

RS-21-076

10 CFR 50.90

July 30, 2021

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

Braidwood Station, Units 1 and 2  
Renewed Facility Operating License Nos. NPF-72 and NPF-77  
NRC Docket Nos. STN 50-456 and STN 50-457

Byron Station, Units 1 and 2  
Renewed Facility Operating License Nos. NPF-37 and NPF-66  
NRC Docket Nos. STN 50-454 and STN 50-455

Clinton Power Station, Unit 1  
Facility Operating License No. NPF-62  
NRC Docket No. 50-461

Subject: Application to Adopt TSTF-273, "Safety Function Determination Program Clarifications"

In accordance with 10 CFR 50.90, "Application for amendment of license, construction permit, or early site permit," Exelon Generation Company, LLC (EGC), requests an amendment to the Technical Specifications (TS) for Braidwood Station, Byron Station, and Clinton Power Station. The proposed amendment is consistent with previously NRC-approved Industry/Technical Specifications Task Force Traveler 273 (TSTF-273), Revision 2 "Safety Function Determination Program Clarifications."

The proposed TS changes adds explanatory text to the LCO 3.0.6 Bases clarifying the "appropriate LCO for loss of function," and that consideration does not have to be made for a loss of power in determining loss of function. Explanatory text is also added to the programmatic description of the Safety Function Determination Program (SFDP) in TS 5.5.15 (Braidwood Station and Byron Station) and TS 5.5.10 (Clinton Power Station) to provide clarification of these same issues.

Attachment 1 provides a description and assessment of the proposed change. Attachment 2 provides the existing TS pages marked up to show the proposed change. Attachment 3 provides TS Bases pages marked up to show the associated TS Bases changes and is provided for information only. Attachment 4 provides the revised (clean) TS pages.

The proposed change has been reviewed by the Plant Operations Review Committees at each station in accordance with the requirements of the EGC Quality Assurance Program.

EGC requests that the approval of the proposed amendment by July 30, 2022. Once approved, the amendment shall be implemented within 60 days.

In accordance with 10 CFR 50.91, "Notice for public comment; State consultation," paragraph (b), EGC is notifying the State of Illinois of this application for license amendment by transmitting a copy of this letter and its attachments to the designated State Officials.

There are no regulatory commitments contained in this letter. Should you have any questions concerning this letter, please contact Mr. Phillip A. Henderson at (630) 657-4727.

I declare under penalty of perjury that the foregoing is true and correct. Executed on the 30th day of July 2021.

Respectfully,



Patrick R. Simpson  
Sr. Manager - Licensing  
Exelon Generation Company, LLC

Attachments:

1. Description and Assessment
  - 2a. Braidwood - Markup of Proposed Technical Specifications Pages
  - 2b. Byron - Markup of Proposed Technical Specifications Pages
  - 2c. Clinton - Markup of Proposed Technical Specifications Pages
  - 3a. Braidwood - Markup of Proposed Technical Specifications Bases Pages (For Information Only)
  - 3b. Byron - Markup of Proposed Technical Specifications Bases Pages (For Information Only)
  - 3c. Clinton - Markup of Proposed Technical Specifications Bases Pages (For Information Only)
  - 4a. Braidwood – Revised (Clean) Technical Specification Pages
  - 4b. Byron - Revised (Clean) Technical Specification Pages
  - 4c. Clinton - Revised (Clean) Technical Specification Pages

cc: NRC Regional Administrator, Region III  
NRC Senior Resident Inspector – Braidwood Station  
NRC Senior Resident Inspector – Byron Station  
NRC Senior Resident Inspector – Clinton Power Station  
Illinois Emergency Management Agency – Division of Nuclear Safety

**ATTACHMENT 1**  
**Description and Assessment**

**Subject: Application to Adopt TSTF-273, Rev 2, "Safety Function Determination Program Clarifications"**

**1.0 DESCRIPTION**

**2.0 ASSESSMENT**

**2.1 Summary of Approved Traveler Justification**

**2.2 Optional Changes and Variations**

**2.3 NRC Approval**

**3.0 REGULATORY ANALYSIS**

**3.1 No Significant Hazards Consideration Analysis**

**3.2 Conclusion**

**4.0 ENVIRONMENTAL CONSIDERATION**

**5.0 REFERENCES**

# ATTACHMENT 1

## Description and Assessment

### 1.0 DESCRIPTION

Exelon Generation Company, LLC (EGC), requests adoption of Technical Specifications Task Force Traveler 273 (TSTF-273), Revision 2, "Safety Function Determination Program (SFDP) Clarifications," which is an approved change to the Improved Standard Technical Specifications (ISTS), into Braidwood Station (Braidwood), Units 1 and 2; Byron Station (Byron), Units 1 and 2; Clinton Power Station (Clinton), Unit 1, Technical Specifications (TS). The Technical Specifications (TS) related to SFDP Clarifications are revised to incorporate TSTF-273, "Safety Functions Determination Program (SFDP) Clarifications," Revision 2, as amended by Westinghouse Owners Group (WOG) editorial change WOG-ED-23 and make administrative changes.

