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

# SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

# REVIEW OF THE PRESSURE TEMPERATURE LIMITS REPORT AND METHODOLOGY FOR THE RELOCATION OF THE REACTOR COOLANT SYSTEM PRESSURE TEMPERATURE LIMITS

SOUTHERN NUCLEAR OPERATING COMPANY, INC.

JOSEPH M. FARLEY NUCLEAR PLANT, UNITS 1 AND 2

DOCKET NOS. 50-348 AND 50-364

## 1.0 INTRODUCTION

By letter dated July 23, 1997 (Reference 10), as supplemented by letters dated September 30 (Reference 11 ), October 27 (Reference 12), and December 18, 1997 (Reference 14), and February 12, 1998 (Reference 15), Southern Nuclear Operating Company, Inc. (SNC or the licensee) requested changes to the Technical Specifications (TS) for the Joseph M. Farley Nuclear Plant (FNP), Units 1 and 2. The requested changes included (1) approving new reactor coolant system (RCS) pressure temperature (P/T) limit heatup, cooldown, and hydrostatic testing curves, (2) relocating the P/T limit curves from the TS to a licensee-controlled document identified as a Pressure Temperature Limits Report (PTLR), and (3) changing the affected limiting conditions for operation and Bases accordingly. These changes are made in accordance with Generic Letter 96-03, "Relocation of the Pressure Temperature Limit Curves and Low Temperature Overpressure Protection System Limits," dated January 31, 1996 (Reference 5).

## 2.0 BACKGROUND

### 2.1 Neutron Fluence

Upon review of the original submittal, the staff concluded that there was some uncertainty as to whether the dosimetry measurements from the FNP Units 1 and 2 surveillance capsules would yield a conservative estimate regarding the projected neutron fluence values for the FNP reactors. The dosimetry analysis is described in WCAP-14687 (Reference 7).

In a subsequent revision, SNC provided neutron fluence values for the fracture toughness analyses that were based on the values calculated from the neutron transport models for the reactors. Therefore, the calculated values were used in the calculation of the pressure temperature limits. The calculated fluence values are higher than the corresponding measured values. All projected fluence values in the proposed PTLR report account for the power uprate submitted in February 1997.

Enclosure

2.2 Pressure Temperature Limits

The methodologies for assessing P/T limits and reactor pressure vessel (RPV) surveillance programs are discussed, in part, in the following documents: (1) 10 CFR Part 50, "Appendix G - Fracture Toughness Requirements;" (2) 10 CFR Part 50, "Appendix H - Reactor Vessel Material Surveillance Program Requirements;" (3) 10 CFR 50.60 - "Acceptance Criteria for Fracture Prevention Measures for Lightwater Nuclear Power Reactors for Normal Operation;" (4) 10 CFR 50.61 - "Fracture Toughness Requirements for Protection Against Pressurized Thermal Shock Events;" and (5) Regulatory Guide 1.99, Revision 2 - "Radiation Embrittlement of Reactor Vessel Materials." The terms and methods used throughout this evaluation are discussed in detail in these sources.

In the original submittal, a scatter criterion of 34°F was used as the basis for determining whether or not the measured $\Delta RT_{NDT}$ values for the FNP Unit 1 material surveillance capsule plate specimens were credible. The revised rule (10 CFR 50.61) requires that the scatter of measured $\Delta RT_{NDT}$ values for surveillance capsule plate specimens be evaluated against a scatter criterion of 17 °F. In this case the rule only allows the scatter criterion to be doubled if the range of surveillance capsule fluences ranged over two or more orders of magnitude (e.g., the maximum and minimum neutron fluence values for surveillance capsule specimens differed by a 100 n/cm$^2$). The staff determined that the range of neutron fluence values for the surveillance capsule plate specimens did not justify allowing the listed scatter criterion to be doubled from 17 °F to 34°F, and that the scatter of measured $\Delta RT_{NDT}$ values for surveillance capsule plate specimens should have been evaluated against a scatter criterion of 17 °F. In addition, the staff also determined that the best least squares fit regression of measured $\Delta RT_{NDT}$ values against the surveillance capsule neutron fluence should have been performed against the origin of the plot. The effect of these two issues caused the scatter of measured $\Delta RT_{NDT}$ values for four of the surveillance capsule plate specimens to exceed the scatter criterion of 17 °F. If the calculated neutron fluence values are used to assess the credibility of the surveillance capsule plate specimens, then the data for only three of the specimens would exceed the scatter criterion of the rule. Therefore, the staff did not consider the measured $\Delta RT_{NDT}$ values for the FNP Unit 1 surveillance capsule plate specimens to be credible, instead, the revised rule should be used as the basis for establishing the chemistry factor for the FNP Unit 1 intermediate shell plate.

