

September 19, 2002

Mr. John L. Skolds, President
Exelon Nuclear
Exelon Generation Company, LLC
4300 Winfield Road
Warrenville, IL 60555

SUBJECT: BYRON STATION, UNITS 1 AND 2, AND BRAIDWOOD STATION, UNITS 1
AND 2 - ISSUANCE OF AMENDMENTS (TAC NOS. MB4450, MB4451,
MB4448, AND MB4449)

Dear Mr. Skolds:

The U.S. Nuclear Regulatory Commission (Commission) has issued the enclosed Amendment No. 129 to Facility Operating License No. NPF-37 and Amendment No. 129 to Facility Operating License No. NPF-66 for the Byron Station, Unit Nos. 1 and 2, respectively, and Amendment No. 124 to Facility Operating License No. NPF-72 and Amendment No. 124 to Facility Operating License No. NPF-77 for the Braidwood Station, Unit Nos. 1 and 2, respectively. The amendments are in response to your application dated March 8, 2002.

The amendments will revise TS 3.8.4, "DC Sources-Operating," 3.8.5, "DC Sources-Shutdown," 3.8.6, "Battery Cell Parameters," and 3.8.8, "Inverter-Shutdown." The changes also include the relocation of the following TS items to a licensee-controlled program: (1) a number of Surveillance Requirements (SRs) that require the performance of preventive maintenance, and (2) TS Table 3.8.6-1, "Battery Cell Parameter Requirements." The amendments also add new actions and their associated completion times to TS 3.8.6 for out-of-limits conditions for battery cell voltage, electrolyte level, and electrolyte temperature. In addition, SRs are included for verification of these parameters.

A copy of the Safety Evaluation is also enclosed. The Notice of Issuance will be included in the Commission's biweekly *Federal Register* notice.

Sincerely,

/RA/

Mahesh Chawla, Project Manager, Section 2
Project Directorate III
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket Nos. STN 50-454, STN 50-455, STN 50-456 and STN 50-457

Enclosures: 1. Amendment No. 129 to NPF-37
2. Amendment No. 129 to NPF-66
3. Amendment No. 124 to NPF-72
4. Amendment No. 124 to NPF-77
5. Safety Evaluation

cc w/encls: See next page

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Docket Nos. STN 50-454, STN 50-455, STN 50-456 and STN 50-457

- Enclosures: 1. Amendment No. 129 to NPF-37
- 2. Amendment No. 129 to NPF-66
- 3. Amendment No. 124 to NPF-72
- 4. Amendment No. 124 to NPF-77
- 5. Safety Evaluation

cc w/encls: See next page

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PUBLIC	PD3-2 r/f	RDennig, O12H4	AStone, RIII
MChawla	OGC, O15B18	ACRS, T2E26	AGill
AMendiola	GHill (8), T5C3	CRosenberg	NLe
GDick			SSaba

ADAMS Accession Number: ML021970381

OFFICE	PM: LPD3-2	PM: LPD3-2	LA: LPD3-2	SC: RORP	SC: EEIB	OGC	SC: LPD3-2
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DATE	8/14/02	8/14/02	8/14/02	8/16/02	8/16/02	9/18/02	9/18/02

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EXELON GENERATION COMPANY, LLC

DOCKET NO. STN 50-454

BYRON STATION, UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 129
License No. NPF-37

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Exelon Generation Company, LLC (the licensee) dated March 8, 2002, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. NPF-37 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendix A as revised through Amendment No. 129 and the Environmental Protection Plan contained in Appendix B, both of which are attached hereto, are hereby incorporated into this license. The licensee shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. This license amendment is effective as of the date of its issuance and shall be implemented within 60 days of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA by Douglass V. Pickett for/

Anthony J. Mendiola, Chief, Section 2
Project Directorate III
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: September 19, 2002

EXELON GENERATION COMPANY, LLC

DOCKET NO. STN 50-455

BYRON STATION, UNIT NO. 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 129
License No. NPF-66

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Exelon Generation Company, LLC (the licensee) dated March 8, 2002, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. NPF-66 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendix A (NUREG-1113), as revised through Amendment No. 129 and the Environmental Protection Plan contained in Appendix B, both of which were attached to License No. NPF-37, dated February 14, 1985, are hereby incorporated into this license. The licensee shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. This license amendment is effective as of the date of its issuance and shall be implemented within 60 days of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA by Douglas V. Pickett for/

Anthony J. Mendiola, Chief, Section 2
Project Directorate III
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: September 19, 2002

ATTACHMENT TO LICENSE AMENDMENT NOS. 129 AND 129

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

DOCKET NOS. STN 50-454 AND STN 50-455

Replace the following pages of the Appendix "A" Technical Specifications with the attached pages. The revised pages are identified by amendment number and contain marginal lines indicating the area of change.

Remove Pages

3.8.4-1
3.8.4-2
3.8.4-3
3.8.4-4
3.8.4-5
3.8.5-1
3.8.5-2
3.8.5-3
3.8.6-1
3.8.6-2
3.8.6-3
3.8.6-4
3.8.8-1
5.5-25

Insert Pages

3.8.4-1
3.8.4-2
3.8.4-3
None
None
3.8.5-1
3.8.5-2
3.8.5-3
3.8.6-1
3.8.6-2
3.8.6-3
3.8.6-4
3.8.8-1
5.5-25

EXELON GENERATION COMPANY, LLC

DOCKET NO. STN 50-456

BRAIDWOOD STATION, UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 124
License No. NPF-72

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Exelon Generation Company, LLC (the licensee) dated March 8, 2002, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. NPF-72 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendix A as revised through Amendment No. 124 and the Environmental Protection Plan contained in Appendix B, both of which are attached hereto, are hereby incorporated into this license. The licensee shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. This license amendment is effective as of the date of its issuance and shall be implemented within 60 days of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA by Douglas Pickett for/