The proposed TS changes adds explanatory text to the LCO 3.0.6 Bases clarifying the "appropriate LCO for loss of function," and that consideration does not have to be made for a loss of power in determining loss of function. Explanatory text is also added to the programmatic description of the Safety Function Determination Program (SFDP) in TS 5.5.15 (Braidwood and Byron) and Technical Specification 5.5.10 (Clinton) to provide clarification of these same issues.

### 2.0 ASSESSMENT

#### 2.1 Summary of Approved Traveler Justification

TS 5.5.15 (Braidwood and Byron) and TS 5.5.10 (Clinton), "Safety Function Determination Program," implements the requirements of LCO 3.0.6. The SFDP program description in TS 5.5.15 (Braidwood and Byron) and TS 5.5.10 (Clinton), is revised to clarify in the requirements that consideration does not have to be made for a loss of power in determining loss of function. The TS is also revised to incorporate an editorial change for consistency in meaning. The Bases for LCO 3.0.6 is revised to provide clarification of the "appropriate LCO for loss of function," and that consideration does not have to be made for a loss of power in determining loss of function.

#### 2.2 Optional Changes and Variations

EGC implemented changes to TS 5.5.15, "Safety Function Determination Program (SFDP)" at Braidwood Station, Units 1 and 2 and Byron Station, Units 1 and 2 under TSTF-567, Revision 1 "Add Containment Sump TS to Address GSI-191 Issues" (ML 20167A007). The change under TSTF-567 added the following wording to TS 5.5.15: "When a loss of safety function is caused by the inoperability of a single Technical Specification support system, the appropriate Conditions and Required Actions to enter are those of the support system." As such the revised TS for Braidwood and Byron will not include this change.

Clinton utilizes different numbering than the Standard Technical Specifications on which TSTF-273 was based. Specifically, Technical Specification 5.5.15, "Safety Function Determination Program," corresponds to Technical Specification 5.5.10 for Clinton. This difference is administrative in nature and do not affect the applicability of TSTF-273 to Clinton.



**ATTACHMENT 1**  
**Description and Assessment**

**2.3 NRC Approval**

TSTF-273-A, Revision 2, was approved by the NRC as documented in a letter from William Beckner (NRC) to James Davis (NEI), dated August 16, 1999 (ADAMS Access No. ML16237A031). TSTF-273-A, Revision 2 has been adopted by many plants as part of complete conversion to the ISTS, such as North Anna Power Station (ML021200265). An example of a plant-specific NRC approval of the changes in TSTF-273-A, Revision 2 is Susquehanna Steam Electric Station, Units 1 and 2, Amendment Numbers 209/183 dated February 25, 2003 (ADAMS Access No. ML030560811).

**3.0 REGULATORY ANALYSIS**

**3.1 No Significant Hazards Consideration Determination Analysis**

Exelon Generation Company, LLC (EGC), requests adoption of TSTF-273, "[Safety Function Determination Program] SFDP Clarifications." The Technical Specifications (TS) related to SFDP Clarifications are revised to incorporate TSTF-273, "Safety Functions Determination Program (SFDP) Clarifications," Revision 2, as amended by Westinghouse Owners Group (WOG) editorial change WOG-ED-23 and make administrative changes.

Title 10 of the Code of Federal Regulations (10 CFR), 10 CFR 50.36(c)(2), states: Limiting conditions for operation. (i) Limiting conditions for operation are the lowest functional capability or performance levels of equipment required for safe operation of the facility. When a limiting condition for operation of a nuclear reactor is not met, the licensee shall shut down the reactor or follow any remedial action permitted by the technical specifications until the condition can be met.

The SFDP, as described in TS 5.5.15 (Braidwood and Byron) and TS 5.5.10 (Clinton), implements the requirements of LCO 3.0.6, and ensures that loss of safety function is detected and appropriate actions are taken. There will be no changes to the plant design or operation such that compliance with the regulatory requirements and guidance document above would come into question. The plant and its systems will continue to comply with all applicable regulatory requirements. The proposed changes are consistent with NUREG-1431 and NUREG-1434.

In conclusion, based on the considerations discussed above, (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the approval of the proposed change will not be inimical to the common defense and security or to the health and safety of the public.

EGC has evaluated whether or not a significant hazards consideration is involved with the proposed amendment(s) by focusing on the three standards set forth in 10 CFR 50.92, "Issuance of amendment," as discussed below:

**ATTACHMENT 1**  
**Description and Assessment**

1. Does the proposed change involve a significant increase in the probability or consequences of an accident previously evaluated?

Response: No

The proposed Technical Specification (TS) changes add explanatory text to the programmatic description of the Safety Function Determination Program (SFDP) in Specification 5.5.15 (Braidwood and Byron) and TS 5.5.10 (Clinton), to clarify in the requirements that consideration does not have to be made for a loss of power in determining loss of function. The Bases for limiting condition for operations (LCO) 3.0.6 are revised to provide clarification of the "appropriate LCO for loss of function," and that consideration does not have to be made for a loss of power in determining loss of function. The changes are editorial and administrative in nature, and therefore do not increase the probability of any accident previously evaluated. No physical or operational changes are made to the plant. The proposed change does not change how the plant would mitigate an accident previously evaluated. Therefore, the proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated. The proposed changes do not have any impact on the integrity of any plant system, structure, or component that initiates an analyzed event. The proposed changes will not alter the operation of, or otherwise increase the failure probability of any plant equipment that initiates an analyzed accident. Thus, the probability of any accident previously evaluated is not significantly increased.