In a subsequent submittal, SNC recalculated the adjusted reference temperature values (e.g., $RT_{NDT}$ values) and $RT_{PTS}$ values for the FNP Units 1 and 2 beltline materials. For FNP Unit 1, recalculation of the $RT_{NDT}$ value for the beltline plate represented in the material surveillance program was based on the following changes in methodology: (1) use of the revised rule (10 CFR 50.61) to establish the chemistry factor for the beltline plate represented in the FNP Unit 1 material surveillance program, (2) recalculating the $\Delta RT_{NDT}$ value for this plate based on the amended neutron fluence and chemistry factor values, and (3) application of a full margin term in the calculation of the end-of-cycle $RT_{NDT}$ value and $RT_{PTS}$ values for the plate. For the remaining beltline materials in the FNP Unit 1 reactor vessel and the beltline materials in the FNP Unit 2 reactor vessel, the changes to the adjusted reference temperature values (e.g., $RT_{NDT}$ values) and $RT_{PTS}$ values were based solely on the changes to the projected neutron fluence values.

2.3 Low-Temperature Overpressure Protection System

At Farley, the residual heat removal (RHR) system relief valves are used to mitigate overpressure transients at low temperatures to protect the integrity of the reactor coolant pressure boundary (RCPB). The RHR suction relief valves have a constant setpoint and are available for low-temperature overpressure protection (LTOP) whenever the corresponding RHR train is valved into service. Alternatively, the licensee may vent the RCS with a vent greater than or equal to 2.85 $in^2$ or remove the vessel head to prevent an overpressure event. The NRC accepted the use of the RHR relief valves as the means of providing LTOP in a Safety Evaluation report dated, July 31, 1979, that concluded no single active failure could disable the overpressure mitigation function.

The design basis of the RHR relief valves considers both mass-addition and heat-addition transients during water solid RCS conditions. The mass-addition analyses account for the injection from the charging pumps. The heat-addition analyses account for heat input from the secondary sides of the steam generators (SGs) into the RCS, upon starting the reactor coolant pumps (RCPs). Low-temperature overpressure protection is required below temperatures where vessel brittle damage may occur and is calculated based on the material properties and the estimated degradation due to neutron embrittlement. The temperature where LTOP is required is frequently referred to as the system enable temperature. The Farley proposed temperature where LTOP is required or the enable temperature and RHR relief valve setpoint were established using the methodology presented in WCAP-14040-NP-A. The approved methodology specifically applies to systems that use the pressurizer power-operated relief valves (PORVs) for LTOP. Because Farley uses the RHR relief valves rather than the PORVs, the licensee modified its methodology to account for the system differences.

3.0 EVALUATIONS

3.1 Neutron Fluence

The fluence values proposed in the original submittal were the result of averaging and spectral modifications in the measured fluence in four dosimeter capsules from FNP Unit 1 and three capsules from FNP Unit 2. For Unit 1, the measured values were lower from 7 to 27 percent with respect to the calculated values. For Unit 2, the measured values were lower from 9 to 17 percent. The staff noted that the calculated mean value for Unit 1 was outside the error bounds for at least one measurement. Therefore, it was requested that the licensee adopt the calculated values for the estimation of the new pressure temperature curves. The calculated values were adopted. The staff finds the calculated values acceptable because the calculation was performed with a benchmarked code and with acceptable approximations and cross sections.

3.2 P/T Limits

The methods used by the licensee in determining the P/T curves conform, in general, to the methodology approved by the NRC in WCAP-14040-NP-A. SNC applied the methodology as the basis for developing the cold overpressure mitigating system setpoints and RCPB heatup and cooldown limit curves.

3.2.1 Revised P/T Limit Heatup and Cooldown Curves for the FNP Unit 1 and Unit 2 RPVs

The staff performed an independent analysis to determine whether SNC's methods for determining the minimum allowable RCS pressures and temperatures during heatup, cooldown, and hydrostatic testing conditions were conservative relative to the staff's analysis.

