

No. 93-146

October 5, 1993

NOTE TO EDITORS:

The Nuclear Regulatory Commission has received from its Advisory Committee on Reactor Safeguards the attached letter-type report that provides comments on a proposed NRC generic letter regarding removal from nuclear power plant technical specifications accelerated testing and special reporting requirements for emergency diesel generators.

In addition, the ACRS has sent two letter reports to the NRC's Executive Director for Operations. They provide comments on proposed priority rankings of generic issues related to nuclear facilities and proposed rules and a draft regulatory guide that deal with light-water reactor pressure vessel issues.

September 22, 1993

The Honorable Ivan Selin, Chairman
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Chairman Selin:

SUBJECT: PROPOSED GENERIC LETTER REGARDING REMOVAL OF ACCELERATED TESTING AND SPECIAL REPORTING REQUIREMENTS FOR EMERGENCY DIESEL GENERATORS FROM PLANT TECHNICAL SPECIFICATIONS

During the 401st meeting of the Advisory Committee on Reactor Safeguards, September 9-10, 1993, we reviewed the subject generic letter (GL). During this meeting, we had the benefit of discussions with representatives of the NRC staff and NUMARC. We also had the benefit of the documents referenced.

The staff has informed us that this version of the proposed GL reflects consideration of the comments made by the Committee to Review Generic Requirements (CRGR). The proposed GL has been issued for public comment in accordance with our agreement that this could be done prior to our review.

The proposed GL would allow licensees to request removal of the Technical Specification (TS) provisions for accelerated testing and special reporting requirements for the emergency diesel generators (EDGs). When requesting this license amendment, licensees must, however, commit to implement a maintenance program for monitoring and maintaining EDG performance consistent with 10 CFR 50.65, "Requirements for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants," and of Regulatory Guide (RG) 1.160, "Monitoring the Effectiveness of Maintenance at Nuclear Power Plants," that was developed by the staff to provide guidance for complying with the provisions of the Maintenance Rule, 10 CFR 50.65.

In our April 26, 1993 (revised June 24, 1993) report on the draft version of RG 1.160, we noted that:

On many occasions, we have provided comments on the trigger-value approach proposed by the staff to resolve Generic Issue B-56, "Diesel Generator Reliability." The proposed regulatory guide for implementing the Maintenance Rule explicitly endorses the trigger-value procedure for "monitoring emergency diesel generator (EDG) performance against EDG target reliability levels." It is categorically impossible to demonstrate the reliability of EDGs using this method. We remain strongly opposed to its use for this purpose and continue to recommend that the staff's implementation guidance for the Station Blackout Rule, 10 CFR 50.63, be revised to deal with this issue. When this is done, the regulatory guide should be appropriately revised.

The staff's response was to include a footnote in RG 1.160 which states:

The triggers are intended to indicate when emergency diesel generator performance problems exist such that additional monitoring or corrective action is necessary. It is recognized that it is not practical to demonstrate by statistical analysis that conformance to the trigger values will ensure the attainment of high reliability, with a reasonable degree of confidence, of individual EDG units.

We do not believe that this footnote satisfactorily resolves our concern.

Regulatory Guide 1.160 endorses Section 12.2.4 of NUMARC 93-01, "Industry Guidelines for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants," which, in turn, references Appendix D of NUMARC 87-00, Revision 1, "Guidelines and Technical Bases for NUMARC Initiatives Addressing Station Blackout at LWRs." Each of these documents clearly implies that use of the "trigger values and monitoring methods" (as described in Appendix D of NUMARC 87-00, Revision 1) provides an acceptable means of monitoring EDG target reliabilities of 0.95 or 0.975 in accordance with the intent of 10 CFR 50.63 for coping with station blackouts. (See, for example, the language of the first paragraph of the introduction to Appendix D of NUMARC 87-00, Revision 1.) It can't be both ways! We strongly recommend that the staff and NUMARC collaborate in resolving this matter by appropriate revision of these documents.

We have had a longstanding concern that the EDGs at many nuclear power plants are being subjected to excessive and unnecessary surveillance testing and other testing as required by TS limiting conditions for operation, and that such testing may actually be degrading the reliability of these machines. Data for the years 1988 to 1991, provided to us by NUMARC, show that some EDGs are subjected to start testing only 12 to 15 times each year, while other EDGs are tested over 100 times each year.

This disparity in testing frequencies results, in part, from the wide variation in relevant TS requirements that were negotiated with licensees over the years. The fact that this situation has existed for so many years reflects badly on both the staff and licensees with respect to their effectiveness in dealing with an acknowledged problem having safety implications. We believe that this proposed GL is an important step in achieving a more rational testing program.

