Public Service
Electric and Gas
Company

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SEP 04 1992

NLR-N92129

U.S. Nuclear Regulatory Commission
Document Control Desk
Washington, DC 20555

Gentlemen:

ACCEPTANCE CRITERIA FOR SELECTION OF FLOOR COVERING MATERIALS FOR SAFETY-RELATED PLANT EQUIPMENT ROOMS
SALEM GENERATING STATION
UNIT NOS. 1 AND 2
DOCKET NOS. 50-272 AND 50-311

On August 12, 1992, representatives of Public Service Electric & Gas (PSE&G) discussed with members of your staff (J. Stone, NRC Senior Project Manager for Salem and D. Notley, Fire Protection Staff Reviewer), clarification of the appropriate test methods and acceptance criteria to be used for selection of floor covering materials for use in safety-related plant areas. The purpose of this letter is to document our revised commitment, consistent with the understanding reached in our telephone conference, relative to fire protection acceptance standards applicable to floor covering materials.

As identified in the discussion, PSE&G had committed to the test method and acceptance criteria for interior finish materials provided in Appendix A to Branch Technical Position (BTP) APCSB 9.5-1. Specifically, Appendix A to BTP APCSB 9.5-1 established an acceptance of 25 for flame spread, fuel contribution and smoke developed for interior finish material used on walls, ceilings, and floors as tested per ASTM E-84. The ASTM E-84 test utilizes a ceiling configuration for all materials and as such would be considered to be conservative for flooring materials.

During the original Fire Protection Program review process for the Salem Units, the BTP was being revised. In BTP ASB 9.5-1, NRC revised the acceptance limit for flame spread to 50, eliminated the discussion of smoke developed rating, established a new acceptance criteria for fuel contribution (i.e. 3500 BTU/lb), and identified pre-approved applications for which

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acceptance testing was not required. The subsequent revision, BTP CMEB 9.5-1 removed the fuel contribution as a consideration while retaining all other requirements from BTP ASB 9.5-1. Throughout its evolution, the BTP has retained ASTM E-84 as the test method to be used.

In recent years, the focus for testing flooring materials has shifted to developing a test method which is more representative of the actual configuration in which the material will be used. The result was the development of NFPA 253/ASTM E-648 which models floor covering materials in a floor configuration. These new tests provide a measurement of the critical radiant flux for a given material. An acceptance criteria of $\geq$0.45 Watts/cm^2 is generally accepted by both building codes and insurance standards.

In letter dated January 27, 1992 (NLR-N91187), PSE&G had requested approval for use of NFPA 253 and/or ASTM E-648 as a basis for selection of floor covering materials in general, and specifically, for control room carpeting. This request was reviewed and approved by NRC in its letter dated March 23, 1992 for the specific installation of control room carpeting. During the August 12 phone conference, it was agreed that use of these test methods for floor covering materials, generically, was both appropriate and preferred by NRC.

PSE&G accepted this position with the clarification that material selection, based on ASTM E-84 results with a flame spread of $\leq$50, was also acceptable without further test. This clarification is required in order to avoid the need for additional testing where a particular vendor has not revised his testing program to include NFPA 253/ASTM E-648. Where a particular application requires initial/additional testing, PSE&G would require that the material be tested in accordance with NFPA 253/ASTM E-648 for a critical radiant heat flux of $\geq$0.45 Watts/cm^2. All other interior finish materials (i.e. walls and ceilings) will be tested in accordance with ASTM E-84 for a flame spread of $\leq$50. Additionally, PSE&G will require that all materials meet a smoke developed index of $\leq$450 which is also consistent with recognized building codes and insurance standards.

The information provided in the preceding paragraph represents our revised commitment to Paragraph 3.4.1.b of Appendix A to Branch Technical Position APCSB 9.5-1 as documented in correspondence dated September 14, 1977 and August 24, 1977 for Salem Units 1 and 2, respectively. In as much as, during the phone discussion involving this issue, on August 12, 1992, the NRC advised PSE&G that the previous staff review/approval of our request in the matter of control room carpeting could be extended

to other types of floor treatment, PSE&G believes that adequate prior approval has been provided.

If there are any questions relative to the information contained herein, we would be pleased to discuss them with you.

Sincerely,

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