The staff's $RT_{PTS}$ values for the FNP Units 1 and 2 beltline materials were in agreement with the revised uprated values calculated by SNC. In all cases, the revised uprated $RT_{PTS}$ values for the FNP Unit 1 and Unit 2 beltline materials are less than the pressurized thermal shock screening criteria. Therefore, SNC's revised $RT_{PTS}$ assessment for the FNP Units 1 and 2 are acceptable to the staff.

In December, SNC included revised P/T limit analyses and a revised PTLR for both units. Also, included were changes to the P/T limit curve figures. However, the revised submittals did not include changes to the P/T limit heatup and cooldown curves themselves. Instead, in order to account for the amended increase in the neutron fluence levels and the increase in the projected limiting 1/4T and 3/4T $RT_{NDT}$ values for FNP Unit 1, SNC proposed that the expiration date for the proposed P/T limit curves for the FNP units be scaled back from the originally proposed expiration dates of 36 effective full power years (EFPY). SNC's revised expiration dates for the FNP Units 1 and 2 P/T limit curves are 21.9 EFPY and 33.8 EFPY, respectively. The staff determined that the curves proposed by SNC were at least as conservative as those that would have been generated by following the criteria of Appendix G. By the staff's calculations, the revised expiration date for the FNP Unit 1 P/T limit curves would be 22.6 EFPY. Therefore, the expiration date of 21.9 EFPY projected by SNC represents a slightly more conservative expiration date for the FNP Unit 1 P/T limit curves. The staff calculated the new expiration date for the proposed P/T limit curves for FNP Unit 2 to be 33.8 EFPY, which was consistent with the value calculated by SNC. Therefore, the proposed expiration dates for both Units 1 and 2 P/T limit curves are acceptable to the staff.

3.2.2 Proposed Changes to the FNP Units 1 and 2 Surveillance Withdrawal Schedules

In August 1988, the staff issued a license amendment approving relocation of the RPV material surveillance program schedule from the TS to the Final Safety Analysis Report (FSAR). SNC revised and updated the withdrawal schedules in the December 18, 1997, submittal based on the revisions to the projected end-of-life (EOL) neutron fluence levels for the FNP Unit 1 and Unit 2 RPVs and surveillance capsules.

The current withdrawal schedule for removal of the surveillance capsules from FNP Unit 1 is consistent with a five-capsule withdrawal program. Four surveillance capsules (Capsules Y, U, X, and W) have already been removed from the FNP Unit 1 RPV, and have been tested and evaluated for the changes in the material properties of the capsule plate and weld materials. A fifth capsule (Capsule V) is scheduled to be withdrawn at either 21 EFPY or at the time when the neutron fluence ($E \geq 1.0$ MeV) is approximately equal to $7.8 \times 10^{19}$ $n/cm^2$. SNC is proposing that Capsule V be scheduled only as a standby capsule, to be pulled on a voluntary basis at the its discretion.

A change in the method for estimating the EOL neutron fluences for the FNP RPVs has resulted in an increase of the projected, limiting EOL fluence for the FNP Unit 1 beltline materials from $3.97 \times 10^{19}$ $n/cm^2$ to $4.34 \times 10^{19}$ $n/cm^2$, and an increase in the projected EOL neutron fluences for Capsules Y, U, X, and W from $5.83 \times 10^{18}$ $n/cm^2$, $1.65 \times 10^{19}$ $n/cm^2$, $2.80 \times 10^{19}$ $n/cm^2$ , and $4.04 \times 10^{19}$ $n/cm^2$, to $6.42 \times 10^{18}$ $n/cm^2$. $1.81 \times 10^{19}$ $n/cm^2$, $3.24 \times 10^{19}$ $n/cm^2$ , and $5.17 \times 10^{19}$ $n/cm^2$ , respectively.

The staff, therefore, concludes that the removal of surveillance Capsules Y, U, X, and W from the FNP Unit 1 RPV has been done according to an acceptable schedule and that removal of Capsule Z at approximately 21 EFPY would not create any significant additional information with regard to the calculation of the $\Delta RT_{NDT}$ values for the FNP Unit 1 surveillance plate and weld materials. Therefore, the proposed changes to the FNP Unit 1 material surveillance program are acceptable for implementation.