2. Does the proposed change create the possibility of a new or different kind of accident from any previously evaluated?

Response: No

The proposed changes are editorial and administrative in nature and do not result in a change in the manner in which the plant operates. The loss of function of any specific component will continue to be addressed in the applicable TS LCO and plant configuration will be governed by the required actions of those LCOs. The proposed changes are clarifications that do not degrade the availability or capability of safety related equipment, and therefore do not create the possibility of a new or different kind of accident from any accident previously evaluated. There are no design changes associated with the proposed changes, and the changes do not involve a physical alteration of the plant (i.e., no new or different type of equipment will be installed). The changes do not alter assumptions made in the safety analysis, and are consistent with the safety analysis assumptions and current plant operating practice. Due to the administrative nature of the changes, they cannot be an accident initiator.

Therefore, the proposed change does not create the possibility of a new or different kind of accident from any accident previously evaluated.

**ATTACHMENT 1**  
**Description and Assessment**

3. Does the proposed change involve a significant reduction in a margin of safety?

Response: No

The proposed changes to TS 5.5.15 (Braidwood and Byron) and TS 5.5.10 (Clinton), are clarifications and are editorial and administrative in nature. No changes are made the LCOs for plant equipment, the time required for the TS Required Actions to be completed, or the out of service time for the components involved. The proposed changes do not affect the safety analysis acceptance criteria for any analyzed event, nor is there a change to any safety analysis limit. The proposed changes do not alter the manner in which safety limits, limiting safety system settings or limiting conditions for operation are determined, nor is there any adverse effect on those plant systems necessary to assure the accomplishment of protection functions. The proposed changes will not result in plant operation in a configuration outside the design basis.

Therefore, the proposed changes do not involve a significant reduction in a margin of safety.

Based on the above, EGC concludes that the proposed change presents no significant hazards consideration under the standards set forth in 10 CFR 50.92(c), and, accordingly, a finding of "no significant hazards consideration" is justified.

### **3.2 Conclusions**

In conclusion, based on the considerations discussed above, (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

### **4.0 ENVIRONMENTAL CONSIDERATION**

The proposed change would revise a requirement with respect to installation or use of a facility component located within the restricted area, as defined in 10 CFR 20, or would change an inspection or surveillance requirement. However, the proposed change does not involve (i) a significant hazards consideration, (ii) a significant change in the types or significant increase in the amounts of any effluents that may be released offsite, or (iii) a significant increase in individual or cumulative occupational radiation exposure. Accordingly, the proposed change meets the eligibility criterion for categorical exclusion set forth in 10 CFR 51.22(c)(9). Therefore, pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the proposed change.

### **5.0 REFERENCES**

1. Letter from the U.S. Nuclear Regulatory Commission to NEI dated August 16, 1999 (ADAMS Access No. ML16237A031)

**ATTACHMENT 1**  
**Description and Assessment**

2. TSTF-273-A, "SFDP Clarifications," Revision 2 as amended by editorial change WOG-ED-23
3. North Anna Power Station, Units 1 and 2 – Issuance of Amendments RE; Conversion to Improved Technical Specifications (TAC NOS. MB0799 and MB0800) (ADAMS Access No. ML021200265)
4. Susquehanna Steam Electric Station, Units 1 and 2 – Issuance of Amendment RE: Adoption of Generic Changes to Improved Technical Specifications (TAC Nos. MB329 and MB3270) (ADAMS Access No. ML030560811)
5. NUREG-1431, Standard Technical Specifications, Westinghouse Plant, Volume 1, Revision 4, dated April 2012
6. NUREG-1434, Standard Technical Specifications, General Electric BWR/6 Plants, Volume 1, Revision 4, dated April 2012
7. Letter from Joel S. Wiebe (NRC) to Bryan Hanson (EGC), "Braidwood Station, Units 1 and 2, Byron Station, Unit Nos. 1 and 2, and R. E. Ginna Nuclear Power Plant – Issuance of Amendments Nos. 216, 216, 220, 220, and 143, Respectively Regarding Adoption of TSTF-567, Revision 1, "Add Containment Sump TS to Address [Generic Safety Issues] GSI-191 Issues" (EPID L-2020-LLA-0022)," dated September 11, 2020 (ADAMS Access No. ML20167A007)

**ATTACHMENT 2a**

**BRAIDWOOD STATION,  
UNITS 1 AND 2**

DOCKET NOS. 50-456 AND 50-457

RENEWED FACILITY OPERATING LICENSE NOS. NPF-72 AND NPF-77

APPLICATION TO ADOPT TSTF-273, "SAFETY FUNCTION DETERMINATION PROGRAM  
CLARIFICATIONS"