Anthony J. Mendiola, Chief, Section 2
Project Directorate III
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: September 19, 2002

EXELON GENERATION COMPANY, LLC

DOCKET NO. STN 50-457

BRAIDWOOD STATION, UNIT NO. 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 124
License No. NPF-77

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Exelon Generation Company, LLC (the licensee) dated March 8, 2002, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. NPF-77 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendix A as revised through Amendment No. 124 and the Environmental Protection Plan contained in Appendix B, both of which were attached to License No. NPF-72, dated July 2, 1987, are hereby incorporated into this license. The licensee shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. This license amendment is effective as of the date of its issuance and shall be implemented within 60 days of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA by Douglas Pickett for/

Anthony J. Mendiola, Chief, Section 2
Project Directorate III
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: September 19, 2002

ATTACHMENT TO LICENSE AMENDMENT NOS. 124 AND 124

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

DOCKET NOS. STN 50-456 AND STN 50-457

Replace the following pages of the Appendix "A" Technical Specifications with the attached pages. The revised pages are identified by amendment number and contain marginal lines indicating the area of change.

Remove Pages

3.8.4-1
3.8.4-2
3.8.4-3
3.8.4-4
3.8.4-5
3.8.5-1
3.8.5-2
3.8.5-3
3.8.6-1
3.8.6-2
3.8.6-3
3.8.6-4
3.8.8-1
5.5-25

Insert Pages

3.8.4-1
3.8.4-2
3.8.4-3
None
None
3.8.5-1
3.8.5-2
3.8.5-3
3.8.6-1
3.8.6-2
3.8.6-3
3.8.6-4
3.8.8-1
5.5-25

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 129 TO FACILITY OPERATING LICENSE NO. NPF-37,
AMENDMENT NO. 129 TO FACILITY OPERATING LICENSE NO. NPF-66,
AMENDMENT NO. 124 TO FACILITY OPERATING LICENSE NO. NPF-72,
AND AMENDMENT NO. 124 TO FACILITY OPERATING LICENSE NO. NPF-77

EXELON GENERATION COMPANY, LLC

BYRON STATION, UNIT NOS. 1 AND 2

BRAIDWOOD STATION, UNIT NOS. 1 AND 2

DOCKET NOS. STN 50-454, STN 50-455, STN 50-456 AND STN 50-457

1.0 INTRODUCTION

By letter dated March 8, 2002, the Exelon Generation Company, LLC, (the licensee) submitted a request for proposed license amendments to change the Technical Specifications (TS) for Braidwood Units 1 and 2, and Byron Units 1 and 2, using the Technical Specifications Task Force (TSTF) Standard Technical Specification (TS) Change Traveler TSTF-360, Revision 1 and TSTF Standard TS Change Traveler TSTF-204, Revision 3. The proposed changes would revise TSs 3.8.4, "DC Sources-Operating," 3.8.5, "DC Sources-Shutdown," 3.8.6, "Battery Cell Parameters," and 3.8.8, "Inverters-Shutdown."

The proposed changes associated with TSTF-360, Revision 1, revise TS 3.8.4, TS 3.8.5, and TS 3.8.6 and include the following changes. The proposed changes would add new Required Actions and extend the Completion Time for an inoperable battery charger, as well as provide alternate battery charger testing criteria in TS 3.8.4 and TS 3.8.5. The proposed changes would also include the relocation to a licensee-controlled program of a number of Surveillance Requirements (SRs) in TS 3.8.4 that relate to preventive maintenance on the safety-related batteries. The licensee proposed that current TS Table 3.8.6-1, "Battery Cell Parameters Requirements," be relocated to a licensee-controlled program, and specific Required Actions associated with out-of-limits conditions for battery cell float voltage, float current, electrolyte level, and electrolyte temperature be added to TS 3.8.6. In addition, specific SRs are being proposed for the verification of the values of these parameters. Additionally, a new administrative TS program is being proposed for the maintenance and monitoring of station batteries based on the recommendations of the Institute of Electrical and Electronics Engineers (IEEE) Standard 450-1995, "IEEE Recommended Practice for Maintenance, Testing, and

ENCLOSURE

Replacement of Vented Lead-Acid Batteries for Stationary Applications.” All of the items proposed to be relocated will be contained within this new program.

The proposed changes associated with TSTF-204, Revision 3, revise TS 3.8.5 and TS 3.8.8 to require only one direct current (DC) electrical power subsystem and two inverters, respectively, during shutdown conditions. Each of the four alternate current (AC) instrument buses (i.e., 2 per division) is normally supplied AC electrical power by a dedicated inverter. This option applies to plants having a pre-Improved TS (ITS) licensing basis for electrical power requirements during shutdown conditions that required only one DC electrical power subsystem and two inverters to be operable. The Braidwood and Byron Stations' pre-ITS licensing basis for electrical power requirements during shutdown conditions required only one DC electrical power subsystem and two inverters to be operable.

The licensee stated that the proposed changes are to support performance of periodic on-line battery charger maintenance and post-maintenance testing, thereby reducing plant refueling outage duration and improving battery charger availability during shutdown. According to the licensee, the changes will provide operational flexibility by allowing more efficient application of plant resources to safety significant activities. The licensee further stated that the proposed changes are consistent with the changes previously approved by the Nuclear Regulatory Commission (NRC) for Clinton Power Station on February 15, 2002, that the changes are related to the conditions, required actions, completion time and surveillance requirements of the battery chargers, the batteries, and the DC electrical power subsystem, and are consistent with NUREG-1431 Revision 2, “Standard Technical Specifications, Westinghouse Plants, PWR,” TSTF-360, Revision 1, “DC Electrical Rewrite,” and TSTF-204, Revision 3, “Revised DC Sources – Shutdown and Inverters – Shutdown.” In a verbal request, followed by an e-mail dated 9/12/02 (ADAMS accession number ML022550392), the licensee requested 60 days implementation period.

