



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 64 TO FACILITY OPERATING LICENSE NO. NPF-63
CAROLINA POWER & LIGHT COMPANY
SHEARON HARRIS NUCLEAR POWER PLANT, UNIT 1
DOCKET NO. 50-400

1.0 INTRODUCTION

By letter dated October 24, 1994, as supplemented August 31, 1995, and February 8, 1996, Carolina Power & Light Company (the licensee or CP&L) submitted a request for changes to the Shearon Harris Nuclear Power Plant, Unit 1 (SHNPP) Technical Specifications (TS). The proposed amendment would revise the TS to allow the relocation of TS 3/4.3.3.4, Turbine Overspeed Protection; 3/4.3.7.12, Area Temperature Monitoring; and 3/4.11.2.6, Gas Storage Tanks; and the associated Bases in the TS to licensee-controlled documents. At your request, the proposed amendment was reviewed in different phases: (1) On December 6, 1994, you provided supplemental information for the turbine overspeed protection review, and on March 22, 1995, the staff issued Amendment No. 55 allowing the relocation of TS 3/4.3.3.4 to other licensee-controlled documents, (2) on July 21, 1995, you provided supplemental information for the area temperature monitoring review, and on August 28, 1995, the staff issued Amendment No. 62 allowing the relocation of TS 3/4.3.7.12 to other licensee-controlled documents.

On August 31, 1995, CP&L provided additional information regarding the relocation of TS 3/4.11.2.6, Gas Storage Tanks, and accordingly, this Safety Evaluation contains the staff's review of the proposed changes to TS 3/4.11.2.6. The August 31, 1995, and February 8, 1996, letters provided additional information to justify that the requirements for the gas storage tanks and associated Bases in the TS can be relocated to other licensee-controlled documents. The new information changed the scope of the original Federal Register notice and was re-noticed on May 8, 1996, but did not change the initial no significant hazards consideration determination.

2.0 BACKGROUND

Section 182a of the Atomic Energy Act (the "Act") requires that applicants for nuclear power plant operating licenses state TS and that these TS be included as a 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;

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(4) design features; and (5) administrative controls. It also states that the Commission may include such additional TS as it finds to be appropriate. However, the regulation does not specify the particular TS to be included in a plant's license.

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), issued on July 22, 1993 (58 FR 39132), 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, and 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 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.¹ As a result, the existing Limiting Condition for Operation (LCO) requirements that fall within or satisfy any of the criteria in the Final Policy Statement must be retained in the TS, while those LCO requirements which do not fall within or satisfy these criteria may be relocated to other appropriate licensee-controlled documents.

3.0 EVALUATION

3.1 TS 3/4.11.2.6, Gas Storage Tanks

In the submittal dated October 24, 1994, the licensee proposed to relocate TS 3/4.11.2.6, the limit on the quantity of radioactive material contained in the storage tanks and related surveillance requirements, to the Final Safety Analysis Report (FSAR) or other appropriate licensee-controlled documents. In the amendment application, the licensee also committed to maintain appropriate controls to ensure the current surveillance program requirements.

The gaseous waste processing system (GWPS) is designed to collect, process and store gaseous wastes generated due to plant operations, including anticipated operational occurrences. Accordingly, the system is designed to ensure that the release of gaseous effluents from the plant and expected offsite doses are as low as reasonably achievable (ALARA). The system consists mainly of a

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The Commission recently adopted an amendment 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 the reactor core isolation cooling, isolation condenser, residual heat removal, standby liquid control, and recirculation pump are included in the TS under Criterion 4, although it recognized that other structures, systems and components could also meet this criterion (60 FR 36956).



closed loop comprised of two waste gas compressors, two catalytic hydrogen recombiners, and 10 waste gas decay (storage) tanks to accumulate the fission product gases. The GWPS performs no function related to the safe shutdown of the plant and some system components are classified as non-nuclear safety; however, the waste gas tanks are of a vertical-cylindrical type, designed in accordance with the ASME Boiler and Pressure Vessel Code, Section III, and are constructed of carbon steel. Restricting the quantity of radioactivity contained in each gas storage tank provides assurance that in the event of an uncontrolled release of a tank's content, the resulting whole body exposure to a member of the public at the nearest site boundary will not exceed 0.5 rem.

