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**To:** Scott Burnell  
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**Subject:** Response to NY Timnes Questions

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Attached is a response to the questions from Matt Wald of the NY Times transmitted by your 0642 e-mail.

**CC:** Anthony McMurtray; Mohammed Shuaibi; Rick Ennis; Robert Dennig; Tad Marsh;  
William Ruland

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RESPONSE TO JANUARY 15, 2004 QUESTIONS FROM  
MATT WALD (NY TIMES)

1. *Twenty-four power uprates have been approved with the licensee relying on over-pressurization [containment accident pressure]. But Generic letter 97-04 seems to indicate licensees can't claim credit for that:*

*RG 1.1 establishes the regulatory position that emergency core cooling and containment heat removal systems should be designed so that adequate NPSH is provided to system pumps assuming maximum expected temperatures of pumped fluids and no increase in containment pressure from that present before any postulated LOCAs.*

*Did the NRC change its position at some point?*

RESPONSE: The statement made at the Tuesday January 13, 2004 interview was that 24 nuclear power plants have approval to credit containment accident pressure in determining available NPSH. As stated at the interview, this number may not be exact. The reasons for needing credit for containment accident pressure for NPSH vary. Some plants require overpressure credit as a result of power uprate. Some, as a result of NRC Bulletin 96-03<sup>1</sup>, that is, because of the increased loading of LOCA-generated debris postulated to block portions of the ECCS suction strainers. This blockage increases the flow resistance to the ECCS pumps and credit for containment accident pressure was allowed in some cases. Some plants were allowed to credit containment overpressure as a result of problems identified due to a detailed examination of the NPSH issue following issuance of NRC Generic letter 97-04<sup>2</sup>.

Thus, power uprate is not the only reason containment overpressure was allowed.

The NRC did modify its position from that in Regulatory Guide 1.1 since the overpressure credit was needed in these cases and a careful safety analysis and an assessment of the impact of not allowing this credit concluded that allowing this credit was justified. Regulatory Guides are not requirements. The note that accompanies every regulatory guide states (paraphrasing) that they describe methods acceptable to the NRC for implementing specific parts of NRC regulations but that different methods may also be acceptable to the NRC.

NPSH credit for containment accident pressure is only applied to operating reactors (not to new designs) and only after a detailed plant-specific review.

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<sup>1</sup> NRC Bulletin 96-03, "Potential Plugging of Emergency Core Cooling Suction Strainers by Debris in Boiling water reactors," May 6, 1996

<sup>2</sup> NRC Generic letter 97-04, "Assurance of Sufficient Net Positive Suction head for Emergency Core Cooling and Containment Heat Removal Pumps," October 7, 1997

This position has been documented in NRC Regulatory Guide 1.82 Revision 3<sup>3</sup>.

*2. I am told that the owners of Maine Yankee and Connecticut Yankee opted to retire their plants after the NRC found that they lacked adequate net positive suction head, without taking credit for overpressure, and such credit wasn't allowed at that time.*

RESPONSE: This is not a true statement. Inadequate NPSH, by itself, is an engineering problem which could have been solved. Although the licensees for these plants would have to provide the exact reasons which led to their decision to shutdown these plants, it is our understanding that the main reasons were economic. The shutdowns were not required by the NRC.

*3. Earlier this week, at a state hearing in Vermont, VY was confronted with the assertion that if it relies on containment overpressure, it would be relying on a single check valve that operates to prevent under-pressure in containment, and that such reliance would violate an NRC rule against the single failure criteria.*

*But VY responded that it wasn't subject to this rule, because its construction permit pre-dates the rule.*

*Do you know if VY is subject to the single failure criteria? Has NRC taken a position on this?*

RESPONSE: Vermont Yankee was licensed prior to the issuance of the general design criteria of Appendix A to 10 CFR Part 50. Therefore, these general design criteria do not apply to Vermont Yankee. However, an earlier version of these criteria is applicable to Vermont Yankee and is discussed in the Vermont Yankee FSAR (Section 1.5). As part of the review of a power uprate request, such as Vermont Yankee's, the staff examines compliance with the applicable regulations and the applicable NRC guidance to which Vermont Yankee has committed, either during its initial licensing or after. Therefore, this issue will be addressed as part of the NRC review of the power uprate.