January 14, 2003

MEMORANDUM TO: Chairman Meserve
Commissioner Dicus
Commissioner Diaz
Commissioner McGaffigan
Commissioner Merrifield
William Travers, EDO

FROM: Gary M. Holahan, Director /RA/
Division of Systems Safety and Analysis

SUBJECT: COMMENTS IN DEFENSE OF THE RISK-INFORMED DECISION MAKING PROCESS AND ON THE OIG EVENT INQUIRY, "NRC'S REGULATION OF DAVIS BESSE REGARDING DAMAGE TO THE REACTOR VESSEL HEAD"

I am taking the unusual step of providing my personal views directly to the Executive Director for Operations and the Commission because of the significance of this issue. In my view, the agency's safety initiatives associated with Risk-Informed Regulation are threatened by the OIG Event Inquiry, "NRC's Regulation of Davis Besse Regarding Damage to the Reactor Vessel Head", Case No. 02-03s December 30, 2002, which presents an incorrect picture of the safety decision making process used by the staff in this case.

I believe that the decision making process used for addressing the issue of Control Rod Drive Mechanism cracking at Davis Besse was not only correct, but that it constitutes a good and appropriate model for future actions. Accepting the OIG Findings as presented would significantly damage the agency's efforts to implement Risk-Informed Regulation, would challenge the goals of the NRC Strategic Plans and would re-interpret the meaning of the Technical Specifications relating to reactor leakage.

The OIG Event Inquiry does an excellent job of presenting the background facts and circumstances but it appears to misunderstand the logic of the decisions and the regulatory tools that were used. I continue to believe that the November 5, 2002, memorandum "Safety Evaluation - Davis Besse Nuclear Power Station, Unit 1 - response to Nuclear Regulatory Commission Bulletin 2001-01" which Dr. Barrett and I signed, represents a full and accurate description of the decision making process. Since the OIG staff did not speak to me during their review, I did not have an opportunity to express these views.

I believe that a proper understanding of the regulatory process as applied in this case is as follows:

Bulletin 2001-01 was issued by NRC under the 10 CFR 50.54 (f). It was a request for information, not an order to do inspections. If licensees could justify inspection dates other than December 31, 2001, then they fully complied with the Bulletin.

The purpose of the staff review of the licensee's response to the Bulletin was to test the licensee's justification for an alternative date.

Since the licensee appeared to be in compliance with the provisions of their license including the Technical Specifications, the NRC bore the burden of showing that a shutdown was needed earlier than the licensee proposed. The staff was required to establish the safety basis for any shutdown Order. This is the appropriate mechanism for preventing regulatory agencies from making arbitrary and capricious decisions.

There were discussions about the regulatory significance of CRDM (i.e. Reactor Coolant System Boundary) leakage and suspected leakage. The conclusion then and now is that the requirement in the regulations and the Technical Specifications which allow no Reactor Coolant System Boundary leakage, apply to known (i.e. observed) RCS boundary leakage. Possible or suspected leakage of the RCS boundary or observed leakage from an unknown source do not constitute RCS boundary leakage. Although I have some sympathy for the view that a strong suspicion of not meeting any Technical Specification should be enough to trigger the actions of that Technical Specification, that view is not the standard staff position and is not supported by OGC. The fact that the Davis Besse Technical Specifications include a non-zero value for unidentified leakage (which could, in fact, be Reactor Coolant System Boundary leakage) argues against an automatic shutdown when Reactor Coolant System Boundary leakage is suspected.

The staff drafted the Order for at least three reasons: to test our technical and regulatory basis for a possible Order (i.e. to answer the question, "Do we have a sufficient basis for an Order?"); to indicate to the licensee that the staff took the issue very seriously; and to be prepared to issue the Order in a timely manner if it was needed. In my experience, many more Orders are drafted than are issued. The Davis Besse case was not unusual.

Since the licensee appeared to be in compliance with their license, the staff needed to show that there was a significant safety problem that needed to be remedied through a plant shutdown. The logical thought process presented in RIS 2001-02 for Risk-Informed Regulatory decision making was an appropriate choice as a means of determining if the situation demanded an earlier shutdown than the licensee planned.

The information presented by the licensee and the staff analysis showed that the likelihood of a LOCA during the proposed period of time was small (i.e. less than 0.2%). The staff performed independent calculations to verify that a LOCA resulting form a CRDM failure would be effectively mitigated by the Emergency Core Cooling System. Base on this information the staff concluded that the increased risk of core damage was likewise small (i.e. 5E-06/ry) and the risk of a Large Early Release was very small (i.e. 5E-08/ry). This analysis placed the results in the RG-1.174 region identified as "small changes, acceptable with management attention". Management attention was provided at numerous levels. In addition, as noted in the OIG Event

Inquiry, the involved staff concluded unanimously during one of the decision making meetings that there was “no significant safety concern” with the licensee’s proposed shutdown date. Therefore, acceptance of the licensee’s alternative shutdown date was appropriate. In fact, I believe that the decision that was made was the only decision that could have been made in light of the applicable processes and the information and analysis available at the time.

I hope that my views on this subject are informative and contribute to the resolution of this issue.

cc: S. Collins
W. Kane
R. Borchardt
B. Sheron
J. Craig
R. Barrett
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