In the August 31, 1995 supplemental letter, the licensee also stated that the GWPS conforms to the requirements of General Design Criterion (GDC) 60 by providing long-term holdup capacity, thus precluding the necessity of releasing radioactive effluents during unfavorable environmental conditions. The design of the GWPS is based on continuous operation of the plant assuming that one percent of the rated core power is generated by fuel rods containing cladding defects, and this condition is assumed to exist over the life of the plant. Additionally, gaseous effluent discharge paths are monitored for radioactivity for compliance with GDC 64. In order to control the release of radioactive gases resulting from equipment failure or operator error, the GWPS design has the waste gas decay tanks isolated from each other with valves.

The licensee further stated that the TS requirements for the current TS 3/4.11.2.6, "Gas Storage Tanks" will be relocated to plant procedure PLP-114, "Relocated Technical Specification Requirement," and in relocating the gas storage tanks to a plant procedure, the licensee will continue to maintain appropriate controls to ensure that the quantity of radioactivity contained in each gas storage tank is limited such that in the event of an uncontrolled release of a tank's contents, the resulting whole body dose to a member of the public at the nearest site boundary will not exceed 0.5 rem. Changes to this procedure, if necessary, will be subjected to the requirements of 10 CFR 50.59. In the February 8, 1996, supplemental letter, the licensee added Section 6.8.4.h.7.j, Gas Storage Tank Radioactivity Monitoring Program, to the TS. This TS section will administratively control the quantity of radioactivity contained in the gas storage tanks, is consistent with NUREG-1431, and therefore is acceptable. Accordingly, there is no need for a separate LCO for the gas storage tanks.

The staff reviewed information provided in the August 31, 1995, and February 8, 1996 supplemental letters, and concurs with the licensee that the requirements related to the gas storage tanks do not satisfy any of the final policy statement criteria which would necessitate that they be included in the TS. The gas storage tanks do not include instrumentation that is (1) used to measure parameters that are initial condition assumptions for a design basis accident or transient, or (2) used to detect a significant abnormal degradation of the reactor coolant pressure boundary, and (3) used to provide for mitigation of design basis events. Therefore, the requirements specified in these existing TS do not satisfy the criteria for TS, and will be relocated to other plant procedures, and controlled by 10 CFR 50.59.



The NRC staff also notes that the proposed relocation of TS 3/4.11.2.6 would make the SHNPP TS consistent with the guidance provided in the NRC's Standard Technical Specifications, Westinghouse Plants (NUREG-1431) in that the NRC's Standard Technical Specifications do not include TS requiring the operability of the gas storage tanks.

4.0 SUMMARY

On the basis presented above, the staff concludes that the requirements for gas storage tanks do not need to be controlled by TS and that changes to these requirements are adequately controlled by 10 CFR 50.59, "Changes, tests, and experiments." Should the licensee's determination conclude that an unreviewed safety question is involved, due to either (1) an increase in the probability or consequences of accidents or malfunctions of equipment important to safety, (2) the creation of a possibility for an accident or malfunction of a different type than any evaluated previously, or (3) a reduction in the margin of safety, NRC approval and a license amendment would be required prior to implementation of the change. NRC inspection and enforcement programs also enable the staff to monitor facility changes and licensee adherence to FSAR commitments and to take any remedial action that may be appropriate.

The staff has concluded, therefore, that relocation of TS 3/4.11.2.6 is acceptable because (1) their inclusion in TS is not specifically required by 10 CFR 50.36 or other regulations, (2) the requirements are not required to avert an immediate threat to the public health and safety, and (3) changes that are deemed to involve an unreviewed safety question will require prior NRC approval in accordance with 10 CFR 50.59(c).

The NRC staff has no objection to the deletion of the Bases associated with TS 3/4.11.2.6.

5.0 STATE CONSULTATION

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

6.0 ENVIRONMENTAL CONSIDERATION

The amendment changes 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 amendment involves 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 amendment involves no significant hazards consideration, and there has been no public comment on such finding (59 FR 60379 and 61 FR 20844). 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.

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

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