

May 10, 2001

MEMORANDUM TO: File

FROM: John F. Stang, Senior Project Manager, Section 1 */RA/*  
Project Directorate III  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

SUBJECT: DONALD C. COOK NUCLEAR PLANT, UNITS 1 AND 2 -  
ACCEPTANCE REVIEW REGARDING, "RESPONSES TO GENERIC  
LETTER (GL) 96-06 ASSURANCE OF EQUIPMENT OPERABILITY  
AND CONTAINMENT INTEGRITY DURING DESIGN BASIS  
ACCIDENT CONDITIONS," DATED AUGUST 15, 2000, AND  
NOVEMBER 7, 2000 (TAC NOS. M96801 AND M96802)

During the review of the subject responses to GL 96-06, the Nuclear Regulatory Commission (NRC) staff determined additional information was necessary to complete its review. Attached is the draft request for additional information (RAI). In accordance with Nuclear Reactor Regulation (NRR) Office Letter 803, the draft RAI will be E-Mailed to the licensee and a conference call will be arranged to discuss the RAI. Once the NRC staff and the licensee have a common understanding of the information required, the RAI will be issued formally to the licensee.

Docket Nos. 50-315 and 50-316

Attachment: As stated

**ACCEPTANCE REVIEW FOR**  
**DONALD. C. COOK, UNITS 1 AND 2**  
**SUBMITTALS C0800-10 AND C1100-01 RESPONSES TO GENERIC LETTER 96-06, DATED**  
**AUGUST 15, 2000, AND NOVEMBER 7, 2000**

1. In the submittal of November 7, 2000, you identified 21 lines installed in Unit 1 that have no relief valves and are susceptible to thermally-induced pressurization. You classified three lines under category E1 and the remaining 18 lines under category E2 depending on the method you used for calculating peak pressure inside the affected line. You also stated that the 21 lines have been analyzed based on the inelastic analysis criteria in Appendix F to Section III of the American Society of Mechanical Engineers (ASME) Code.
  - a. Provide the maximum-calculated temperature and pressure for the pipe run. Describe in detail, the method used to calculate temperature and pressure values for the affected lines. This should include a discussion on the heat transfer model and the basis for the heat transfer coefficients used in the analysis.
  - b. Describe the applicable design criteria for the piping and the valves. Include the required load combinations and the methodology for calculating primary membrane stress intensity for combined loads. Identify the licensing basis code edition of Appendix F to Section III of the ASME Code. Provide the maximum calculated and allowable stress and strain in the carbon steel and/or stainless steel penetrations.
  - c. Based on the results of inelastic analysis of the 21 lines, provide the calculation for the line that has the maximum calculated stress/strain. The calculation should clearly indicate all design input parameters including material stress-strain curve and justification thereof, and the methodology for inelastic analysis including the analysis results. Provide the detailed calculation of maximum primary membrane stress intensity, membrane hoop strain, and the peak strain at local discontinuity. Acceptance criteria for stress and strain limits and its justification should also be provided along with the reference to specific articles of Appendix F to Section III of the ASME Code.
  - d. For piping in E2 category, you indicated that credit for the momentary lifting of diaphragm valves was taken in the calculation of peak pressure that are listed in the submittal. Describe the method used to estimate the valve lift off pressure. Discuss any source of uncertainty associated with the calculation of the valve lift off pressure.
2. In the submittal of August 15, 2000, you identified four lines installed in Unit 2 that have no relief valves and are susceptible to thermally-induced pressurization. You stated that the four lines were analyzed based on the inelastic analysis criteria in Appendix F to Section III of the ASME Code.
  - a. Provide the maximum calculated temperature and pressure values for the pipe run. Describe in detail, the method to calculate temperature and pressure, if different from that provided in response to question 1(a).

- b. Provide the maximum calculated stress and strain in the carbon steel and/or stainless steel penetrations. Describe the design criteria, if different from that provided in response to question 1(b).
- c. Provide the calculation for the line with the maximum calculated stress/strain, if the maximum calculated stress/strain are not enveloped by and/or the calculation process is different from the sample calculation provided in response to question 1(c).

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A. Vogel, RIII

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