2.0 BACKGROUND

2.1 TSTF-360

The changes to the standard TS (STS) in Technical Specification Task Force (TSTF) Traveler TSTF-360, Revision 1, “DC Electrical Rewrite,” were approved for incorporation into STS by the staff on December 18, 2000, as set forth in a letter from W. D. Beckner to A. R. Pietrangelo (NEI). This TSTF provides guidance for the rewrite of current TS requirements for Class 1E DC power supply systems as referenced in the Standard Technical Specifications NUREGs, Revision 1, (i.e., NUREG-1430 Babcock & Wilcox), NUREG-1431 Westinghouse, NUREG-1432 Combustion Engineering, NUREG-1433 General Electric (BWR/4), and NUREG- 1434 General Electric (BWR/6). The acceptability of a licensee-proposed rewrite of its DC Electrical Systems TS requirements is based on the NRC staff review and evaluation of the licensee justifications for each of the proposed changes. This includes justifications for revising, relocating, and removing current plant-specific requirements in order to convert the current TS into new TS LCOs 3.8.4, 3.8.5, 3.8.6, and 5.5.17 similar to those outlined in the TSTF. In general, licensees are expected to address the following areas to be consistent with TSTF-360 during conversion of plant TSs to ITS format:

1. Relocation of preventive maintenance SRs to licensee-controlled programs;
2. Specification of alternate testing criteria for battery charger testing;
3. Replacement of battery specific gravity monitoring with float current monitoring;
4. Relocation of maintenance surveillance for cell voltage and electrolyte level based on the industry recommendations in IEEE Standard 450 to a licensee-control program, and created a new section in Chapter 5 TS program (this new section in Chapter 5 program will be a TS-controlled activity with its detailed requirements relocated to a plant procedure);
5. Addition of specific Actions and increased Completion Times for out-of-limits conditions for battery cell voltage, electrolyte level, and electrolyte temperature;
6. Elimination of the “once per 60 month” restriction on replacing the battery service test with the battery modified performance discharge test; and
7. Provision of enhanced TS Bases for each of the newly proposed TS 3.8.4, 3.8.5, and 3.8.6.

In particular, the staff reviewed licensee plant justifications for adopting the various elements of TSTF-360 for consistency with the revised Bases of the TSTF. These Bases were reviewed and accepted by the staff during the review of the TSTF-360, Revision 0, and TSTF-360, Revision 1, which were submitted by NEI on behalf of the industry on February 4, 2000, and November 6, 2000, respectively.

2.2. TSTF-204

TSTF-204 revises STS LCO provisions for DC Sources – Shutdown and Inverters – Shutdown to address specific subsystem requirements. As written, the TS LCO implies that a full complement of battery and charger are required for both subsystems. Similarly, for Inverters – Shutdown, a DC battery-backed inverter is required for both divisions or trains. In accepting TSTF-204, the staff recognized that the second subsystem (division or train) is not typically required by the current Technical Specifications for most plants. Thus, TSTF-204 provides a consistent format and presentation for plants converting to the ITS but retaining current requirements.

Section 182a of the Atomic Energy Act requires applicants for nuclear power plant operating licenses to state the TSs to be included as part of the license. The Commission’s regulatory requirements related to the content of the TSs are set forth in 10 CFR 50.36. That regulation requires the TSs to include items in five specific categories, including: (1) safety limits, limiting safety system settings, and limiting control settings; (2) limiting conditions for operation; (3) surveillance requirements; (4) design features; and (5) administrative controls. However, the regulation does not specify the particular requirements to be included in a plant’s TSs.

Under 10 CFR 50.36(c)(2)(ii), a limiting condition for operation must be included in TSs for any item meeting one or more of the following four criteria:

- 1) installed instrumentation that is used to detect, and indicate in the control room, a significant abnormal degradation of the reactor coolant pressure boundary;
- 2) a process variable, design feature, or operating restriction that is an initial condition of a design basis accident or transient analysis that either assumes the failure of or presents a challenge to the integrity of a fission product barrier;
- 3) a structure, system, or component that is part of the primary success path and which functions or actuates to mitigate a design basis accident or transient that either assumes the failure of or presents a challenge to the integrity of a fission product barrier; and
- 4) a structure, system, or component which operating experience or probabilistic risk assessment has shown to be significant to public health and safety.

As a result, existing TS requirements that fall within or satisfy any of the criteria in 10 CFR 50.36 must be retained in the TSs, while those TS requirements that do not fall within or satisfy these criteria may be relocated to other licensee controlled documents.

3.0 EVALUATION OF LICENSEE PROPOSED CHANGES

The staff reviewed the licensee's submittal for conformance to the guidance of TSTF-360, Revision 1, and TSTF-204, Revision 3.

The licensee provided the following description of the current 125 VDC electrical power systems for Byron Units 1 and 2, and Braidwood Units 1 and 2: The station's DC electrical power system provides the AC emergency power system with control power. It also provides both motive and control power to selected safety-related equipment and AC instrument bus power (via inverters). As required by 10 CFR Part 50, Appendix A, GDC 17, "Electric power systems," the DC electrical power system is designed to have sufficient independence, redundancy, and testability to perform its safety functions, assuming a single failure. The DC electrical power system also conforms to the recommendations of Regulatory Guide (RG) 1.6, "Independence Between Redundant Standby (Onsite) Power Sources and Between Their Distribution Systems," March 1971, and Institute of Electrical and Electronics Engineers (IEEE) Standard 308-1978, "Standard Criteria for Class 1E Power Systems for Nuclear Power Generating Station."

The 125 VDC electrical power system for each unit consists of two independent and redundant safety-related Class 1E DC electrical power subsystems (Division 11 (21) and Division 12 (22)). Each subsystem consists of one 125 VDC battery, the associated battery charger for each battery, and all the associated control equipment and interconnecting cabling.