**Braidwood Proposed Technical Specifications Changes**

---

**MARKED-UP TS PAGES**

5.5-20



## 5.5 Programs and Manuals

---

### 5.5.15 Safety Function Determination Program (SFDP)

This program ensures loss of safety function is detected and appropriate actions taken. Upon entry into LCO 3.0.6, an evaluation shall be made to determine if loss of safety function exists. Additionally, other appropriate actions may be taken as a result of the support system inoperability and corresponding exception to entering supported system Condition and Required Actions. This program implements the requirements of LCO 3.0.6. The SFDP shall contain the following:

- a. Provisions for cross train checks to ensure a loss of the capability to perform the safety function assumed in the accident analysis does not go undetected;
- b. Provisions for ensuring the plant is maintained in a safe condition if a loss of function condition exists;
- c. Provisions to ensure that an inoperable supported system's Completion Time is not inappropriately extended as a result of multiple support system inoperabilities; and
- d. Other appropriate limitations and remedial or compensatory actions.

A loss of safety function exists when, assuming no concurrent single failure, *no concurrent loss of offsite power or no concurrent loss of onsite diesel generator(s)*, a safety function assumed in the accident analysis cannot be performed. For the purpose of this program, a loss of safety function may exist when a support system is inoperable, and:

- a. A required system redundant to the system(s) supported by the inoperable support system is also inoperable; or
- b. A required system redundant to the system(s) in turn supported by the inoperable supported system is also inoperable; or
- c. A required system redundant to the support system(s) for the supported systems (a) and (b) above is also inoperable.

**ATTACHMENT 2b**

**BYRON STATION,  
UNITS 1 AND 2**

DOCKET NOS. 50-454 AND 50-455

RENEWED FACILITY OPERATING LICENSE NOS. NPF-37 AND NPF-66

APPLICATION TO ADOPT TSTF-273, "SAFETY FUNCTION DETERMINATION PROGRAM  
CLARIFICATIONS"

**Byron Proposed Technical Specifications Changes**

---

**MARKED-UP TS PAGES**

5.5-20

## 5.5 Programs and Manuals

---

### 5.5.15 Safety Function Determination Program (SFDP)

This program ensures loss of safety function is detected and appropriate actions taken. Upon entry into LCO 3.0.6, an evaluation shall be made to determine if loss of safety function exists. Additionally, other appropriate actions may be taken as a result of the support system inoperability and corresponding exception to entering supported system Condition and Required Actions. This program implements the requirements of LCO 3.0.6. The SFDP shall contain the following:

- a. Provisions for cross train checks to ensure a loss of the capability to perform the safety function assumed in the accident analysis does not go undetected;
- b. Provisions for ensuring the plant is maintained in a safe condition if a loss of function condition exists;
- c. Provisions to ensure that an inoperable supported system's Completion Time is not inappropriately extended as a result of multiple support system inoperabilities; and
- d. Other appropriate limitations and remedial or compensatory actions.

A loss of safety function exists when, assuming no concurrent single failure, *no concurrent loss of offsite power or loss of onsite diesel generator(s)*, a safety function assumed in the accident analysis cannot be performed. For the purpose of this program, a loss of safety function may exist when a support system is inoperable, and:

- a. A required system redundant to the system(s) supported by the inoperable support system is also inoperable; or
- b. A required system redundant to the system(s) in turn supported by the inoperable supported system is also inoperable; or
- c. A required system redundant to the support system(s) for the supported systems (a) and (b) above is also inoperable.

**ATTACHMENT 2c**

**CLINTON POWER STATION,  
UNIT 1**

DOCKET NO. 50-461

RENEWED FACILITY OPERATING LICENSE NO. NPF-62

APPLICATION TO ADOPT TSTF-273, "SAFETY FUNCTION DETERMINATION PROGRAM  
CLARIFICATIONS"

**Clinton Proposed Technical Specifications Changes**

---

**MARKED-UP TS PAGES**

5.0-15

5.0-16

5.5 Programs and Manuals (continued)

---

5.5.10 Safety Function Determination Program (SFDP)

This program ensures loss of safety function is detected and appropriate actions taken. Upon entry into LCO 3.0.6, an evaluation shall be made to determine if loss of safety function exists. Additionally, other appropriate limitations and remedial or compensatory actions may be identified to be taken as a result of the support system inoperability and corresponding exception to entering supported system Condition and Required Actions. This program implements the requirements of LCO 3.0.6. The SFDP shall contain the following:

- a. Provisions for cross division checks to ensure a loss of the capability to perform the safety function assumed in the accident analysis does not go undetected;
- b. Provisions for ensuring the plant is maintained in a safe condition if a loss of function condition exists;
- c. Provisions to ensure that an inoperable supported system's Completion Time is not inappropriately extended as a result of multiple support system inoperabilities; and
- d. Other appropriate limitations and remedial or compensatory actions.

A loss of safety function exists when, assuming no concurrent single failure, *no concurrent loss of offsite power or no concurrent loss of on-site diesel generator(s)*, a safety function assumed in the accident analysis cannot be performed. For the purpose of this program, a loss of safety function may exist when a support system is inoperable, and:

- a. A required system redundant to system(s) supported by the inoperable support system is also inoperable;
- b. A required system redundant to system(s) in turn supported by the inoperable supported system is also inoperable; or
- c. A required system redundant to support system(s) for the supported systems (a) and (b) above is also inoperable.

