County, and State of Alabama.

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TABLE 3.8-1 INSPECTIONS, TESTS, ANALYSES, AND ACCEPTANCE CRITERIA (SHEET 8 of 23)			
Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
8.0 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.	8.1 The means exist to provide initial and continuing radiological assessment throughout the course of an accident. [1.2]	8.1 A test of the emergency plan will be conducted by performing an exercise or drill to verify the capability to perform accident assessment.	8.1 A report exists that confirms an exercise or drill has been accomplished including use of selected monitoring parameters identified in the EAL Thresholds in Emergency Plan Implementing Procedure, “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. 2. EALs parameters determined. 3. 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. Decision whether to issue radioprotective drugs to TVA emergency workers made. 7. Protective action recommendations developed and communicated to appropriate authorities.

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TABLE 3.8-1 INSPECTIONS, TESTS, ANALYSES, AND ACCEPTANCE CRITERIA (SHEET 9 of 23)			
Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
	8.2 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]	8.2 An analysis of emergency plan implementing procedures will be performed.	8.2 The means has been established to determine the source term of releases of radioactive materials within plant systems and the magnitude of the release of radioactive materials based on plant system parameters and effluent monitors.
	8.3 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]	8.3 An analysis of emergency plan implementing procedures will be performed.	8.3 The means has been provided to 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.
	8.4 The means exist to acquire and evaluate meteorological information. [I.5]	8.4 An inspection of the control room, TSC, and CECC will be performed to verify the availability of the following meteorological data is available: · Wind speed (at 10 m and 55 m) · Wind direction (at 10 m and 55 m) · Ambient air temperature (at 10 m and 55 m)	8.4 The specified meteorological data was available at the control room, TSC, and CECC.

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TABLE 3.8-1 INSPECTIONS, TESTS, ANALYSES, AND ACCEPTANCE CRITERIA (SHEET 10 of 23)			
Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
	8.5 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]	8.5 An analysis of emergency plan implementing procedures will be performed.	8.5 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.
	8.6 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]	8.6 A test of TVA field survey instrumentation will be performed to verify the capability to detect airborne concentrations as low as 1E-07 microcuries per cubic centimeters.	8.6 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.
	8.7 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]	8.7 An analysis of emergency plan implementing procedures will be performed to verify that a methodology is provided 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.	8.7 The means has been established to make rapid assessments of actual or potential magnitude and locations of any radiological hazards through liquid or gaseous release pathways.

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TABLE 3.8-1 INSPECTIONS, TESTS, ANALYSES, AND ACCEPTANCE CRITERIA (SHEET 11 of 23)			
Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
9.0 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>9.1 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>9.1 A test of the onsite warning and communications capability will be performed during a drill or exercise.</p>	<p>9.1.1 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>9.1.2 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>

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TABLE 3.8-1 INSPECTIONS, TESTS, ANALYSES, AND ACCEPTANCE CRITERIA (SHEET 12 of 23)

Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
10.0 Radiological Exposure Control			
10 CFR 50.47(b)(11) – Means for controlling radiological exposures, in an emergency, are established for emergency workers. The means for controlling radiological exposures shall include exposure guidelines consistent with EPA Emergency Worker and Lifesaving Activity PAGs.	10.1 The means exists to provide onsite radiation protection. [K.2]	10.1 An analysis of site procedures will be performed.	10.1 Site procedures provide the means for onsite radiation protection.
	10.2 The means exists to provide 24-hour-per-day capability to determine the doses received by emergency personnel and maintain dose records. [K.3]	10.2 An analysis of emergency plan implementing procedures will be performed.	10.2 Emergency plan implementing procedures provide the means for 24- hour per-day capability to determine the doses received by emergency personnel and maintain dose records.
	10.3 The means exists to decontaminate relocated onsite and emergency personnel, including waste disposal. [K.5.b, K.7]	10.3 An analysis of emergency plan implementing procedures will be performed.	10.3 Emergency plan implementing procedures provide a means to decontaminate relocated onsite and emergency personnel, including waste disposal.
	10.4 The means exists to provide onsite and contamination control measures. [K.6]	10.4 An analysis of site procedures will be performed.	10.4 Site procedures provide the means for onsite contamination control measures.

