



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NO. 201 TO FACILITY OPERATING LICENSE NO. NPZ-3  
TOLEDO EDISON COMPANY  
CENTERIOR SERVICE COMPANY  
AND  
THE CLEVELAND ELECTRIC ILLUMINATING COMPANY  
DAVIS-BESSE NUCLEAR POWER STATION, UNIT NO. 1  
DOCKET NO. 50-346

1.0 INTRODUCTION

By letter dated June 23, 1995, the Toledo Edison Company, Centerior Service Company, and the Cleveland Electric Illuminating Company (the licensees), submitted a request for changes to the Davis-Besse Nuclear Power Station (DBNPS) Technical Specifications (TS). By facsimile transmission dated October 31, 1995, the licensee transmitted a revised TS page to reflect a clarification to the amendment application. The clarification was the result of telephone conversation with the staff, as discussed in the evaluation below, and were not outside the scope of the original no significant hazards determination. The requested amendment would relocate TS 3/4.3.3.3, "Seismic Instrumentation;" TS 3/4.3.3.4, "Meteorological Instrumentation;" and TS 3/4.4.11, "Reactor Coolant System Vents;" and the Bases for each of these three TS sections from the TS to the Updated Safety Analysis Report (USAR), and eliminates the special reporting requirements for inoperable seismic and meteorological monitoring instrumentation from TS 6.9.2.

2.0 BACKGROUND

Section 182a of the Atomic Energy Act (the "Act") requires applicants for nuclear power plant operating licenses to include TS 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 Specifications 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. These criteria were subsequently incorporated into the regulations by an amendment to 10 CFR 50.36, 60 CFR 36953 (July 19, 1995). The criteria incorporated into the rule are 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 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;
- (4) a structure, system, or component which operating experience or probabilistic safety assessment has shown to be significant to public health and safety.<sup>1</sup>

As a result, existing TS requirements which fall within or satisfy any of the criteria 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.

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<sup>1</sup> The Commission recently adopted amendments to 10 CFR 50.36, pursuant to which the rule was revised to codify and incorporate these criteria. See Final Rule, "Technical Specifications," 60 FR 36953 (July 19, 1995). The Commission indicated that reactor core isolation cooling, isolation condenser, residual heat removal, standby liquid control, and recirculation pump trip systems are to be included in the Technical Specifications under Criterion 4, although it recognized that other structures, systems and components could also meet this criterion, 60 FR 36956.

### 3.0 EVALUATION

#### 3/4.3.3.3 Seismic Monitoring Instrumentation

Section VI(a)(3) of Appendix A to 10 CFR Part 100, requires that seismic monitoring instrumentation be provided to promptly determine the response of those nuclear power plant features important to safety in the event of an earthquake. This capability is required to allow for a comparison of the measured response to that used in the design basis for the unit. Comparison of such data is needed to (1) determine whether the plant can continue to be operated safely, and (2) permit such timely action as may be appropriate. The requirements do not address the need for seismic monitoring instrumentation that would automatically shut down the plant when an earthquake occurs which exceeds a predetermined intensity. The licensee has proposed to relocate these provisions to the USAR such that future changes to the operation and surveillance of the seismic monitoring instrumentation could be changed under 10 CFR 50.59.

The capability of the plant to withstand a seismic event or other design-basis accident is determined by the initial design and construction of systems, structures, and components. The instrumentation is used to alert operators to the seismic event and evaluate the plant response. The Final Policy Statement explained that instrumentation to detect precursors to reactor coolant pressure boundary leakage, such as seismic instrumentation, is not included in the first criterion (58 FR 39137). As discussed above, the seismic instrumentation does not serve as a protective design feature or part of a primary success path for events which challenge fission product barriers.

Accordingly, the staff has concluded that the requirements for seismic monitoring instrumentation do not meet the 10 CFR 50.36 criteria for inclusion in the TS. In addition, the staff finds that sufficient regulatory controls exist under 10 CFR 50.59 to assure continued protection of public health and safety. The limiting conditions for operation and surveillance requirements for seismic monitoring instrumentation may be removed from the standard technical specifications.

#### 3/4.3.3.4 Meteorological Instrumentation

The meteorological instrumentation is used to measure environmental parameters (wind direction, speed, and air temperature differences) which may affect the distribution of radioactive effluents following a release of radioactive material. In 10 CFR 50.47, "Emergency Plans," and 10 CFR Part 50, Appendix E, "Emergency Planning and Preparedness for Production and Utilization Facilities," the Commission requires power plant licensees to provide reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency. Timely access to accurate local meteorological data is important for estimating potential radiation doses to the public and for determining appropriate protective measures. In 10 CFR 50.36a(a)(2), the Commission requires nuclear power plant licensees to submit annual reports specifying the quantity of each of the principal radionuclides released to unrestricted areas in liquid and airborne effluents and such other information as may be required by the NRC to estimate maximum potential annual radiation doses to the public. A knowledge of meteorological

conditions in the vicinity of the reactor is important in providing a basis for estimating annual radiation doses resulting from radioactive materials released in airborne effluents. Accordingly, the meteorological monitoring instrumentation serves a useful function in estimating radiation doses to the public from either routine or accidental releases of radioactive materials to the atmosphere. The licensee has proposed to relocate these provisions to the USAR such that future changes to the operation and surveillance of the meteorological monitoring instrumentation could be changed under 10 CFR 50.59. The meteorological monitoring instrumentation does not serve a primary protective function so as to warrant inclusion in the TS in accordance with the criteria of the Final Policy Statement. The instrumentation does not serve to ensure that the plant is operated within the bounds of initial conditions assumed in design basis accident and transient analyses or that the plant will be operated to preclude transients or accidents. Likewise, the meteorological instrumentation does not serve as part of the primary success path of a safety sequence analysis used to demonstrate that the consequences of these events are within the appropriate acceptance criteria.