During normal operation, the 125 VDC loads are powered from the battery chargers with the batteries floating on the system. In case of a loss of this source of power, the DC load is automatically powered from the station battery.

Each battery was sized based upon supplying the design duty cycle in the event of a loss of offsite AC power concurrent with a loss-of-coolant accident (LOCA) and a single failure of a

Diesel Generator (DG). There is no sharing between redundant Class 1E subsystems, such as batteries, battery chargers, or distribution panels. While it is possible to interconnect the Unit 1 and Unit 2 DC electrical power subsystems, they normally remain disconnected, except when a DC source must be taken out of service for the purposes of maintenance and/or testing, or in the event of a failure of a DC source.

The crosstie between 125 VDC ESF buses 111 and 211 and the crosstie between 125 VDC ESF buses 112 and 212 are each provided with two normally locked open, manually operated, circuit breakers. No interlocks are provided since the interconnected buses are not redundant. Crosstie breaker closed alarms are also provided to alert the operator when the units are crosstied.

Each Division 11 (21) and Division 12 (22) DC electrical power subsystem battery charger has ample power output capacity for the steady state operation of connected loads required during normal operation, while at the same time maintaining its battery bank fully charged. Each battery charger also has sufficient capacity to restore the battery from the design minimum charge to its fully charged state within 24 hours while supplying normal steady state loads discussed in the UFSAR Section 8.3.2.1, "D-C Power System, Description."

3.1 Proposed Changes

In its letter dated March 08, 2002, the licensee proposed a license amendment change to the Technical Specifications (TS) for Braidwood Units 1 and 2, and Byron Units 1 and 2, using TSTF Standard Technical Specification (TS) Change Traveler TSTF-360, Revision 1 and TSTF Standard TS Change Traveler TSTF-204, Revision 3. The proposed changes would revise TSs 3.8.4, "DC Sources-Operating," 3.8.5, "DC Sources-Shutdown," 3.8.6, "Battery Cell Parameters," and 3.8.8, "Inverters-Shutdown," and TS Section 5.5, "Administrative." In particular, the proposed changes will:

- (1) provide an increased Completion Time for an inoperable battery charger,
- (2) relocate preventive maintenance SRs to a licensee-controlled program,
- (3) provide alternate testing criteria for battery charger testing,
- (4) replace battery specific gravity monitoring with float current monitoring,
- (5) relocate to a licensee-controlled program based on IEEE-450, or to a newly created TS 5.0 Administrative Controls program to reference actions for the following battery cell float voltage and electrolyte level based on the TS bases:
 - a. Categories A and B limits for battery cell float voltage and electrolyte level, along with the associated compensatory actions;
 - b. Category C specific value limit for electrolyte level;
 - c. the specific value of the limit for electrolyte temperature; and
 - d. the specific value for the minimum battery charging float voltage.

- (6) provide specific Required Actions and increased Completion Times for out-of-limits conditions for battery cell float voltage, electrolyte level, and electrolyte temperature, and
- (7) require only one DC electrical power subsystem and two inverters, respectively, during shutdown conditions. Each of the four AC instrument buses (i.e., 2 per division) is normally supplied AC electrical power by a dedicated inverter.

The staff evaluation of the proposed changes is as follows:

Proposed Changes for TS 3.8.4 – Required Actions A.2 and A.3

- Add two new Required Actions A.2 and A.3 with associated Completion Times of 2 hours and once per 12 hours for one battery charger inoperable:
 - A.2 Restore Battery Terminal voltage to greater than or equal to the minimum established float voltage
 - A.3 Verify the battery float current ≤ 3 amps once per 12 hours.
- Renumber existing Action A.2 to read A.4 with associated Completion Time extended from 24 hours to seven days for restoring a battery charger to operable.
- Revise Completion Time for Required Action B.1 to extend duration from 60 hours to 204 hours.

The staff reviewed the changes and related proposed Bases, and finds that the TS 3.8.4 Actions provide a tiered response that focuses on returning the battery to the fully charged state and restoring a fully qualified charger to OPERABLE status in a reasonable time period, as set forth below. The proposed new Action A.2, as a first tiered action, requires that the battery terminal voltage be restored to greater than or equal to the minimum established float voltage within 2 hours. This time provides for returning the inoperable charger to operable status or providing an alternate means of restoring battery terminal voltage to greater than or equal to the minimum established float voltage, and is a reasonable time that is based on Regulatory Guide 1.93 "Availability of Electric Power Source." The second tiered action, as required by proposed Action A.3, proposes 12 hours to establish that the battery has sufficient capacity to perform its assumed duty cycle as measured by float current ≤ 3 amps, which may involve some recharging of lost capacity occurring during the initial 2 hours. Given the choice of a plant shutdown in this condition, as currently required, versus a 12-hour duration at the end of which it is reasonable to assume the battery can be shown to have its assumed capacity, the staff finds this to be an acceptable relaxation. The third tiered action, as required by the renumbered Action A.4 [which was Action A.2], limits the restoration time for the inoperable charger to 7 days. This Action is applicable if an alternate means of restoring battery terminal voltage to greater than or equal to the minimum established float voltage has been used. The staff finds the proposed 7-day Completion Time for Action A.4 a reasonable time duration to effect restoration of the qualified battery charger to operable status. Based on this evaluation, the staff concludes that proposed changes to TS 3.8.4 Actions A2, A.3, and A.4 are acceptable

because if the DC subsystem is not restored to OPERABLE status, the unit must be brought to an orderly and safe shutdown condition.

For the proposed change to TS 3.8.4 Action B.1, extending the Completion Time duration from the current 60 hours to 204 hours, the staff finds that this condition addresses the situation of crosstieing the operating unit's DC bus to the opposite unit, if the opposite unit has an inoperable battery charger, and when the opposite unit is in Mode 1, 2, 3, or 4. The staff concurs with the licensee's statement that this provision is included to accommodate unexpected failures, maintenance and/or testing of the opposite unit's DC subsystem. The staff finds that the function of the crosstie is to maintain the opposite unit's battery fully charged and to supply the opposite unit's minimal DC loads. The proposed 204 hour Completion Time is based on the 7 days that the opposite unit has to restore the inoperable charger and the 36 hours that the opposite unit would have to reach MODE 5 if the charger is not restored to Operable status. Based on this review, the staff finds the proposed 204 hours to be reasonable and, therefore, the change is acceptable.

