



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 145 TO FACILITY OPERATING LICENSE NO. DPR-19,
AMENDMENT NO. 139 TO FACILITY OPERATING LICENSE NO. DPR-25,
AMENDMENT NO. 167 TO FACILITY OPERATING LICENSE NO. DPR-29,
AND AMENDMENT NO. 163 TO FACILITY OPERATING LICENSE NO. DPR-30

COMMONWEALTH EDISON COMPANY

AND

MIDAMERICAN ENERGY COMPANY

DRESDEN NUCLEAR POWER STATION, UNITS 2 AND 3
QUAD CITIES NUCLEAR POWER STATION, UNITS 1 AND 2
DOCKET NOS. 50-237, 50-249, 50-254 AND 50-265

1.0 INTRODUCTION

By letter dated September 15, 1995, Commonwealth Edison Company (ComEd, the licensee) submitted an amendment resolving some of the open items from previous amendments to upgrade sections of the Dresden Nuclear Power Station, Units 2 and 3, and the Quad Cities Nuclear Power Station, Units 1 and 2, Technical Specifications (TS). The changes have been requested as part of their Technical Specification Upgrade Program (TSUP).

As a result of findings by a Diagnostic Evaluation Team inspection performed by the NRC staff at the Dresden Nuclear Power Station in 1987, ComEd made a decision that both the Dresden Nuclear Power Station and sister site Quad Cities Nuclear Power Station, needed attention focused on the existing custom TS used at the sites.

The licensee made the decision to initiate a TSUP for both Dresden and Quad Cities. The licensee evaluated the current TS for both stations against the Standard Technical Specifications (STS), contained in NUREG-0123, "Standard Technical Specifications General Electric Plants BWR/4, Revision 4." Both Dresden and Quad Cities are BWR-3 designs and are nearly identical plants. The licensee's evaluation identified numerous potential improvements such as clarifying requirements, changing the TS to make them more understandable and to eliminate the need for interpretation, and deleting requirements that are no longer considered current with industry practice. As a result of the evaluation, ComEd elected to upgrade both the Dresden and Quad Cities TS to the STS contained in NUREG-0123.

The TSUP for Dresden and Quad Cities is not a complete adoption of the STS. The TSUP focuses on (1) integrating additional information such as equipment operability requirements during shutdown conditions, (2) clarifying requirements such as limiting conditions for operations and action statements utilizing STS terminology, (3) deleting superseded requirements and modifications to the TS based on the licensee's responses to Generic Letters (GL), and (4) relocating specific items to more appropriate TS locations.

The application dated September 15, 1995, proposed to resolve some of the items left open in previous TSUP amendments issued for Dresden and Quad Cities.

The staff reviewed the proposed changes and evaluated all deviations and changes between the proposed TS, the STS and the current TS. In no case did the licensee propose a change in the TS that would result in the relaxation of the current design requirements as stated in the Updated Final Safety Analysis Reports (UFSAR) for Dresden or Quad Cities.

In response to the staff's recommendations, the licensee submitted identical TS for Quad Cities and Dresden except for plant-specific equipment and design differences. Technical differences between the units are identified as appropriate in the proposed amendment.

2.0 EVALUATION

Review Guidelines - The licensee's purpose for the TSUP was to reformat the existing Dresden and Quad Cities TS into the easier to use STS format. Plant specific data, values, parameters, and equipment specific operational requirements contained in the current TS for Dresden and Quad Cities were retained by the licensee in the TSUP.

The STS contained in NUREG-0123 were developed by the NRC and industry because of the shortcomings associated with the custom TS which were issued to plants licensed in early 1970's (i.e., Dresden (1971) and Quad Cities (1972)). The STS developed by the NRC and industry provided an adequate level of protection for plant operation by assuring required systems are operable and have been proven to be able to perform their intended functions. The limiting conditions for operation (LCO), the allowed out-of-service times, and the required surveillance frequencies were developed based on industry operating experience, equipment performance, and probabilistic risk assessment analysis during the 1970's. The STS were used as the licensing basis for plants licensed starting in the late 1970's.

For the most part, ComEd's adoption of the STS resulted in more restrictive LCOs and surveillance requirements (SR). In some cases, however, the STS provides relief from the Dresden and Quad Cities current TS requirements. In all these cases, the adoption of the STS requirements for LCOs or SRs do not change the current design requirements of either plant as described in each plant's UFSAR. In addition, the success criteria for the availability

and operability of all required systems contained in the current TS are maintained by the adoption of the STS guidelines in the proposed TSUP TS.