The SFDP identifies where a loss of safety function exists. If a loss of safety function is determined to exist by this program, the appropriate Conditions and Required Actions of the LCO in which the loss of safety function exists are required to be entered.

(continued)

---



5.5 Programs and Manuals (continued)

---

5.5.10 Safety Function Determination Program (SFDP) (continued)

*When a loss of safety function is caused by the inoperability of a single Technical Specification support system, the appropriate Conditions and Required Actions to enter are those of the support system.*

5.5.11 Technical Specifications (TS) Bases Control Program

This program provides a means for processing changes to the Bases of these Technical Specifications.

- a. Changes to the Bases of the TS shall be made under appropriate administrative controls and reviews.
- b. Licensees may make changes to Bases without prior NRC approval provided the changes do not require either of the following:
  1. A change in the TS incorporated in the license; or
  2. A change to the USAR or Bases that requires NRC approval pursuant to 10 CFR 50.59.
- c. The Bases Control Program shall contain provisions to ensure that the Bases are maintained consistent with the USAR.
- d. Proposed changes that meet the criteria of either Specification 5.5.11.b.1 or Specification 5.5.11.b.2 above shall be reviewed and approved by the NRC prior to implementation. Changes to the Bases implemented without prior NRC approval shall be provided to the NRC on a frequency consistent with 10 CFR 50.71(e).

5.5.12 Ultimate Heat Sink (UHS) Erosion, Sediment Monitoring, and Dredging Program

A program to provide maintenance on the UHS in the event inspections of the UHS dam, its abutments, or the UHS shoreline indicate erosion or local instability. This program shall ensure that the UHS is maintained in such a way as to achieve the following objectives:

- a. During normal operation, there will be a volume of water in the UHS below elevation 675 sufficient to receive the sediment load from a once-in-25-year flood event; and
- b. Still be adequate to maintain the plant in a safe-shutdown condition for 30 days under meteorological conditions of the severity suggested by Regulatory Guide 1.27.

---

(continued)

**ATTACHMENT 3a**

**BRAIDWOOD STATION,  
UNITS 1 AND 2**

DOCKET NOS. 50-456 AND 50-457

RENEWED FACILITY OPERATING LICENSE NOS. NPF-72 AND NPF-77

APPLICATION TO ADOPT TSTF-273, "SAFETY FUNCTION DETERMINATION PROGRAM  
CLARIFICATIONS"

**Braidwood Proposed Technical Specifications Bases Changes (for information only)**

---

**MARKED-UP TS BASES PAGES**

3.0-12

3.0-13

BASES

---

LCO 3.0.6 (continued)

However, there are instances where a support system's Required Action may either direct a supported system to be declared inoperable or direct entry into Conditions and Required Actions for the supported system. This may occur immediately or after some specified delay to perform some other Required Action. Regardless of whether it is immediate or after some delay, when a support system's Required Action directs a supported system to be declared inoperable or directs entry into Conditions and Required Actions for a supported system, the applicable Conditions and Required Actions shall be entered in accordance with LCO 3.0.2.

Specification 5.5.15, "Safety Function Determination Program (SFDP)," ensures loss of safety function is detected and appropriate actions are taken. Upon entry into LCO 3.0.6, an evaluation shall be made to determine if loss of safety function exists. Additionally, other limitations, remedial actions, or compensatory actions may be identified as a result of the support system inoperability and corresponding exception to entering supported system Conditions and Required Actions. The SFDP implements the requirements of LCO 3.0.6.

Cross train checks to identify a loss of safety function for those support systems that support multiple and redundant safety systems are required. The cross train check verifies that the supported systems of the redundant OPERABLE support system are OPERABLE, thereby ensuring safety function is retained. If this evaluation determines that a loss of safety function exists, the appropriate Conditions and Required Actions of the LCO in which the loss of safety function exists are required to be entered.

*This loss of safety function does not require the assumption of additional single failures or loss of offsite power. Since operation is being restricted in accordance with the ACTIONS of the support system, any resulting temporary loss of redundancy or single failure protection is taken into account. Similarly, the ACTIONS for inoperable offsite circuit(s) and inoperable diesel generator(s) provide the necessary restriction for cross train inoperabilities. This explicit cross train verification for inoperable AC electrical power sources also acknowledges that supported system(s) are not declared inoperable solely as a result of inoperability of a normal or emergency electrical power source (refer to the definition of OPERABILITY).*

BASES

---

*LCO 3.0.6 (continued)*

*When a loss of safety function is determined to exist, and the SFDP requires entry into the appropriate Conditions and Required Actions of the LCO in which the loss of safety function exists, consideration must be given to the specific type of function affected. Where a loss of function is solely due to a single Technical Specification support system (e.g., loss of automatic start due to inoperable instrumentation, or loss of pump suction source due to low tank level) the appropriate LCO is the LCO for the support system. The ACTIONS for a support system LCO adequately addresses the inoperabilities of that system without reliance on entering its supported system LCO. When the loss of function is the result of multiple support systems, the appropriate LCO is the LCO for the supported system.*