Proposed Changes to TS SR 3.8.4.1, SR 3.8.4.2, SR 3.8.4.3, SR 3.8.4.4, SR 3.8.4.5, SR 3.8.4.6, SR 3.8.4.7, and SR 3.8.4.8

- Revise SR 3.8.4.1 to state "Verify battery terminal voltage is greater than or equal to the minimum established float voltage," with the specific limiting value for float voltage relocated to the TS Bases.
- Relocate SRs 3.8.4.2, 3.8.4.3, 3.8.4.4, and 3.8.4.5 to a licensee-controlled program.
- SR 3.8.4.6 is renumbered to SR 3.8.4.2 and new proposed SR 3.8.4.2 is revised to state the following, with the specific limiting value for float voltage relocated to the TS Bases.
 - "Verify each battery charger supplies a load equal to the manufacturer's rating at greater than or equal to the minimum established float voltage for ≥ 8 hours.
 - Verify each battery charger can recharge the battery to the fully charged state within 24 hours while supplying the largest coincident demands of the various continuous steady state loads, after a battery discharge to the bounding design basis event discharge state."
- SR 3.8.4.7 is renumbered to SR 3.8.4.3. References to SR 3.8.4.8 and SR 3.8.4.7 in the SR Note are renumbered to SR 3.8.6.6 and SR 3.8.4.3, respectively.
- SR 3.8.4.8 is moved to TS 3.8.6 and renumbered to SR 3.8.6.6.

The staff reviewed the proposed changes and finds the revised SR 3.8.4.1 provides for the verification of battery terminal voltage while the system is on float charge, and this surveillance requirement helps to ensure the effectiveness of the chargers. The licensee stated that voltage requirements are consistent with the minimum float voltage established by the battery manufacturer, and the 7-day frequency is consistent with manufacturer recommendations and IEEE-450, and therefore, the staff finds the change to SR 3.8.4.1 acceptable.

For the proposed relocation of SRs 3.8.4.2, 3.8.4.3, 3.8.4.4, and 3.8.4.5, the licensee stated that failure to meet the SR does not necessarily mean that the equipment is not capable of performing its safety function, and the corrective action is generally a routine or preventive maintenance activity. As stated in the Bases, SR 3.8.4.4 identifies the removal of visible corrosion and tightening of terminal connections as a preventive maintenance. SR 3.8.4.3, visible inspection for physical damage or deterioration that could potentially degrade battery performance, is not required for the battery to perform its safety function, but again reflects ongoing preventive maintenance activities. These activities are inappropriate for operability SRs, do not meet the requirements of 10 CFR 50.36 for retention in the TSs, and are better controlled under the maintenance programs for batteries.

SR 3.8.4.2 and SR 3.8.4.5 verify the resistance and the values of resistance and these are vendor recommended values; that is, values at which some action should be taken and not necessarily when the operability of the battery is in question. The safety analyses do not assume a specific battery resistance value, but assume the batteries will supply adequate power. Therefore, a key parameter is the overall battery resistance. The resistance of each connection varies independently from all the others. The staff concurs that some of these connection resistances may be higher or lower than others, and the battery may still be able to perform its function and thus should not be considered inoperable solely because one connector's resistance is high. Overall resistance has a direct impact on operability, however, it is adequately determined as acceptable through completion of the battery service and discharge tests. Based on the foregoing, the staff finds the proposed relocation of these SRs to a licensee-controlled document to be consistent with IEEE-450 and Bases in TSTF-360. The licensee controls this document under its maintenance programs, which in turn are under the control of 10 CFR 50.59, and therefore, the changes are acceptable.

New proposed SR 3.8.4.2 [SR 3.8.4.6 is renumbered to SR 3.8.4.2] is consistent with TSTF-360, and provides alternate testing criteria for battery charger testing to confirm the charger design capacity. The licensee stated that alternate acceptance criteria are proposed that would allow an actual in-service demonstration that the charger can recharge the battery to the fully charged state within 24 hours while supplying the largest combined demands of the various continuous steady state loads after a battery discharge to the bounding design basis event discharge state. This meets the intent of the existing test and allows for a normal in-place demonstration of the charger capability thereby minimizing the time when the charger would be disconnected from the DC bus, and, therefore, the staff finds this proposed change acceptable.

New SR 3.8.4.3 [which was SR 3.4.7] and related references changes are editorial or administrative in nature, do not change any substantive requirements, and, therefore, are acceptable.

Relocating of SR 3.8.4.8 to TS Section 3.8.6 and renumbering to SR 3.8.6.6 are changes which are administrative in nature, do not change any substantive requirements, and, therefore, are acceptable.

Proposed Changes to TS 3.8.5

- TS 3.8.5 is revised to require only one DC electrical power subsystem during shutdown conditions.
- SR 3.8.5.1 is revised to delete reference to the SRs relocated from TS 3.8.4 and the remaining SRs in the SR Note are renumbered.

For proposed changes to TS 3.8.5, the staff reviewed the changes and finds them to be consistent with TSTF-204, Revision 3, in that the licensee is revising TS 3.8.5 and TS 3.8.8 to require only one DC electrical power subsystem and two inverters, respectively, during shutdown conditions. This option to require only one DC electrical power subsystem and two inverters during shutdown conditions applies to plants having a pre-Improved TS (ITS) licensing basis for electrical power requirements during shutdown conditions that required only one DC electrical power subsystem and two inverters to be operable. Each of the four AC instrument buses (i.e., 2 per division) is normally supplied AC electrical power by a dedicated inverter. The Braidwood and Byron Stations' pre-ITS licensing basis for electrical power requirements during shutdown conditions required only one DC electrical power subsystem and two inverters to be operable.