In addition to adopting the STS guidelines in the TSUP, ComEd has also evaluated GLs concerning line item improvements for TS. These GLs were factored into TSUP to make the proposed TS in the TSUP reflect industry lessons learned in the 1980's and early 1990's.

Deviations between the proposed specifications, the STS and the current TS were reviewed by the staff to determine if they were due to plant specific features or if they posed a technical deviation from the STS guidelines. Plant specific data, values, parameters and equipment specific operational requirements contained in the current TS for Dresden and Quad Cities were retained by the licensee in the upgraded TS.

Administrative Changes - Non-technical, administrative changes were intended to incorporate human factor principles into the form and structure of the STS so that they would be easier for plant operation's personnel to use. These changes are editorial in nature or involve the reorganization or reformatting of requirements without affecting technical content of the current TS or operational requirements. Every section of the proposed TS reflects this type of change.

More Restrictive Requirements - The proposed TSUP TS include certain more restrictive requirements than are contained in the existing TS. Examples of more restrictive requirements include the following: placing an LCO on plant equipment which is not required by the present TS to be operable; adding more restrictive requirements to restore inoperable equipment; and adding more restrictive SR.

Less Restrictive Requirements - The licensee provided a justification for less restrictive requirements on a case-by-case basis as discussed in this SE. When requirements have been shown to provide little or no safety benefit, their removal from the TS may be appropriate. In most cases, these relaxations had previously been granted to individual plants on a plant-specific basis as the result of (a) generic NRC actions, and (b) new NRC staff positions that have evolved from technological advancements and operating experience.

The Dresden and Quad Cities plant designs were reviewed to determine if the specific design basis was consistent with the STS contained in NUREG-0123. All changes to the current TS and deviations between the licensee's proposed TS and the STS were reviewed by the staff for acceptability to determine if adequate justification was provided (i.e., plant specific features, retention of existing operating values, etc.).

Deviations the staff finds acceptable include: (1) adding clarifying statements, (2) incorporating changes based on GLs, (3) reformatting multiple steps included under STS action statements into single steps with unique identifiers, (4) retaining plant specific steps, parameters, or values,

(5) moving action statements within a TS, (6) moving action statements from an existing TS to form a new TS section, and (7) omitting the inclusion of STS steps that are not in existing TS.

Relocation of Technical Specifications - The proposed TS may include the relocation of some requirements from the TS to licensee-controlled documents. Section 182a of the Atomic Energy Act requires applicants for nuclear power plant operating licenses to state TSs to be included as part of the license. The Commission's regulatory requirements related to the content of TS are set forth in 10 CFR 50.36. That regulation requires that the TS 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 TS.

The Commission has provided guidance for the contents of TS in its "Final Policy Statement on Technical Specification Improvements for Nuclear Power Reactors" ("Final Policy Statement"), 58 FR 39132 (July 22, 1993), in which the Commission indicated that compliance with the Final Policy Statement satisfies Section 182a of the Act. In particular, the Commission indicated that certain items could be relocated from the TS to licensee-controlled documents, consistent with the standard enunciated in *Portland General Electric Co.* (Trojan Nuclear Plant), ALAB-531, 9 NRC 263, 273 (1979). In that case, the Atomic Safety and Licensing Appeal Board indicated that "technical specifications are to be reserved for those matters as to which the imposition of rigid conditions or limitations upon reactor operation is deemed necessary to obviate the possibility of an abnormal situation or event giving rise to an immediate threat to the public health and safety."

Consistent with this approach, the Final Policy Statement identified four criteria to be used in determining whether a particular matter is required to be included in the TS, as follows: (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 a 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; (4) a structure, system, or component which operating experience or probabilistic safety assessment has shown to be significant to public health and safety. As a result, existing TS requirements which fall within or satisfy any of the criteria in the Final Policy Statement must be retained in the TS, while those TS requirements which do not fall within or satisfy these criteria may be relocated to other, licensee-controlled documents. The Commission recently amended 10 CFR 50.36 to codify and incorporate these four criteria (60 FR 36953). The change to 10 CFR 50.36 was effective as of August 18, 1995.