The current withdrawal schedule for removal of the surveillance capsules from FNP Unit 2 is consistent with a four-capsule withdrawal program. Three surveillance capsules (Capsules U, W, and X) have already been removed from the FNP Unit 2 RPV, and have been tested and evaluated. A fourth capsule (Capsule Z) is scheduled to be withdrawn at either 13 EFPY or at the time when the neutron fluence ($E \geq 1.0$ MeV) is approximately equal to $3.89 \times 10^{19}$ $n/cm^2$. A fifth capsule and a sixth capsule (Capsules V and Y) are to be reserved in standby for removal.

A change in the method for estimating the EOL neutron fluences for the FNP Unit 2 beltline materials has increased the projected, limiting EOL fluence for the materials from $3.70 \times 10^{19}$ $n/cm^2$ to $4.39 \times 10^{19}$ $n/cm^2$, and increased the projected EOL neutron fluences for Capsules U, W, and X from $5.61 \times 10^{18}$ $n/cm^2$, $1.54 \times 10^{19}$ $n/cm^2$, and $3.11 \times 10^{19}$ $n/cm^2$ to $6.39 \times 10^{18}$ $n/cm^2$, $1.85 \times 10^{19}$ $n/cm^2$, $3.18 \times 10^{19}$ $n/cm^2$ , respectively. SNC is proposing a revision of the estimated withdrawal time for Capsule Z from 13.0 EFPY to 12.2 EFPY. This change has been prompted by the change in the projected EOL neutron fluence for the FNP Unit 2 RPV, and by the change in the estimated EOL neutron fluence for the Capsule Z, which has been set equivalent to the revised projected EOL fluence for the FNP Unit 2 RPV. Since the revised neutron fluence for Capsule Z is still representative of the projected limiting EOL fluence for the vessel, the proposed change still meets the withdrawal schedule recommendations for removal of the fourth capsule in a five-capsule surveillance program. This change is therefore acceptable to the staff.

The changes to the projected limiting EOL neutron fluence for the FNP Unit 2 RPV have also resulted in an increase in the limiting projected $\Delta RT_{NDT}$ value for the FNP Unit 2 RPV. In this case, the limiting $\Delta RT_{NDT}$ value will increase from 200.0 °F to 205.6 °F. A five-capsule material surveillance program is recommended for implementation when the limiting $\Delta RT_{NDT}$ value for the vessel is projected to be greater than 200 °F. SNC is therefore proposing to remove Capsule V, the fifth capsule, in the FNP Unit 2 material surveillance program, at 17.2 EFPY instead of only scheduling it as a standby capsule. SNC estimates that the neutron fluence for Capsule V will be $6.52 \times 10^{19}$ n/cm$^2$ upon its removal from the FNP Unit 2 RPV. This estimated fluence is consistent with the criteria that the fluence for the fifth capsule in a five-capsule program be in the range of one to two times the projected limiting EOL fluence for the vessel. This change is therefore acceptable to the staff.

SNC has placed the material surveillance program withdrawal schedules for FNP Units 1 and 2 in the respective PTLRs. However, the proposed FNP PTLRs indicate that Section 5.4.3.6 of the FNP FSAR describes the RPV material surveillance programs for the FNP Units 1 and 2 RPVs. An amendment in August 1988, allowed the licensee to relocate the RPV material surveillance program schedule from the Surveillance Requirements of the TS to the FSAR. The approved change was based on the following:

1. The requirements for surveillance capsule withdrawal would now be contained in a licensee-controlled document.

2. Pursuant to 10 CFR Part 50, Appendix H, proposed changes to the schedule would still require NRC approval.

3. A TS surveillance requirement would still be retained in the FNP Units 1 and 2 TS requiring removal, examination, and determination of changes in the RPV material properties pursuant to 10 CFR Part 50, Appendix H.

Consistent with the previous license amendment, the FSAR is currently the controlling document providing the surveillance capsule withdrawal schedules for the FNP units.