In its March 8, 2002, submittal, the licensee stated that shutdown TS requirements are designed to ensure that the unit has the capability to mitigate the consequences of certain postulated accidents. Worst case DBAs, which are analyzed for operating modes, are generally viewed not to be a significant concern during shutdown modes due to the lower energies involved. The TS therefore requires a lesser complement of electrical equipment to be available during shutdown than is required during operating modes. More recent work completed on the potential risks associated with shutdown, however, has found significant risk associated with certain shutdown evolutions. As a result, in addition to the requirements established in the TS, the industry has adopted NUMARC 91-06, "Guidelines for Industry Actions to Assess Shutdown Management," as an industry initiative to manage shutdown tasks and associated electrical support to maintain risk at an acceptable low level. Based on this review, the staff finds the change is consistent with the plant current licensing basis, and, therefore, the change is acceptable. In addition, the licensee's adoption of the NUMARC 91-06 initiative in managing shutdown tasks to maintain risk at an acceptable low level during shutdown will provide added assurance that the DC electrical power supply is adequate during shutdown.

The proposed changes to SR 3.8.5.1, deleting references to the SRs relocated from TS 3.8.4 and renumbering the remaining SRs in the SR Note, are administrative in nature, do not change substantive requirements, and, therefore, are acceptable.

Proposed Changes to TS 3.8.6

- The word "Cell" is deleted from TS 3.8.6 and the Limiting Condition for Operation (LCO) is revised to delete reference to Table 3.8.6-1, Battery Cell Parameters Requirements.
- The following specific limits of Table 3.8.6-1 are relocated to a licensee-controlled program:

- Categories A and B limits for electrolyte level and float voltage
- Category C specific value limit for electrolyte level
- Float current requirements (which replace specific gravity requirements)
- Condition A is deleted and replaced with the following new Conditions.
 - Proposed Condition A for one battery with one or more cells with float voltage < 2.07 V
 - Proposed Condition B for one battery with float current > 3 amps
 - Proposed Condition C for one battery with one or more cells with electrolyte level less than minimum established design limits
 - Proposed Condition D for one battery with pilot cell electrolyte temperature less than minimum established design limits
 - Proposed Condition E for two batteries with battery parameters not within limits
- Condition B is renamed Condition F and revised by referencing proposed Conditions B, C, D, and E. In addition, the portions of Condition B that address electrolyte temperature and battery cell parameters not within Category C values are replaced with a Condition that addresses battery cell float voltage and float current.
- The existing SRs and Table 3.8.6-1 are deleted and replaced with SRs for float current, battery pilot and battery cell float voltage, electrolyte level, and pilot cell electrolyte temperature. The Category A and B limits for electrolyte level and float voltage, the Category C specific limiting value for electrolyte level, and the specific limiting value for pilot cell electrolyte temperature are relocated to a licensee-controlled program.

The staff review of the above proposed changes is as follows:

Deleting the word "Cell" from TS 3.8.6 and the Limiting Condition for Operation (LCO) and deleting reference to Table 3.8.6-1, are administrative changes in nature, do not change substantive requirements and, therefore, the changes are acceptable.

The licensee proposed to remove condition A of LCO 3.8.6 and relocate TS Table 3.8.6-1 to a licensee-controlled program titled "Battery Monitoring and Maintenance Program." This program will be administratively controlled under newly added TS Section 5.5.17. The staff finds that the parameter values in Table 3.8.6-1 will continue to be controlled at their current level, in accordance with the new program, and actions will be implemented in accordance with the plant corrective action program. Table 3.8.6-1 has three categories of limitations for the battery cells: electrolyte level, float voltage, and specific gravity.

Categories A and B values represent appropriate monitoring levels and appropriate preventive maintenance levels for long term battery quality and extended battery life. As such, they do not

reflect the 10 CFR 50.36 criteria for LCOs of “the lowest functional capability or performance levels of equipment required for safe operation of the facility.” It is proposed that these values, and the Required Actions associated with restoration, be relocated to a licensee-controlled program that is under the control of 10 CFR 50.59, “Changes, tests, and experiments.” This program is to be based on the recommendations of IEEE-450-1995. The battery parameter values will continue to be controlled at their current level, and actions will be implemented in accordance with the plant corrective action program. Furthermore, the battery and its preventive maintenance and monitoring are under the regulatory requirements of 10 CFR 50.65, "Requirements for monitoring the effectiveness of maintenance at nuclear power plants." This relocation will continue to assure the battery is maintained at current levels of performance, and allows the TS and the licensed operators to focus on battery parameter degradations.

Category C specific limiting values for the battery electrolyte temperature and level are also relocated to a licensee-controlled program that is under the control of 10 CFR 50.59. The TS will require the electrolyte temperature and level to be greater than or equal to minimum established design limits. Depending on the available excess capacity of the associated battery, the minimum temperature necessary to support operability of the battery can vary. Relocation to a licensee-controlled program will allow the flexibility to monitor and control this limit at values directly related to the battery's ability to perform its assumed function.

Based on the above, the staff finds the proposed change maintains compliance with requirements governing the design and operation of the DC electrical power system, provides adequate assurance of system operability, and therefore, is acceptable.

The licensee proposed to delete TS 3.8.6 Condition A and replace it with the following new Conditions A, B, C, D, and E, which will be added to LCO 3.8.6; and the existing old Condition B would be redesignated as condition F. In addition, the portions of Condition B that address electrolyte temperature and battery cell parameters not within Category C valves are replaced with a condition that addresses battery cell voltage and float current. The Required Actions are related to parameters that have an impact on the battery and its OPERABILITY. These conditions with their associated Required Actions and Completion Times will provide the necessary actions for a specific abnormal battery condition.

