



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

December 30, 1999

Robin Mills
 Director, Maryland Safe Energy Coalition
 1443 Gorsuch Avenue
 Baltimore, MD 21218

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PUBLIC DOCUMENT

Dear Mr. Mills:

In your letter dated May 4, 1999, to the Chief, Rules Review and Directives Branch, Division of Administrative Services, U.S. Nuclear Regulatory Commission, concerning license renewal of Calvert Cliffs Nuclear Power Plant, Unit Nos. 1 and 2 (CCNPP) you raised several concerns. One of your concerns was in regard to pressurized thermal shock (PTS) of the reactor pressure vessel (RPV). You requested that "a special section with detailed analysis on this specific problem and the unique risk it entails to extended operation be included in the [environmental impact statement] before any license extension be granted."

As stated in "Appendix A - Section A.1.11 - Operating Safety Issues - Generic Environmental Impact Statement for License Renewal of Nuclear Plants - Regarding the Calvert Cliffs Nuclear Power Plant - Final Report - NUREG-1437, Supplement 1, dated October 1999," your concerns regarding this issue were referred to me for reply since this concern is relevant to current operations.

Section 50.61 of Title 10 of the *Code of Federal Regulations* (10 CFR 50.61) is the PTS rule. The PTS rule has screening criteria for the end-of-license (EOL) reference temperature, RT_{PTS} . This value must account for the effects of neutron irradiation on the reactor vessel beltline materials to ensure that RPV structural integrity is maintained. If the EOL RT_{PTS} value for any material in the beltline is projected to exceed the PTS screening criteria, the licensee must implement a flux reduction program. If no flux reduction program will prevent the RT_{PTS} value from exceeding the screening criteria, the plant cannot continue to operate without justification in the form of a safety analysis. This analysis must be submitted at least 3 years before RT_{PTS} is projected to exceed the screening criteria. If RT_{PTS} is below the screening criteria, the licensee is not required to perform any additional analysis to justify continued operation.

As outlined in the CCNPP Units 1 and 2 license renewal safety evaluation report issued March 21, 1999, both units are projected to be within the PTS screening criteria for 20 years beyond the current expiration dates of the licenses. This covers the period of the renewed license. As accounted for in the applicant's process for evaluating neutron embrittlement of the RPV materials, these projections are subject to change as new information and data become available. Any changes will be evaluated in accordance with 10 CFR 50.61, which requires an assessment whenever a "significant" change in the neutron embrittlement occurs. With respect to the PTS requirements, the licensee satisfies 10 CFR 54.21(c)(i) (which requires an evaluation of time-limited aging analyses demonstrating that the analyses remain valid for the period of extended operation) because the PTS screening criteria are satisfied for 20 years beyond the current expiration date of the license.

CCNPP Units 1 and 2 meet the requirements of 10 CFR 50.61 since the beltline materials are projected to be within the PTS screening criteria for 20 years beyond the current expiration dates of the licenses. Therefore, RPV structural integrity is maintained, and the risk of vessel failure is acceptably low.

During the environmental assessment public meeting on April 6, 1999, for CCNPP, you also raised concerns regarding the Year 2000 (Y2K) problem. You indicated that Philadelphia Electric Company (PECO) did an experiment at Peach Bottom with Y2K. You indicated that they turned the clocks forward to find out what would happen, and all the computers crashed for 7 hours. You further state that nuclear reactors needs a constant source of power, and in a Y2K disaster situation or other possibilities, there is the possibility of an accident. This concern was also referred to me for response.

On May 11, 1998, the U.S. Nuclear Regulatory Commission (NRC) issued Generic Letter (GL) 98-01, "Year 2000 Readiness of Computer Systems at Nuclear Power Plants," to all holders of operating licenses for nuclear power plants, except those who have permanently ceased operations and have certified that fuel has been permanently removed from the reactor vessel. The NRC issued GL 98-01 to ensure that licensees were adequately addressing potential date-related errors with computer systems, embedded software devices, and software applications sufficiently in advance of the Y2K rollover date to ensure that nuclear power plants will be in a stable, safe condition during the Y2K transition.

The NRC staff required that all addressees submit a written response to this generic letter as follows:

1. Within 90 days of the date of this generic letter, submit a written response indicating whether or not you have pursued and are continuing to pursue a Y2K program such as or similar to, that outlined in NEI/NUSMG 97-07, augmented appropriately in the areas of risk management, contingency planning, and remediation of embedded systems. If your program significantly differs from the NEI/NUSMG guidance, present a brief description of the programs that have already been completed, are being conducted, or are planned to ensure Y2K readiness of the computer systems at your facility(ies). This response must address the program's scope, assessment process, plans for corrective actions (including testing and schedules), QA measures, contingency plans, and regulatory compliance.
2. Upon completing your Y2K program or, in any event, no later than July 1, 1999, submit a written response confirming that your facility is Y2K ready, or will be Y2K ready, by the Year 2000 with regard to compliance with the terms and conditions of your license(s) and NRC regulations. If your program is incomplete as of that date, your response must contain a status report, including completion schedules, of work remaining to be done to confirm your facility is/will be Y2K ready by the year 2000.

Subsequent to the issuance of GL 98-01, increased public awareness and government attention to the Y2K issue resulted in concern over not only public health and safety of nuclear power plants, but also concern over the ability of nuclear power plants to continue to provide power to the national electric power grid. Therefore on January 14, 1999, the staff issued Supplement 1 to GL 98-01 to provide addressees with a voluntary, alternative response to that

required in item (2) of GL 98-01. In responding to Supplement 1, addressees were asked to confirm Y2K readiness of the facility with regard to those systems within the scope of the license and NRC regulations, as well as those systems required for continued operation of the facility after January 1, 2000. Addressees were permitted to voluntarily respond to Supplement 1 to GL 98-01 on or before July 1, 1999, in lieu of item (2) of GL 98-01.

NUREG-1706, "Year 2000 Readiness in U.S. Nuclear Power Plants," provides a status of nuclear power plant Year 2000 readiness as of September 1, 1999, and a description of NRC actions to determine Y2K readiness in operating U.S. reactors. The staff assessment of Y2K readiness consisted of independently evaluating nuclear power plant licensee Y2K readiness program processes, reviewing licensee responses to NRC requests for reporting Y2K readiness (i.e., GL 98-01 and Supplement 1), and combining the results of these assessments to achieve a high level of assurance that each facility will operate safely during the transition from 1999 to 2000 and on other Y2K sensitive dates. Table 1 of NUREG-1706 (page 18) indicates that CCNPP 1 & 2 is Y2K ready. NUREG-1706 is linked to the NRC home page (<http://www.nrc.gov/NRC/NEWS/year2000.html>).

We appreciate your interest in and concern for ensuring public safety and hope the above is responsive to your concerns.

Sincerely,



Alexander W. Dromerick, Sr. Project Manager, Section 1
Project Directorate I
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

R. Mills

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/s/

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