



Carolina Power & Light Company
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New Hill NC 27562

James Scarola
Vice President
Harris Nuclear Plant

JUN - 2 2000

United States Nuclear Regulatory Commission
ATTENTION: Document Control Desk
Washington, DC 20555

SERIAL: HNP-00-092

SHEARON HARRIS NUCLEAR POWER PLANT
DOCKET NO. 50-400/LICENSE NO. NPF-63
REQUEST FOR LICENSE AMENDMENT
SUPPLEMENTAL INFORMATION - PRESSURE TEMPERATURE REQUIREMENTS

Dear Sir or Madam:

On April 12, 2000, Harris Nuclear Plant (HNP) submitted a proposed license amendment for a revision to the Technical Specifications (TS). The proposed amendment revises Technical Specifications (TS) 3/4.4.9.2 "Pressure/Temperature (P-T) Limits - Reactor Coolant System", and 3/4.4.9.4 "Overpressure Protection System", and associated Bases. Specifically, HNP proposed to revise the applicable TS to incorporate results of the Reactor Vessel Surveillance Program capsule analysis. Additionally, HNP requested an exemption to 10 CFR 50.60 (a), based on American Society of Mechanical Engineers (ASME) Code Case N-640 and WCAP-15315.

After further discussions with the staff, HNP is hereby withdrawing the request for an exemption to 10 CFR 50.60 (a) based on WCAP-15315. HNP continues to request an exemption to 10 CFR 50.60 (a), based on ASME Code Case N-640.

This supplemental information does not affect the conclusions of either the 10 CFR 50.92 evaluation or the Environmental Considerations submitted as part of HNP's April 12, 2000 letter.

Enclosure 1 contains the retyped TS pages which incorporate changes resulting from withdrawal of the exemption request based on WCAP-15315.

CP&L requests that the proposed amendment be issued such that implementation will occur within 60 days of issuance to allow time for procedure revision and orderly incorporation into copies of the Technical Specifications.

ADD1

Please refer any questions regarding this submittal to Mr. E. A. McCartney at (919) 362-2661.

Sincerely,

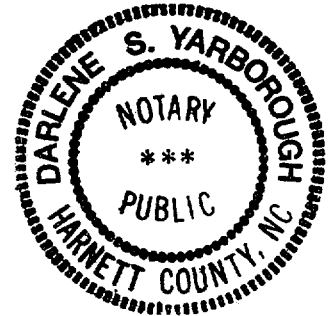
James Scarola

J. Scarola, having been first duly sworn, did depose and say that the information contained herein is true and correct to the best of his information, knowledge and belief, and the sources of his information are employees, contractors, and agents of Carolina Power & Light Company.

Darlene S. Yarbrough

Notary (Seal)

My commission expires: 2-21-2005



MSE/mse

- c: Mr. J. B. Brady, NRC Sr. Resident Inspector
- Mr. Mel Fry, Director, NC DEHNR
- Mr. R. J. Laufer, NRC Project Manager
- Mr. L. A. Reyes, NRC Regional Administrator

ENCLOSURE 1 TO SERIAL: HNP-00-092

SHEARON HARRIS NUCLEAR POWER PLANT
NRC DOCKET NO. 50-400/LICENSE NO. NPF-63
REQUEST FOR LICENSE AMENDMENT
SUPPLEMENTAL INFORMATION - PRESSURE TEMPERATURE REQUIREMENTS

TECHNICAL SPECIFICATION PAGES

REACTOR COOLANT SYSTEM

BASES

SPECIFIC ACTIVITY (Continued)

distinction between the radionuclides above and below a half-life of 15 minutes. For these reasons the radionuclides that are excluded from consideration are expected to decay to very low levels before they could be transported from the reactor coolant to the SITE BOUNDARY under any accident condition.

Based upon the above considerations for excluding certain radionuclides from the sample analysis, the allowable time of 2 hours between sample taking and completing the initial analysis is based upon a typical time necessary to perform the sampling, transport the sample, and perform the analysis of about 90 minutes. After 90 minutes, the gross count should be made in a reproducible geometry of sample and counter having reproducible beta or gamma self-shielding properties. The counter should be reset to a reproducible efficiency versus energy. It is not necessary to identify specific nuclides. The radiochemical determination of nuclides should be based on multiple counting of the sample within typical counting basis following sampling of less than 1 hour, about 2 hours, about 1 day, about 1 week, and about 1 month.