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TABLE 3.8-1 INSPECTIONS, TESTS, ANALYSES, AND ACCEPTANCE CRITERIA (SHEET 13 of 23)			
Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
11.0 Exercises and Drills			
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.	11.1 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]	11.1 A full-participation exercise (test) will be conducted within the specified time periods of Appendix E to 10 CFR Part 50.	<p>11.1.1.1 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 were met, and there were no uncorrected onsite exercise deficiencies.</p> <p>11.1.1.2 A report exists that confirms the following exercise objectives were satisfied by meeting the specified performance criteria:</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 Criteria:</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><i>B. Notifications</i></p> <p>1. Demonstrate the ability to alert, notify and mobilize site emergency response personnel.</p> <p>Performance Criteria:</p>

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TABLE 3.8-1 INSPECTIONS, TESTS, ANALYSES, AND ACCEPTANCE CRITERIA (SHEET 14 of 23)

Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
			<p>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.</p> <p>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> <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> <p>a. Transmit information in accordance with approved emergency plan implementing procedures within 15 minutes of event classification.</p> <p>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> <p>c. Transmit information in accordance with emergency plan implementing procedures within 60 minutes of event classification for an initial notification of the NRC.</p>

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TABLE 3.8-1 INSPECTIONS, TESTS, ANALYSES, AND ACCEPTANCE CRITERIA (SHEET 15 of 23)			
Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
			<p>3. Demonstrate the ability to warn or advise onsite individuals of emergency conditions.</p> <p>Performance Criteria:</p> <p>a. Initiate notification of onsite individuals within 15 minutes of notification.</p> <p><i>C. Emergency Response</i></p> <p>1. Demonstrate the capability to direct and control emergency operations.</p> <p>Performance Criteria:</p> <p>a. Command and control is demonstrated by the Control Room in the early phase of the emergency, and the technical support center (TSC) within 60 minutes from TSC activation.</p> <p>2. Demonstrate the ability to transfer emergency direction from the control room (simulator) to the TSC within 30 minutes from activation.</p> <p>Performance Criteria:</p> <p>a. Turnover briefings are conducted in accordance with emergency plan implementing procedures.</p> <p>b. Documentation of transfer of duties is completed in accordance with emergency plan implementing procedures.</p>

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TABLE 3.8-1 INSPECTIONS, TESTS, ANALYSES, AND ACCEPTANCE CRITERIA (SHEET 16 of 23)

Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
			<p>4. Demonstrate the ability to perform assembly and accountability for all onsite individuals within 30 minutes of an emergency requiring protected area assembly and accountability.</p> <p>Performance Criteria:</p> <p>a. Protected area (PA) personnel assembly and accountability completed within 30 minutes of an emergency requiring protected area assembly and accountability.</p> <p><i>D. Emergency Response Facilities</i></p> <p>1. Demonstrate activation of the operational support center (OSC), and full functional operation of the TSC and CECC within 60 minutes of activation.</p> <p>Performance Criteria:</p> <p>a. The TSC, CECC and OSC are activated within about 60 minutes of the initial notification.</p> <p>2. Demonstrate the adequacy of equipment, security provisions, and habitability precautions for the TSC, OSC and CECC as appropriate.</p>

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TABLE 3.8-1 INSPECTIONS, TESTS, ANALYSES, AND ACCEPTANCE CRITERIA (SHEET 17 of 23)

Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
			<p>Performance Criteria:</p> <ul style="list-style-type: none"> a. Emergency equipment in the emergency response facilities as specified in emergency plan implementing procedures was available to emergency responders b. The Security Shift Supervisor implements and follows applicable emergency implementing procedures. c. The Radiation Protection Manager (TSC) implements designated responsibilities in accordance with emergency plan implementing procedures if an onsite/offsite release has occurred. <p>3. Demonstrate the adequacy of communications for all emergency support resources.</p> <p>Performance Criteria:</p> <ul style="list-style-type: none"> a. Emergency response facility personnel are able to operate communication systems in accordance with emergency plan implementing procedures. b. Clear primary and backup communications links are established and maintained for the duration of the exercise. <p><i>E. Radiological Assessment and Control</i></p> <ul style="list-style-type: none"> 1. Demonstrate the ability to obtain onsite radiological surveys and samples.

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TABLE 3.8-1 INSPECTIONS, TESTS, ANALYSES, AND ACCEPTANCE CRITERIA (SHEET 18 of 23)			
Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
			<p>Performance Criteria:</p> <ul style="list-style-type: none"> a. HP Technicians demonstrate the ability to obtain appropriate instruments (range and type) and perform surveys. b. Airborne samples are taken in accordance with emergency plan implementing procedures. <p>2. Demonstrate the ability to continuously monitor and control radiation exposure to emergency workers.</p> <p>Performance Criteria:</p> <ul style="list-style-type: none"> a. Emergency workers are issued self reading dosimeters when radiation levels require, and exposures are controlled to 10 CFR Part 20 limits (unless the Site Emergency Director authorizes emergency limits). b. Exposure records are available. c. Emergency workers include Security and personnel within all emergency facilities. <p>3. Demonstrate the ability to assemble and deploy field monitoring teams within 60 minutes from the decision to do so.</p>