**ATTACHMENT 3b**

**BYRON STATION,  
UNITS 1 AND 2**

DOCKET NOS. 50-454 AND 50-455

RENEWED FACILITY OPERATING LICENSE NOS. NPF-37 AND NPF-66

APPLICATION TO ADOPT TSTF-273, "SAFETY FUNCTION DETERMINATION PROGRAM  
CLARIFICATIONS"

**Byron Proposed Technical Specifications Bases Changes (for information only)**

---

**MARKED-UP TS BASES PAGES**

3.0-12

3.0-13



BASES

---

LCO 3.0.6 (continued)

However, there are instances where a support system's Required Action may either direct a supported system to be declared inoperable or direct entry into Conditions and Required Actions for the supported system. This may occur immediately or after some specified delay to perform some other Required Action. Regardless of whether it is immediate or after some delay, when a support system's Required Action directs a supported system to be declared inoperable or directs entry into Conditions and Required Actions for a supported system, the applicable Conditions and Required Actions shall be entered in accordance with LCO 3.0.2.

Specification 5.5.15, "Safety Function Determination Program (SFDP)," ensures loss of safety function is detected and appropriate actions are taken. Upon entry into LCO 3.0.6, an evaluation shall be made to determine if loss of safety function exists. Additionally, other limitations, remedial actions, or compensatory actions may be identified as a result of the support system inoperability and corresponding exception to entering supported system Conditions and Required Actions. The SFDP implements the requirements of LCO 3.0.6.

Cross train checks to identify a loss of safety function for those support systems that support multiple and redundant safety systems are required. The cross train check verifies that the supported systems of the redundant OPERABLE support system are OPERABLE, thereby ensuring safety function is retained. If this evaluation determines that a loss of safety function exists, the appropriate Conditions and Required Actions of the LCO in which the loss of safety function exists are required to be entered.

*This loss of safety function does not require the assumption of additional single failures or loss of offsite power. Since operation is being restricted in accordance with the ACTIONS of the support system, any resulting temporary loss of redundancy or single failure protection is taken into account. Similarly, the ACTIONS for inoperable offsite circuit(s) and inoperable diesel generator(s) provide the necessary restriction for cross train inoperabilities. This explicit cross train verification for inoperable AC electrical power sources also acknowledges that supported system(s) are not declared inoperable solely as a result of inoperability of a normal or emergency electrical power source (refer to the definition of OPERABILITY).*

BASES

---

*LCO 3.0.6 (continued)*

*When a loss of safety function is determined to exist, and the SFDP requires entry into the appropriate Conditions and Required Actions of the LCO in which the loss of safety function exists, consideration must be given to the specific type of function affected. Where a loss of function is solely due to a single Technical Specification support system (e.g., loss of automatic start due to inoperable instrumentation, or loss of pump suction source due to low tank level) the appropriate LCO is the LCO for the support system. The ACTIONS for a support system LCO adequately addresses the inoperabilities of that system without reliance on entering its supported system LCO. When the loss of function is the result of multiple support systems, the appropriate LCO is the LCO for the supported system.*

---

LCO 3.0.7

There are certain special tests and operations required to be performed at various times over the life of the unit. These special tests and operations are necessary to demonstrate select unit performance characteristics, to perform special maintenance activities, and to perform special evolutions. Exception LCOs (e.g., LCO 3.1.8, "PHYSICS TESTS Exceptions-MODE 2") allow specified Technical Specification (TS) requirements to be changed to permit performances of these special tests and operations, which otherwise could not be performed if required to comply with the requirements of these TS. Unless otherwise specified, all the other TS requirements remain unchanged. This will ensure all appropriate requirements of the MODE or other specified condition not directly associated with or required to be changed to perform the special test or operation will remain in effect.

The Applicability of an Exception LCO represents a condition not necessarily in compliance with the normal requirements of the TS. Compliance with Exception LCOs is optional. A special operation may be performed either under the provisions of the appropriate Exception LCO or under the other applicable TS requirements. If it is desired to perform the special operation under the provisions of the Exception LCO, the requirements of the Exception LCO shall be followed.

**ATTACHMENT 3c**

**CLINTON POWER STATION,  
UNIT 1**

DOCKET NO. 50-461

RENEWED FACILITY OPERATING LICENSE NO. NPF-62

APPLICATION TO ADOPT TSTF-273, "SAFETY FUNCTION DETERMINATION PROGRAM  
CLARIFICATIONS"

**Clinton Proposed Technical Specifications Bases Changes (for information only)**

---

**MARKED-UP TS BASES PAGES**

3.0-10  
3.0-11

BASES

---

LCO 3.0.6  
(continued)

When a support system is inoperable and there is an LCO specified for it in the TS, the supported system(s) are required to be declared inoperable if determined to be inoperable as a result of the support system inoperability. However, it is not necessary to enter into the supported systems' Conditions and Required Actions unless directed to do so by the support system's Required Actions. The potential confusion and inconsistency of requirements related to the entry into multiple support and supported systems' LCO's Conditions and Required Actions are eliminated by providing all the actions that are necessary to ensure the plant is maintained in a safe condition in the support system's Required Actions.