3.3 Low Pressure Overpressure Protection System

3.3.1 Temperatures Where LTOP is Required

FNP TS 3.4.10.3, "Reactor Coolant Systems Overpressure Protection," requires overpressure protection below 325 °F for both units. The value is determined by using the equation from the approved methodology, $RT_{NDT}$ + 90 °F, and accounts for the temperature instrumentation uncertainties and temperature difference between RCS liquid and the temperature of the reactor vessel metal. Accounting for instrument uncertainty ensures that the LTOP system is enabled at temperatures where it is required by the methodology. The uncertainties were developed from a methodology that is consistent with the Instrument Society of America 67.04 and is consistent with other staff approved applications. The $RT_{NDT}$ + 90 °F values for Farley Units 1 and 2 are 251 °F and 276 °F, respectively. For Unit 2, which is more limiting, the RCS fluid temperature associated with a metal temperature of 276 °F is 302 °F. By adding 21 °F instrument uncertainty, the resulting temperature, 323 °F, is below the temperature were overpressure protection is required, 325 °F. The staff finds this acceptable for both units. Additionally, the licensee raised the minimum bolt-up temperature to 75 °F to include instrumentation uncertainties to prevent an overpressure event below where the P/T limit curves are calculated. Based on the above discussion, the staff finds the temperatures where LTOP is required acceptable and the methodology used to determine the temperatures where LTOP is required acceptable.

3.3.2 RHR Relief Valve Setpoint

TS 3.4.10.3 requires that the two RHR relief valves be set less than or equal to 450 psi. The methodology requires that setpoints be verified acceptable to protect the P/T limit curves. This is performed by analyzing the limiting mass and energy addition transients. These transients are performed in accordance with the approved Westinghouse methodology, WCAP-14040-NP-A. The limiting mass addition transient is the start of one charging pump below 180 °F and the start of all three charging pumps above 180 °F. TS 3.1.2.3 prohibits having more than one charging pump capable of injecting below 180 °F, except while swapping charging pumps, to preclude a more severe mass addition transient. The limiting energy addition transient is the start of a single RCP with the secondary SG temperature 50 °F higher than the primary system. TS 3.4.1.3 prohibits starting a RCP with the SG temperature greater than 50 °F higher than the RCS to preclude an more severe heat addition transient.

The analysis conservatively models the overpressure transients. The analysis credits only one of the two RHR relief valves. To account for valve accumulation no relief flow is modeled prior to 10% higher than the setpoint. Rather than modeling the valve to gradually open from 0-10%, it is assumed to fully open at the 10% accumulation. No pressurizer bubble was assumed during the transient. These are all conservative assumptions. To account for relief valve tolerance drift or setpoint uncertainty the licensee noted that because the ASME Code allows relief valves to drift, the setpoint of the valve must be set below the TS value of 450 psi. To account for setpoint drift, the setpoint is set 3% below the TS-required setpoint so that the setpoint can drift while not violating the TS requirement.

The steady state Appendix G curves were used to verify that the RHR relief valve setpoints are acceptable because an overpressure transient is most likely to occur at steady state conditions. The P/T limit curves include an adjustment to account for the pressure difference between the limiting vessel location and the pressure sensor. The pressure difference is made up of the static head, associated with the elevation difference, and the dynamic head associated with the operation of the RCPs and the RHR pumps. The curves assume one RCP and two RHR pumps are operating below 110 °F, with a 25 psi adjustment, and three RCPs and two RHR pumps above 110 °F, with a 60 psi adjustment. A note has been added to TS 3.4.1.4 to preclude operation of more than one RCP below 110 °F except to keep continuous flow while taking a pump out of service. As a result, the staff finds current setpoints and the methodology used to verify the setpoints are acceptable.

4.0 CONCLUSIONS

Based upon its evaluations, as discussed in Section 3.0 above, the NRC staff concludes that the methodology proposed by SNC is acceptable. Therefore, it is acceptable for the licensee to relocate the P/T limit curves from the Farley, Units 1 and 2, TS to a licensee-controlled PTLR.

The staff has reviewed and determined that the proposed P/T limit curves are acceptable for use, and are consistent with the requirements of Appendix G to 10 CFR Part 50, and Appendix G to Section XI of the ASME Code. The curves for FNP Unit 1 will expire at 21.9 EPFY and the curves for FNP Unit 2 will expire at 33.8 EFPY.

The NRC notes that the licensee should address the method for assessing the credibility of the RPV surveillance capsule data consistent with the criteria provided in the revised rule (10 CFR 50.61) or in Regulatory Guide 1.99, Revision 2, in future revisions to the PTLR. With respect to these methods, the licensee should apply the ratio procedure when it is determined that the chemical composition of the surveillance capsule weld material is different from that of its corresponding beltline weld material.