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TABLE 3.8-1 INSPECTIONS, TESTS, ANALYSES, AND ACCEPTANCE CRITERIA (SHEET 19 of 23)

Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
			<p>Performance Criteria:</p> <p>a. One Field Monitoring team is ready to be deployed within 60 minutes of being requested from the OSC, and no later than 90 minutes from the declaration of an Alert or higher emergency.</p> <p>4. Demonstrate the ability to collect and disseminate field team data.</p> <p>Performance Criteria:</p> <p>a. Field team collects data for dose rate and airborne radioactivity levels in accordance with emergency plan implementing procedures.</p> <p>b. Field team communicates data to the TSC and/or CECC in accordance with emergency plan implementing procedures.</p> <p>5. Demonstrate the ability to develop dose projections.</p> <p>Performance Criteria:</p> <p>a. Timely and accurate dose projections are performed in accordance with emergency plan implementing procedures.</p> <p>6. Demonstrate the ability to make the decision whether to issue radioprotective drugs (KI) to onsite emergency workers.</p>

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TABLE 3.8-1 INSPECTIONS, TESTS, ANALYSES, AND ACCEPTANCE CRITERIA (SHEET 20 of 23)			
Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
			<p>Performance Criteria:</p> <p>a. KI is taken (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 of development.</p> <p>Performance Criteria:</p> <p>a. Total effective dose equivalent (TEDE) and CDE dose projections 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 via voice or fax within 15 minutes of event classification and/or PAR development.</p> <p><i>F. Public Information</i></p> <p>1. Demonstrate the capability to develop and disseminate clear, accurate, and timely information to the news media in accordance with EPIPs.</p>

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TABLE 3.8-1 INSPECTIONS, TESTS, ANALYSES, AND ACCEPTANCE CRITERIA (SHEET 21 of 23)

Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
			<p>Performance Criteria:</p> <p>a. Media information (e.g., press releases, press briefings, electronic media) are made available within 60 minutes of notification of the TVA Chief Spokesperson.</p> <p>b. Follow-up information is provided to the news media, at a minimum, within 60 minutes of an emergency classification or PAR change.</p> <p>2. Demonstrate the capability to establish and effectively operate rumor control in a coordinated fashion.</p> <p>Performance Criteria:</p> <p>a. Calls are answered in a timely manner with the correct information, in accordance with EIPs.</p> <p>b. Calls are returned or forwarded, as appropriate, to demonstrate responsiveness.</p> <p>c. Rumors are identified and addressed in accordance with emergency plan implementing procedures.</p> <p><i>G. Evaluation</i></p> <p>1. Demonstrate the ability to conduct a post-exercise critique, to determine areas requiring improvement and corrective action.</p>

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TABLE 3.8-1 INSPECTIONS, TESTS, ANALYSES, AND ACCEPTANCE CRITERIA (SHEET 22 of 23)			
Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
			<p>Performance Criteria:</p> <p>a. An exercise time line is developed, followed by an evaluation of the objectives.</p> <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>11.1.2.1 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>11.1.2.2 A report exists that confirms onsite emergency response personnel performed their assigned responsibilities and there were no uncorrected onsite exercise deficiencies.</p> <p>11.1.3 A report exists that confirms the exercise was completed within the specified time periods of Appendix E to 10 CFR Part 50, offsite exercise objectives were met.</p>

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TABLE 3.8-1 INSPECTIONS, TESTS, ANALYSES, AND ACCEPTANCE CRITERIA (SHEET 23 of 23)			
Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
12.0 Responsibility for the Planning Effort: Development , Periodic Review, and Distribution of Emergency Plans			
10 CFR 50.47(b)(16) – Responsibilities for plan development and review and for distribution of emergency plans are established, and planners are properly trained.	10 CFR 50.47(b)(16) – Responsibilities for plan development and review and for distribution of emergency plans are established, and planners are properly trained.	10 CFR 50.47(b)(16) – Responsibilities for plan development and review and for distribution of emergency plans are established, and planners are properly trained.	10 CFR 50.47(b)(16) – Responsibilities for plan development and review and for distribution of emergency plans are established, and planners are properly trained.
13.0 Implementing Procedures			
10 CFR Part 50, App. E.V – No less than 180 days prior to the scheduled issuance of an operating license for a nuclear power reactor or a license to possess nuclear material, the applicant’s detailed implementing procedures for its emergency plan shall be submitted to the Commission.	13.1 The licensee has submitted detailed implementing procedures for its emergency plan no less than 180 days prior to fuel load.	13.1 An inspection of the submittal letter will be performed.	13.1 TVA has submitted detailed implementing procedures for the onsite emergency plan, to the NRC, no less than 180 days prior to fuel load.