Accordingly, the staff has concluded that the requirements for meteorological monitoring instrumentation do not meet the 10 CFR 50.36 criteria for inclusion in the TS. In addition, the staff finds that sufficient regulatory controls exist under 10 CFR 50.59 to assure continued protection of the public health and safety. The limiting conditions for operation and surveillance requirements for meteorological monitoring instrumentation may be removed from the standard technical specifications.

#### 3/4.4.11 Reactor Coolant System Vents

The reactor coolant vents described in this section do not include the pilot operated relief valve (PORV) which is included in TS section 3/4.4.3. The reactor coolant vents in TS 3/4.4.11 were installed to vent noncondensable gases and steam from the RCS that could inhibit natural circulation core cooling following any event involving a loss of offsite power and requiring long term cooling, such as a small-break loss-of-coolant accident (SBLOCA). The vent paths have restrictive orifices sized such that an inadvertent opening could not cause the reactor coolant system to depressurize when all pressurizer heaters are energized. Although available for use, the vents are not required to operate to mitigate any design basis accident or transient. The reactor coolant vents described in TS 3/4.4.11 do not serve a primary protective function so as to warrant inclusion in the TS in accordance with the criteria of the Final Policy Statement. The licensee has proposed to relocate these provisions to the USAR such that future changes to the operation and surveillance of the reactor coolant vents could be changed under 10 CFR 50.59.

The reactor coolant vents are not used to detect or indicate in the control room, a significant abnormal degradation of the reactor coolant system (RCS) pressure boundary. As described in USAR Section 6.3.3.1.4, "Discussion of Noncondensable Gases," DBNPS design basis events do not generate sufficient noncondensable gases to block natural circulation. The DBNPS SBLOCA analyses take credit for reflux cooling (coupled heat transfer from the RCS to the

steam generator secondary side) to keep the reactor cool in the event of an interruption of natural circulation due to the accumulation of steam in the RCS loop. Operation of the vents is not assumed in the USAR Chapter 15 safety analysis, as the vents are not part of the primary success path. Therefore, the vents do not serve to ensure that the plant is operated within the bounds of initial conditions assumed in design basis accident and transient analyses or that the plant will be operated to preclude transients or accidents. Likewise, the vents do not serve as part of the primary success path of a safety sequence analysis used to demonstrate that the consequences of these events are within the appropriate acceptance criteria. Results of the DBNPS probabilistic risk assessment (i.e. individual plant examination) indicate that the RCS vents are not significant in the mitigation of any design basis accident.

Accordingly, the staff has concluded that the requirements for the RCS vents currently described in TS 3/4.4.11 do not meet the 10 CFR 50.36 criteria for inclusion in the TS. In addition, the staff finds sufficient regulatory controls exist under 10 CFR 50.59 to assure continued protection of the public health and safety. The current TS that prescribes the control and testing of the RCS vents may be relocated to the USAR with no changes, and the valves will continue to be operated and tested in the same manner as currently specified.

#### 6.9.2 - Special Reports

The Special Reports section 6.9.2 of the TS currently requires reporting if either the seismic monitoring instrumentation or the meteorological monitoring instrumentation is inoperable. Since the licensee proposes to relocate both TS requirements for seismic monitoring instrumentation and meteorological monitoring instrumentation, the licensee proposes to eliminate the special reporting requirements. The licensee will evaluate the unavailability of both of these instrumentation systems in accordance with the reporting requirements of 10 CFR 50.72, "Immediate Notification Requirements for Operating Nuclear Reactors," and 10 CFR 50.73, "Licensee Event Report System." During staff review, it was noted that the reporting requirement, TS 6.9.2(d), which requires a report seismic event analysis, references TS 4.3.3.3.2. Since the licensee's request was to relocate TS 3/4.3.3.3, the staff communicated with the licensee. The licensee submitted a facsimile revising page 6-18, indicating TS 6.9.2(d) as "deleted."

Accordingly, the staff has concluded that eliminating the special reporting requirements is an administrative change that will be replaced by the reporting requirements of 10 CFR 50.72 and 10 CFR 50.73. This administrative change will have no effect on the health and safety of the public. Therefore, the staff finds this change acceptable.

In conclusion, these specific requirements for the seismic monitoring instrumentation, meteorological monitoring instrumentation system, and RCS vents, as currently described in TS 3/4.4.11, are not required to be in the TS under 10 CFR 50.36 or § 182a of the Atomic Energy Act, and are not required to obviate the possibility of an abnormal situation or event giving rise to an

immediate threat to the public health and safety. Further, they do not fall within any of the four criteria set forth in the Commission's Final Policy Statement and subsequently incorporated into 10 CFR 50.36. In addition, the staff finds that sufficient regulatory controls exist under 10 CFR 50.59 to address future changes to these requirements. Accordingly, the staff has concluded that these requirements may be relocated from the TS to the licensee's USAR.

#### 4.0 STATE CONSULTATION

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

#### 5.0 ENVIRONMENTAL CONSIDERATION

This amendment changes a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 or changes a surveillance requirement. The staff has determined that the amendment involves 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 amendment involves no significant hazards consideration and there has been no public comment on such finding (60 FR 39455). Accordingly, the amendment meets 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 amendment.

#### 6.0 CONCLUSION

The staff 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 this amendment will not be inimical to the common defense and security or to the health and safety of the public.

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