3.0 EVALUATION

The following sections provide the staff's evaluation of the TS changes reflected in the licensee's proposed resolution of some TSUP open items. These proposed TS changes incorporate the guidelines of STS and requirements from current TS for both Dresden and Quad Cities. The proposed TS has been reformatted based on STS guidelines. Plant specific values for the listed parameters are included to be consistent with each station's UFSAR. Deviations between the proposed TS and current TS and between the proposed TS and STS are discussed below.

3.1 Section 3/4.10.F

In an SE dated June 23, 1995, the staff stated: "Proposed TS Section 3/4.10.F, 'Crane Travel,' has been left as an open item. The licensee will re-submit this section in the clean-up package and will include the current Dresden TS Section 3/4.10.H, 'Loads Over Spent Fuel Storage Pool' requirements for both Dresden and Quad Cities. The current TS Section 3/4.10.F, 'Spent Fuel Cask Handling' will be relocated to administrative controls. The revised TSUP Section 3/4.10.F will be based on STS Section 3/4.9.7 and will incorporate the loadings of the current TS requirements (loads no heavier than the weight of a single fuel assembly and handling tool). These changes will be left as an open item, contingent upon their review and approval in the TSUP clean-up package."

By letter dated September 15, 1995, the licensee provided justification for not incorporating Dresden Custom TS Section 3/4.10.H; however, it did not justify the removal of Custom TS Section 3/4.10.F, "Spent Fuel Cask Handling." This will remain an open item to be addressed in a subsequent clean-up package. Bases pages B3/4.10-2 will also be held open for resolution of TS Section 3/4.10.F.

3.2 Section 4.10.B.3

In an SE dated June 23, 1995, the staff stated: "Proposed TS 4.10.B.3 contains a new footnote (c) which allows for an SRM count rate of 0.7 counts per second (cps) provided the signal-to-noise ratio is ≥ 2.0 . This has been left as an open item. The inclusion of the provision would represent a relaxation of the current Dresden and Quad Cities TS. The licensee is currently reviewing this footnote and it will remain an open item contingent upon its review and approval in the clean up package."

The licensee has removed note c from the proposed TS 4.10.B.3. The revised TS is consistent with the current Dresden and Quad Cities TS and is, therefore, acceptable.

3.3 Section 1.0

In an SE dated February 16, 1995, the staff stated: "During the staff's review of TSUP Section 1.0 it was noted that the licensee did not incorporate

the STS definition for Reactor Protection System (RPS) response time testing. In subsequent discussions with the licensee, the licensee committed to resolve the staff's concern in a future TSUP application."

The licensee has incorporated an existing definition from Section 3.1.A of the Dresden and Quad Cities current TS as a definition for RPS response time in TSUP Section 1.0. This meets the current licensing basis for Dresden and Quad Cities and the staff finds this acceptable.

3.4 Section 5.1

In an SE dated June 14, 1995, the staff stated: "Proposed TSUP Section 5.1, 'Site,' incorporates the guidelines of STS Section 5.1 and all existing TS requirements from Section 5.1 for both Dresden and Quad Cities. Plant-specific Figures 5.1.B-1, Low Population Zone, are consistent with the safety analysis for the plant. The proposed Figures 5.1.B-1 provided in the December 15, 1993, submittal were unclear. This item is left as an open item contingent upon correction in the TSUP cleanup amendment. In addition, the licensee did not include the STS figure concerning the exclusion area. This item is also left as an open item. Based on discussions between the NRC staff and ComEd, Figure 5.1.A-1 for the Exclusion Area will be added in the cleanup amendment. The location and/or description of the Meteorological Tower will be added to Figure 5.1.A-1."

The current TS for Dresden and Quad Cities Stations includes the Low Population and Exclusion Area Maps. However, this type of information is contained in the UFSAR. Therefore, the licensee has deleted the proposed Low Population and Exclusion Area maps and has updated the site description of the current TS to include the exclusion area. The proposed textual descriptions more appropriately control any changes and sufficient details relating to these features exists in the LCO's. More detailed information is included in the Offsite Dose Calculation Manual (ODCM). The staff has determined that the requirements for these maps are not required to be in the TS under 10 CFR 50.36 or Section 182a of the Atomic Energy Act. Further, they do not fall within any of the four criteria discussed in Section 2.0, above. This type of information is more appropriate in the UFSAR and meets the present staff recommendations and, therefore, it is acceptable.