1. Proposed CONDITION A applies to a battery that has one or more battery cells with a float voltage less than 2.07 volts. The battery is considered degraded and the Required Actions are to verify (a) the battery terminal voltage to be greater than or equal to minimum established float voltage (SR 3.8.4.1), and (b) the battery float current is less than or equal to 3 amps (SR 3.8.6.1). The staff concludes that this change is acceptable, because the above actions assure that there is still sufficient battery capacity to perform its intended function and the battery is not considered INOPERABLE. Continued operations up to 24 hours are permitted to allow the restoration of the affected cell (cells) voltage to greater than or equal to 2.07 volts. The staff concludes that the 24-hour restoration time is a reasonable time and is acceptable.
2. Proposed CONDITION B applies to a battery with a float current greater than 3 amps, which indicates that the battery is partially discharged. The Required Action is to verify within two hours that the battery terminal voltage is greater than or equal to the minimum established float voltage (SR 3.8.4.1), confirming battery charger operability.

If the terminal voltage is found to be less than the minimum established float voltage, it indicates that the battery charger is inoperable or is operating in the current limit mode. If the battery charger is found to be inoperable, LCO 3.8.4 Condition A would be entered. If the battery charger is operating in the current limit mode after 2 hours, it is an indication that the battery has been substantially discharged and likely cannot perform its required design functions.

If the float voltage is found to be satisfactory, but there are one or more battery cells with float voltage less than 2.07 V, the associated "OR" statement of Condition F is applicable and the battery must be declared inoperable. If the float voltage is satisfactory and there are no cells less than 2.07 V, there is assurance that within 12 hours the battery will be restored to its fully-charged condition from any discharge that might have occurred due to a temporary loss of the battery charger. Based on the above, the staff concludes that proposed Condition B is acceptable.

3. Proposed CONDITION C relates to the level of the electrolyte in a cell (cells) less than a minimum established design limit. If the level is above the top of the battery plates, but below the minimum limit, the battery still has sufficient capacity and is not considered inoperable. With electrolyte level below the top of the plates, there is a potential for dryout and plate degradation. Required Actions C.1 and C.2 restore the level and ensure that the cause of the loss of electrolyte level is not due to a leak in the battery casing. These actions are only required if the level in the battery is found below the top of the battery plates. The staff finds these actions adequate to ensure minimum electrolyte levels will be maintained.

In addition, the Battery Monitoring and Maintenance Program described in proposed TS Section 5.5.17 would require action, based on IEEE Standard 450-1995, to equalize and test battery cells that have been discovered with an electrolyte level below the minimum established level limit. Based on the above evaluation, the staff concludes that proposed Condition C is acceptable.

4. Proposed CONDITION D applies to a battery found with a pilot cell electrolyte temperature less than the minimum established design limit. A low electrolyte temperature limits the current and power available. Because the battery is sized with an adequate margin to perform its intended functions as stated in the Byron and Braidwood UFSAR, the staff finds that the proposed 12-hour completion time is reasonable to restore the battery electrolyte temperature. Therefore, the staff concludes that the proposed change is acceptable.
5. Proposed CONDITION E relates to batteries with battery parameters not within limits. If this condition exists, there is not sufficient assurance that the battery capacity has not been affected. There is the possibility that the batteries involved will not be able to perform their intended function. Byron and Braidwood stations have only one battery per division. With two batteries with an out-of-limit parameter, loss of function for multiple systems that depend upon the batteries is possible. Thus, the licensee proposes that battery parameters be restored to within limits on at least one division within 2 hours. Based on its review, the staff concludes that this proposal is reasonable for assuring safety, and is acceptable.

6. Renumbered CONDITION F (from current CONDITION B) for one or more batteries with battery parameters outside the allowance of the Required Action for CONDITION A, B, C, D, or E indicates that sufficient capacity to supply the maximum expected load requirement is not assured, or if one battery with one or more cells with float voltage < 2.07V and float current > 3 amps, the corresponding DC battery must be declared inoperable immediately. The staff considers this change is reasonable, and therefore is acceptable.

In addition to the above proposed Conditions added to LCO 3.8.6, the licensee also proposed the following revision to SRs associated with LCO 3.8.6. Current SR 3.8.6.1, SR 3.8.6.2 and SR 3.8.6.3 are deleted and replaced by the following new SRs, SR 3.8.6.1, SR 3.8.6.2, SR 3.8.6.3, SR 3.8.6.4, SR 3.8.6.5, and SR 3.8.6.6 with a new NOTE "Not required to be met when battery terminal voltage is less than the minimum established float voltage of SR 3.8.4.1."

SR 3.8.6.1 requires verification that float current for each battery is less than or equal to 3 amps every 7 days. The float current indicates the battery conditions. These current requirements are based on a fully-charged battery. These are consistent with IEEE 450 and manufacturer's recommendations, and are acceptable to the staff as explained previously in this SE. SR 3.8.6.2 requires verification that pilot cell voltage for each battery is greater than or equal to 2.07 volts every 31 days. SR 3.8.6.5 requires verification that connected cell voltage for each battery is greater than or equal to 2.07 volts every 92 days. A voltage of 2.07 volts represents the minimum voltage at which battery operability is assured. The surveillance frequency and minimum established design limits for optimal long-term battery performance are based on operational experience, and are acceptable to the staff. SR 3.8.6.3 requires verification that connected cell electrolyte level for each battery is greater than or equal to minimum established design limits every 31 days. SR 3.8.6.4 requires verification that the temperature of each battery pilot cell is greater than or equal to the minimum established design limits every 31 days. The design limits will be provided in TS 5.5.17 "Battery Monitoring and Maintenance Program." The program is based on IEEE 450-1995, and the staff concludes that this is reasonable to achieve safe conditions and is acceptable. SR 3.8.6.6 is a relocated item from current SR 3.8.4.8, and thus is an administrative change. The staff finds the above SRs are designed to maintain battery parameters within acceptable limits and to ensure availability of the required DC power to shut down the reactor and to maintain it in a safe condition after an anticipated operational occurrence or a postulated DBA and therefore, are acceptable.