The staff has also reviewed the changes to the FNP Unit 1 and Unit 2 material surveillance programs. The staff therefore concludes that the proposed changes to the FNP Unit 1 and Unit 2 material surveillance programs are acceptable for implementation by SNC.

The staff has reviewed implementation of the LTOP and the LTOP system enable temperature and actuation setpoints and finds the licensee's proposal consistent with the staff's safety evaluation approving the WCAP, including the modifications made to make the WCAP applicable to a plant that relies on RHR relief valves rather than PORVs. Therefore, the staff concludes that the proposed changes are acceptable.

5.0 REFERENCES

1. Letter from A. Schwencer, NRC, "Safety Evaluation by the Office of Nuclear Reactor Regulation Supporting Amendment No. 13 to Facility Operating License NO. NPF-2, Alabama Power Company, Joseph M. Farley Nuclear Plant, Unit No. 1, Docket No. 50-348," July 31, 1979.

2. WCAP-12471, Westinghouse Electric Corporation, "Analysis of Capsule X from the Alabama Power Company, Joseph M. Farley Unit 2 Reactor Vessel Radiation Surveillance Program," December 1989.

3. WCAP-14196, Westinghouse Electric Corporation, "Analysis of Capsule W from the Alabama Power Company, Farley Unit 1 Reactor Vessel Radiation Surveillance Program," February 1995.

4. Letter from C. I. Grimes, NRC, to R. A. Newton, Westinghouse Electric Corporation, "Acceptance for Referencing of Topical Report WCAP-14040, Revision 1, 'Methodology Used to Develop Cold Overpressure Mitigating System Setpoints and RCS Heatup and Cooldown Limit Curves," October 16, 1995.

5. WCAP-14040-NP-A, Revision 2, Westinghouse Electric Corporation, "Methodology Used to Develop Cold Overpressure Mitigating System Setpoints and RCS Heatup and Cooldown Limit Curves," January 16, 1996.

6. NRC Generic Letter 96-03, "Relocation of the Pressure Temperature Limit Curves and Low Temperature Overpressure Protection System Limits," January 31, 1996.

7. WCAP-14687, Westinghouse Electric Corporation, "Joseph M. Farley, Units 1 and 2, Radiation Analysis and Neutron Dosimetry Evaluation," June 1996.

8. WCAP-14689, Revision 1, Westinghouse Electric Corporation, "Joseph M. Farley Units 1 and 2 Heatup and Cooldown Limit Curves for Normal Operation and PTLR," June 1996.

9. CE NPSD-1039, Revision 2, A. B. Combustion Engineering, "Best Estimate Copper and Nickel Values in CE Fabricated Reactor Welds, CEO Task 902," June 1997.

10. Letter from D. Morey, Southern Nuclear Operating Company, to NRC Document Control Desk, "Joseph M. Farley Nuclear Plant Technical Specification Change Request, Pressure Temperature Limits Report," July 23, 1997.

11. Letter from D. Morey, Southern Nuclear Operating Company, to NRC Document Control Desk, "Joseph M. Farley Nuclear Plant Technical Specification Change Request Correction to Pressure Temperature Limits Report," September 30, 1997.

12. Letter from D. Morey, Southern Nuclear Operating Company, to NRC Document Control Desk, "Joseph M. Farley Nuclear Plant Pressure Temperature Limits Report," October 27, 1997.

13. Letter from J. Zimmerman, NRC, to D. Morey, Southern Nuclear Operating Company, "Request for Additional Information Related to Proposed Amendments Regarding Pressure Temperature Limits Report, Farley Units 1 and 2," November 14, 1997.

14. Letter from D. Morey, Southern Nuclear Operating Company, to NRC Document Control Desk, "Joseph M. Farley Nuclear Plant Technical Specification Change Request, Pressure Temperature Limits Report," December 18, 1997.

15. Letter from D. Morey, Southern Nuclear Operating Company, to NRC Document Control Desk, "Joseph M. Farley Nuclear Plant Technical Specification Change Request, Pressure Temperature Limits Report," February 12, 1998.

Principal Contributors: C. Jackson
L. Lois
J. Medoff
M. W. Weston

Date: March 31, 1998