However, there are instances where a support system's Required Action may either direct a supported system to be declared inoperable or direct entry into Conditions and Required Actions for the supported system. This may occur immediately or after some specified delay to perform some other Required Action. Regardless of whether it is immediate or after some delay, when a support system's Required Action directs a supported system to be declared inoperable or directs entry into Conditions and Required Actions for a supported system, the applicable Conditions and Required Actions shall be entered in accordance with LCO 3.0.2.

Specification 5.5.10, "Safety Function Determination Program" (SFDP), ensures loss of safety function is detected and appropriate actions are taken. Upon entry into LCO 3.0.6, an evaluation shall be made to determine if loss of safety function exists. Additionally, other limitations, remedial actions, or compensatory actions may be identified as a result of the support system inoperability and corresponding exception to entering supported system Conditions and Required Actions. The SFDP implements the requirements of LCO 3.0.6.

Cross division checks to identify a loss of safety function for those support systems that support safety systems are required. The cross division check verifies that the supported systems of the redundant OPERABLE support system are OPERABLE, thereby ensuring safety function is retained. If this evaluation determines that a loss of safety function exists, the appropriate Conditions and Required Actions of the LCO in which the loss of safety function exists are required to be entered.

*(continued)*

---

BASES

---

LCO 3.0.6  
(continued)

*This loss of safety function does not require the assumption of additional single failures or loss of offsite power. Since operation is being restricted in accordance with the ACTIONS of the support system, any resulting temporary loss of redundancy or single failure protection is taken into account. Similarly, the ACTIONS for inoperable offsite circuit(s) and inoperable diesel generator(s) provide the necessary restriction for cross train inoperabilities. This explicit cross train verification for inoperable AC electrical power sources also acknowledges that supported system(s) are not declared inoperable solely as a result of inoperability of a normal or emergency electrical power source (refer to the definition of OPERABILITY).*

*When a loss of safety function is determined to exist, and the SFDP requires entry into the appropriate Conditions and Required Actions of the LCO in which the loss of safety function exists, consideration must be given to the specific type of function affected. Where a loss of function is solely due to a single Technical Specification support system (e.g., loss of automatic start due to inoperable instrumentation, or loss of pump suction source due to low tank level) the appropriate LCO is the LCO for the support system. The ACTIONS for a support system LCO adequately addresses the inoperabilities of that system without reliance on entering its supported system LCO. When the loss of function is the result of multiple support systems, the appropriate LCO is the LCO for the supported system.*

---

(continued)



**ATTACHMENT 4a**

**BRAIDWOOD STATION,  
UNITS 1 AND 2**

DOCKET NOS. 50-456 AND 50-457

RENEWED FACILITY OPERATING LICENSE NOS. NPF-72 AND NPF-77

APPLICATION TO ADOPT TSTF-273, "SAFETY FUNCTION DETERMINATION PROGRAM  
CLARIFICATIONS"

**Braidwood Proposed Technical Specifications Changes**

---

**REVISED (CLEAN) TS PAGES**

5.5-20

5.5 Programs and Manuals

---

5.5.15 Safety Function Determination Program (SFDP)

This program ensures loss of safety function is detected and appropriate actions taken. Upon entry into LCO 3.0.6, an evaluation shall be made to determine if loss of safety function exists. Additionally, other appropriate actions may be taken as a result of the support system inoperability and corresponding exception to entering supported system Condition and Required Actions. This program implements the requirements of LCO 3.0.6. The SFDP shall contain the following:

- a. Provisions for cross train checks to ensure a loss of the capability to perform the safety function assumed in the accident analysis does not go undetected;
- b. Provisions for ensuring the plant is maintained in a safe condition if a loss of function condition exists;
- c. Provisions to ensure that an inoperable supported system's Completion Time is not inappropriately extended as a result of multiple support system inoperabilities; and
- d. Other appropriate limitations and remedial or compensatory actions.

A loss of safety function exists when, assuming no concurrent single failure, no concurrent loss of offsite power or no concurrent loss of onsite diesel generator(s), a safety function assumed in the accident analysis cannot be performed. For the purpose of this program, a loss of safety function may exist when a support system is inoperable, and:

- a. A required system redundant to the system(s) supported by the inoperable support system is also inoperable; or
- b. A required system redundant to the system(s) in turn supported by the inoperable supported system is also inoperable; or
- c. A required system redundant to the support system(s) for the supported systems (a) and (b) above is also inoperable.