Reducing T_{avg} to less than 500°F prevents the release of activity should a steam generator tube rupture occur, since the saturation pressure of the reactor coolant is below the lift pressure of the atmospheric steam relief valves. The Surveillance Requirements provide adequate assurance that excessive specific activity levels in the reactor coolant will be detected in sufficient time to take corrective action. A reduction in frequency of isotopic analyses following power changes may be permissible if justified by the data obtained.

3/4.4.9 PRESSURE/TEMPERATURE LIMITS

ASME Code Case N-640,

The temperature and pressure changes during heatup and cooldown are limited to be consistent with the requirements given in the ASME Boiler and Pressure Vessel Code, Section XI, Appendix G, and 10 CFR 50 Appendix G and H. 10 CFR 50, Appendix G also addresses the metal temperature of the closure head flange and vessel flange regions. The minimum metal temperature of the closure flange region should be at least 120°F higher than the limiting RT NDT for these regions when the pressure exceeds 20% (621 psig for Westinghouse plants) of the preservice hydrostatic test pressure. For Shearon Harris Unit 1, the minimum temperature of the closure flange and vessel flange regions is 120°F because the limiting RT NDT is 0°F (see Table B 3/4 4-1). The Shearon Harris Unit 1 cooldown and heatup limitations shown in Figures 3.4-2 and 3.4-3 and Table 4.4-6 are not impacted by the 120°F limit.

1. The reactor coolant temperature and pressure and system cooldown and heatup rates (with the exception of the pressurizer) shall be limited in accordance with Figures 3.4-2 and 3.4-3 and Table 4.4-6 for the service period specified thereon:
 - a. Allowable combinations of pressure and temperature for specific temperature change rates are below and to the right of the limit lines shown. Limit lines for cooldown rates between those presented may be obtained by interpolation:
and

REACTOR COOLANT SYSTEM

BASES

SPECIFIC ACTIVITY (Continued)

distinction between the radionuclides above and below a half-life of 15 minutes. For these reasons the radionuclides that are excluded from consideration are expected to decay to very low levels before they could be transported from the reactor coolant to the SITE BOUNDARY under any accident condition.

Based upon the above considerations for excluding certain radionuclides from the sample analysis, the allowable time of 2 hours between sample taking and completing the initial analysis is based upon a typical time necessary to perform the sampling, transport the sample, and perform the analysis of about 90 minutes. After 90 minutes, the gross count should be made in a reproducible geometry of sample and counter having reproducible beta or gamma self-shielding properties. The counter should be reset to a reproducible efficiency versus energy. It is not necessary to identify specific nuclides. The radiochemical determination of nuclides should be based on multiple counting of the sample within typical counting basis following sampling of less than 1 hour, about 2 hours, about 1 day, about 1 week, and about 1 month.

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3/4.4.9 PRESSURE/TEMPERATURE LIMITS

The temperature and pressure changes during heatup and cooldown are limited to be consistent with the requirements given in the ASME Boiler and Pressure Vessel Code, Section XI, Appendix G, ASME Code Case N-640, and 10 CFR 50 Appendix G and H. 10 CFR 50, Appendix G also addresses the metal temperature of the closure head flange and vessel flange regions. The minimum metal temperature of the closure flange region should be at least 120°F higher than the limiting RT NDT for these regions when the pressure exceeds 20% (621 psig for Westinghouse plants) of the preservice hydrostatic test pressure. For Shearon Harris Unit 1, the minimum temperature of the closure flange and vessel flange regions is 120°F because the limiting RT NDT is 0°F (see Table B 3/4 4-1).