Proposed Changes to TS 3.8.8

- TS LCO 3.8.8 is revised to require only two inverters during shutdown conditions. Condition A is revised to read: "One or more required inverters inoperable."

The proposed changes revise TS 3.8.8 to require only one DC electrical power subsystem and two inverters during shutdown conditions. This option to require only one DC electrical power subsystem and two inverters during shutdown conditions applies to plants having a pre-ITS licensing basis for electrical power requirements during shutdown conditions that required only one DC electrical power subsystem and two inverters to be operable. Each of the four AC instrument buses (i.e., 2 per division) is normally supplied AC electrical power by a dedicated inverter at the Braidwood and Byron Stations. At these plants, the pre-ITS licensing basis for electrical power requirements during shutdown conditions specified only one DC electrical se

power subsystem and two inverters to be operable. Based on this review, the staff finds the changes are acceptable since these changes are consistent with the Byron and Braidwood current licensing basis and TSTF-204, Revision 3, for ensuring reliable DC power supply during plant shutdown. In addition, the licensee is implementing NUMARC 91-06, "Guidelines for Industry Actions to Assess Shutdown Management," as an industry initiative to manage shutdown tasks and associated electrical support to maintain risk at an acceptable low level.

Proposed Changes to TS Section 5.5

- A TS 5.0 Administrative Controls program (i.e., TS 5.5.17, Battery Monitoring and Maintenance Program) is created and references actions for battery cell float voltage and electrolyte level.

The staff reviewed the licensee proposed change to add a new program for the maintenance and monitoring of batteries. This program will have elements relocated from the different affected TS. The licensee stated that the program will be based on the recommendations of IEEE Standard 450-1995. The program is covered in the TS as follows:

5.5.17 Battery Monitoring and Maintenance Program

This program provides for battery monitoring and maintenance, based on the recommendations of IEEE Standard 450-1995, "IEEE Recommended Practice for Maintenance, Testing, and Replacement of Vented Lead-Acid Batteries for Stationary Applications," including the following:

- a. Actions to restore battery cells with float voltage less than 2.13 V,
and
- b. Actions to equalize and test battery cells that had been discovered with electrolyte level below the minimum established design limit.

The parameter values will continue to be controlled at their current level and actions will be implemented in accordance with the plant corrective action program. The changes associated with the new Battery Maintenance and Monitoring Program will ensure that the batteries are maintained in a highly reliable condition.

Based on the above, the staff finds the proposed change maintains compliance with requirements governing the design and operation of the DC electrical power system, provides adequate assurance of system operability, and therefore, is acceptable.

As stated in proposed changes to relocate Preventive Maintenance SR 3.8.4.2, SR 3.8.4.3, SR 3.8.4.4, and SR 3.8.4.5 above, to a licensee-controlled program, all proposed items to be relocated will be contained within this new program, which will be included in the Byron and Braidwood Station UFSAR, either directly, or in the Operations Requirements Manual, which is incorporated in the UFSAR by reference. This will make all changes to the program subject to review under 10 CFR 50.59, "Changes, tests, and experiments," to determine if the proposed changes will require prior NRC review and approval, and will require reporting of all changes to

the NRC in accordance with 10 CFR 50.71(e), "Maintenance of records, making of reports." The staff concludes that this provides sufficient regulatory control of the program and is acceptable.

Also, the staff reviewed licensee plant justifications for adopting the various elements of TSTF-360 for consistency with the revised wording in the Bases submitted by the licensees and with the Bases of the TSTFs. The associated Bases in the licensee's March 8, 2002, submittal were reviewed against those Bases that were accepted by the staff during the review of TSTF-360, Revision 0, and TSTF-360, Revision 1 [submitted by NEI on behalf of the industry on February 4, 2000, and November 6, 2000, respectively.] The staff finds the proposed Bases to be consistent with those of the TSTF 360 bases.

3.2 Summary

The staff has reviewed proposed changes to revise the following TS items for Byron Units 1 and 2 and Braidwood Units 1 and 2: TSs 3.8.4, "DC Sources-Operating," 3.8.5, "DC Sources-Shutdown," 3.8.6, "Battery Cell Parameters," and 3.8.8, "Inverters-Shutdown." The changes also include adding new item 5.5.17 to TS Section 5.5, and associated revised Bases pages based on information, guidance, and applicable regulatory requirements from TSTF-360, Revision 1, TSTF-204, Revision 3, and NUREG-1431 Revision 2, 10 CFR 50.36(c)(2)(ii) and 10 CFR 50.65. The changes are related to the conditions, required actions, completion time and surveillance requirements of the batteries, the battery chargers, and the DC electrical power subsystem, and the proposed relocation of the following TS items to a licensee-controlled program: (a) a number of SRs that require the performance of preventive maintenance, and (b) TS Table 3.8.6-1, "Battery Cell Parameter Requirements." The staff finds the proposed changes technically acceptable in accordance with the regulations and, therefore, are acceptable. In addition, the changes are consistent with NUREG-1431 Revision 2, "Standard Technical Specifications, Westinghouse Plants, PWR," TSTF-360, Revision 1, "DC Electrical Rewrite," and TSTF-204, Revision 3, "Revise DC Sources – Shutdown and Inverter – Shutdown."

4.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Illinois State official was notified of the proposed issuance of the amendment. The State official had no comments.

5.0 ENVIRONMENTAL CONSIDERATION

The amendments change a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and change the surveillance requirements. The NRC staff has determined that the amendments involve no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendments involve no significant hazards consideration, and there has been no public comment on such finding (67 FR 34485). Accordingly, the amendments meet the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendments.

6.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above, that: (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 amendments will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributors: N. Le and S. Saba

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