**ATTACHMENT 4b**

**BYRON STATION,  
UNITS 1 AND 2**

DOCKET NOS. 50-454 AND 50-455

RENEWED FACILITY OPERATING LICENSE NOS. NPF-37 AND NPF-66

APPLICATION TO ADOPT TSTF-273, "SAFETY FUNCTION DETERMINATION PROGRAM  
CLARIFICATIONS"

**Byron Proposed Technical Specifications Changes**

---

**REVISED (CLEAN) TS PAGES**

5.5-20

## 5.5 Programs and Manuals

---

### 5.5.15 Safety Function Determination Program (SFDP)

This program ensures loss of safety function is detected and appropriate actions taken. Upon entry into LCO 3.0.6, an evaluation shall be made to determine if loss of safety function exists. Additionally, other appropriate actions may be taken as a result of the support system inoperability and corresponding exception to entering supported system Condition and Required Actions. This program implements the requirements of LCO 3.0.6. The SFDP shall contain the following:

- a. Provisions for cross train checks to ensure a loss of the capability to perform the safety function assumed in the accident analysis does not go undetected;
- b. Provisions for ensuring the plant is maintained in a safe condition if a loss of function condition exists;
- c. Provisions to ensure that an inoperable supported system's Completion Time is not inappropriately extended as a result of multiple support system inoperabilities; and
- d. Other appropriate limitations and remedial or compensatory actions.

A loss of safety function exists when, assuming no concurrent single failure, no concurrent loss of offsite power or loss of onsite diesel generator(s), a safety function assumed in the accident analysis cannot be performed. For the purpose of this program, a loss of safety function may exist when a support system is inoperable, and:

- a. A required system redundant to the system(s) supported by the inoperable support system is also inoperable; or
- b. A required system redundant to the system(s) in turn supported by the inoperable supported system is also inoperable; or
- c. A required system redundant to the support system(s) for the supported systems (a) and (b) above is also inoperable.

**ATTACHMENT 4c**

**CLINTON POWER STATION,  
UNIT 1**

DOCKET NO. 50-461

RENEWED FACILITY OPERATING LICENSE NO. NPF-62

APPLICATION TO ADOPT TSTF-273, "SAFETY FUNCTION DETERMINATION PROGRAM  
CLARIFICATIONS"

**Clinton Proposed Technical Specifications Changes**

---

**REVISED (CLEAN) TS PAGES**

5.0-15

5.0-16

5.5 Programs and Manuals (continued)

---

5.5.10 Safety Function Determination Program (SFDP)

This program ensures loss of safety function is detected and appropriate actions taken. Upon entry into LCO 3.0.6, an evaluation shall be made to determine if loss of safety function exists. Additionally, other appropriate limitations and remedial or compensatory actions may be identified to be taken as a result of the support system inoperability and corresponding exception to entering supported system Condition and Required Actions. This program implements the requirements of LCO 3.0.6. The SFDP shall contain the following:

- a. Provisions for cross division checks to ensure a loss of the capability to perform the safety function assumed in the accident analysis does not go undetected;
- b. Provisions for ensuring the plant is maintained in a safe condition if a loss of function condition exists;
- c. Provisions to ensure that an inoperable supported system's Completion Time is not inappropriately extended as a result of multiple support system inoperabilities; and
- d. Other appropriate limitations and remedial or compensatory actions.

A loss of safety function exists when, assuming no concurrent single failure, no concurrent loss of offsite power or no concurrent loss of onsite diesel generator(s) a safety function assumed in the accident analysis cannot be performed. For the purpose of this program, a loss of safety function may exist when a support system is inoperable, and:

- a. A required system redundant to system(s) supported by the inoperable support system is also inoperable;
- b. A required system redundant to system(s) in turn supported by the inoperable supported system is also inoperable; or
- c. A required system redundant to support system(s) for the supported systems (a) and (b) above is also inoperable.

The SFDP identifies where a loss of safety function exists. If a loss of safety function is determined to exist by this program, the appropriate Conditions and Required Actions of the LCO in which the loss of safety function exists are required to be entered.

(continued)

---



5.5 Programs and Manuals (continued)

---

5.5.10 Safety Function Determination Program (SFDP) (continued)

When a loss of safety function is caused by the inoperability of a single Technical Specification support system, the appropriate Conditions and Required Actions to enter are those of the support system.

5.5.11 Technical Specifications (TS) Bases Control Program

This program provides a means for processing changes to the Bases of these Technical Specifications.

- a. Changes to the Bases of the TS shall be made under appropriate administrative controls and reviews.
- b. Licensees may make changes to Bases without prior NRC approval provided the changes do not require either of the following:
  1. A change in the TS incorporated in the license; or
  2. A change to the USAR or Bases that requires NRC approval pursuant to 10 CFR 50.59.
- c. The Bases Control Program shall contain provisions to ensure that the Bases are maintained consistent with the USAR.
- d. Proposed changes that meet the criteria of either Specification 5.5.11.b.1 or Specification 5.5.11.b.2 above shall be reviewed and approved by the NRC prior to implementation. Changes to the Bases implemented without prior NRC approval shall be provided to the NRC on a frequency consistent with 10 CFR 50.71(e).

5.5.12 Ultimate Heat Sink (UHS) Erosion, Sediment Monitoring, and Dredging Program

A program to provide maintenance on the UHS in the event inspections of the UHS dam, its abutments, or the UHS shoreline indicate erosion or local instability. This program shall ensure that the UHS is maintained in such a way as to achieve the following objectives:

- a. During normal operation, there will be a volume of water in the UHS below elevation 675 sufficient to receive the sediment load from a once-in-25-year flood event; and
- b. Still be adequate to maintain the plant in a safe-shutdown condition for 30 days under meteorological conditions of the severity suggested by Regulatory Guide 1.27.

---

(continued)