1. The reactor coolant temperature and pressure and system cooldown and heatup rates (with the exception of the pressurizer) shall be limited in accordance with Figures 3.4-2 and 3.4-3 and Table 4.4-6 for the service period specified thereon:
 - a. Allowable combinations of pressure and temperature for specific temperature change rates are below and to the right of the limit lines shown. Limit lines for cooldown rates between those presented may be obtained by interpolation; and

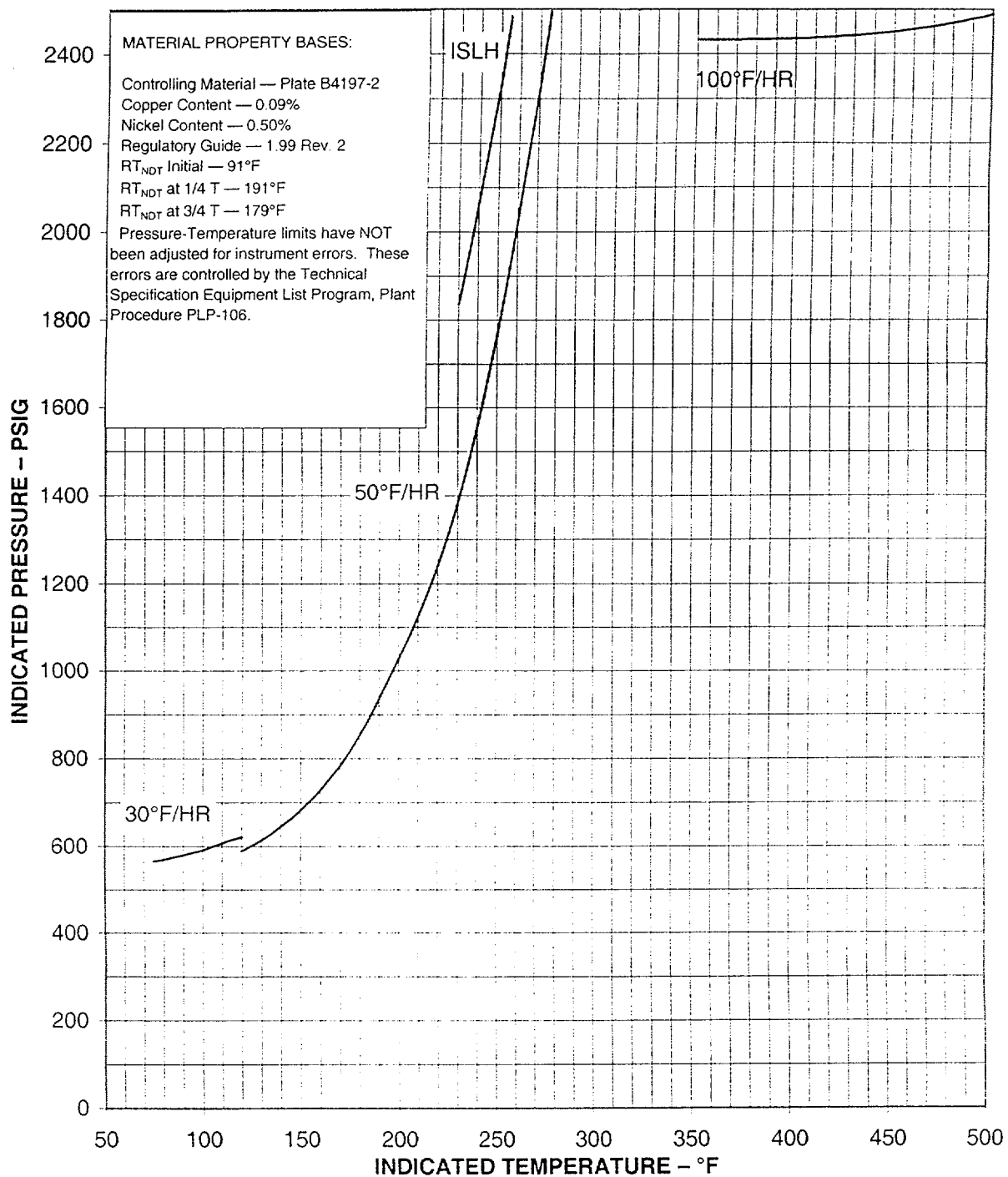


FIGURE 3.4-2
 REACTOR COOLANT SYSTEM
 COOLDOWN LIMITATIONS - APPLICABLE UP TO 36 EFPY