3.5 Section 1.0 and 3/4.0

In letter dated February 16, 1995, the staff approved TSUP Sections 1.0 and 3.0/4.0 through Amendment Nos. 152 and 148 for Quad Cities, Units 1 and 2, respectively. In this letter it was stated that, "This license amendment is effective as of the date of issuance and shall be implemented no later than December 31, 1995." By letter dated September 15, 1995, the licensee requested that the implementation date be extended to June 30, 1996, for Quad Cities. These amendments should be implemented along with the other approved TSUP section amendments which shall be implemented no later than June 30, 1996. This request to change the implementation date for Amendment Nos. 152 and 148 is administrative in nature and is, therefore, acceptable.

3.6 Section 3/4.4

In an SE dated June 8, 1995, the staff stated that the proposed TS 4.4.A.3 requires the standby liquid control pumps be tested pursuant to TS Section 4.0.E which specifies that test frequencies be as specified by Section XI of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code. However, the SE also stated that current frequency of 31 days would not change. The proposed TSUP requirements imposes the Code frequency of 92 days. The current Inservice Testing (IST) program would replace the monthly frequency with quarterly tests as approved by the NRC. The licensee's submittal of October 15, 1992, related to Section 3/4.4 of the TSUP, indicated that the test frequency would be increased from 31 to 92 days. These quarterly tests are currently used at Dresden and Quad Cities as well as at other facilities with similar standby liquid control systems and have adequately demonstrated system performance. This change is therefore acceptable.

The IST program is based on the requirements of 10 CFR 50.55a which provides controls to assure these tests are adequately tested. Based upon previous NRC approval of the IST program, the staff finds that sufficient regulatory controls exist under 10 CFR 50.55a to assure continued protection of the public health and safety, therefore, the TS change is acceptable.

3.7 Open Items

The following should be left as an open item, contingent upon its approval at a later date.

- Deletion of TS 3/4.10.F

3.8 Technical Specification Bases

The staff has reviewed TSUP TS Bases page B3/4.10-1 change and has found it acceptable.

3.9 Conclusion

The staff has reviewed all deviations between the STS guidelines and the proposed TS and the relaxation of current requirements. The staff has determined that the relaxations are consistent with plant design requirements and adequate justification has been provided to support these deviations. Therefore, the staff finds the proposed amendment changes for TSUP amendment open items acceptable.

4.0 STATE CONSULTATION

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

5.0 ENVIRONMENTAL CONSIDERATION

The amendments change a requirement with respect to the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and change 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 effluent 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 (60 FR 52220). 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 Contributor: R. Pulsifer

Date: December 19, 1995

December 19, 1995

The application dated September 15, 1995, contains some of the TSUP open items from previous Dresden and Quad Cities TS amendments issued by the NRC.

The review guidance to be used by the NRC staff in the review of the TSUP is described in Section 2.0 of the enclosed Safety Evaluation (SE). The staff reviewed the proposed changes and evaluated all deviations and changes between the proposed TS, the STS and the current TS.

Based on discussions between ComEd and the staff, it has been mutually agreed upon that the NRC will review the sections of TSUP as they are submitted and provide ComEd an amendment for each submittal. This amendment closes open items from the amendments that ComEd will submit after September 15, 1995. It is our understanding that ComEd will close the remaining open items. The applicable TSUP TS will be issued with each amendment and will become effective no later than June 30, 1996.

The Notice of Issuance will be included in the Commission's biweekly Federal Register notice.

Sincerely,

Original signed by:

John F. Stang, Senior Project Manager
Project Directorate III-2
Division of Reactor Projects - III/IV
Office of Nuclear Reactor Regulation

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- Enclosures:
1. Amendment No. 145 to DPR-19
 2. Amendment No. 139 to DPR-25
 3. Amendment No. 167 to DPR-29
 4. Amendment No. 163 to DPR-30
 5. Safety Evaluation

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Based on discussions between ComEd and the staff, it has been mutually agreed upon that the NRC will review the sections of TSUP as they are submitted and provide ComEd an amendment for each submittal. This amendment closes open items from the amendments that had been issued as of September 15, 1995. It is our understanding that ComEd will submit another application after issuance of the remaining amendments to close the remaining open items. The applicable TSUP TS will be issued with each amendment and will become effective no later than June 30, 1996.

The Notice of Issuance will be included in the Commission's biweekly Federal Register notice.

Sincerely,

Original signed by:

John F. Stang, Senior Project Manager
Project Directorate III-2
Division of Reactor Projects - III/IV
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