In addition to our recommendation that RG 1.160 and the NUMARC documents on which this proposed GL is based be revised to reflect statistical reality, we believe that the language of the proposed GL needs improvement. The proposed GL quotes a statement from RG 1.160 that triggers and testing of "problem diesels" will be addressed separately by the NRC. In the next paragraph of the GL, licensee commitments required for approval of the removal of accelerated testing and special reporting requirements from the TS are described, including the need for a commitment to RG 1.160. A statement is then made that these actions are intended to close the issues of triggers and testing for "problem diesels." The staff should clarify this apparent contradiction and state clearly that the former prescriptive requirement for accelerated testing has been eliminated by this proposed generic letter.

Sincerely,

J. Ernest Wilkins, Jr., Chairman
Advisory Committee on Reactor
Safeguards

References:

1. Memorandum dated August 13, 1993, from J. Larkins, ACRS, to B. Grimes, Office of Nuclear Reactor Regulation, Subject: Proposed NRC Generic Letter "Removal of Accelerated Testing and Special Reporting Requirements for Emergency Diesel Generators from Plant Technical Specifications"
2. Memorandum dated August 12, 1993, from G. Marcus, Office of Nuclear Reactor Regulation, for J. Larkins, ACRS, forwarding proposed NRC Generic Letter Regarding Removal of Accelerated Testing and Special Reporting Requirements for Emergency Diesel Generators from Plant Technical Specifications
3. U.S. NRC Regulatory Guide 1.160, "Monitoring the Effectiveness of Maintenance at Nuclear Power Plants," June 1993
4. NUMARC 93-01, "Industry Guideline for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants," May 1993
5. Appendix D. "EDG Reliability Program" to NUMARC Report, "Guidelines and Technical Bases for NUMARC Initiatives Addressing Station Blackout at LWRs," NUMARC 87-00, Revision 1, August 1991
6. SECY-93-044 dated February 22, 1993, for the Commission from James M. Taylor, NRC Executive Director for Operations, Subject: Resolution of Generic Safety Issue B-56, "Diesel Generator Reliability"
7. Letter dated April 26, 1993 (Revised June 24, 1993), from Paul Shewmon, ACRS Chairman, to Brian K. Grimes, Office of Nuclear Reactor Regulation, Subject: Implementation Guidance for the Maintenance Rule
8. Letter dated August 7, 1992, from Alex Marion, NUMARC, to Paul Boehnert, ACRS, providing Industrywide Emergency Diesel Generator Reliability Data
9. Letter dated December 18, 1992, from Raymond Fraley, ACRS, to Alex Marion, NUMARC, Subject: Industrywide Emergency Diesel Generator Reliability Performance Data
10. Letter dated March 1, 1993, from Alex Marion, NUMARC, to Raymond Fraley, ACRS, responding to questions regarding Industrywide Emergency Diesel Generator Reliability Performance Data

September 16, 1993

MEMORANDUM TO: James M. Taylor
Executive Director for Operations

FROM: J. Ernest Wilkins, Jr.
Chairman, ACRS

SUBJECT: PROPOSED PRIORITY RANKINGS OF GENERIC ISSUES: EIGHTH GROUP

During the 401st meeting of the Advisory Committee on Reactor Safeguards, September 9-10, 1993, we reviewed the priority rankings proposed by the NRC staff for the generic issues listed in the attached table. During this meeting, we had the benefit of discussions with representatives of the NRC staff.

We agree with all of the proposed priority rankings. We note, however, that the safety concerns of several generic issues are to be evaluated and resolved through the Individual Plant Examination (IPE) and Individual Plant Examination of External Events (IPEEE) processes, or are to be treated as licensing issues, or to be handled in some other manner. We are not sure whether the large number of licensees who have already completed their IPEs have evaluated these issues. We believe that the staff, while reviewing the IPE and IPEEE submittals, should ensure that these generic issues have been evaluated and resolved by the licensees in an adequate manner. In the event some of the licensees had not considered these issues in their IPEs or IPEEEs, the staff should establish a mechanism to require them to evaluate these issues. The staff should also establish a system to keep track of the resolution of all of the issues that have been included in other programs for resolution. We would like to hear a report from the staff, at an appropriate time, on the adequacy of resolution of all these generic issues.

J. Ernest Wilkins, Jr., Chairman
Advisory Committee on Reactor
Safeguards

Attachment: As stated

September 20, 1993

Mr. James M. Taylor
Executive Director for Operations
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Mr. Taylor:

SUBJECT: PROPOSED RULE AMENDING FRACTURE TOUGHNESS REQUIREMENTS FOR LIGHT WATER REACTOR PRESSURE VESSELS, PROPOSED RULE REGARDING REQUIREMENTS FOR THERMAL ANNEALING OF REACTOR PRESSURE VESSELS, AND DRAFT REGULATORY GUIDE ON FORMAT AND CONTENT OF APPLICATION FOR APPROVAL FOR THERMAL ANNEALING OF REACTOR PRESSURE VESSELS

During the 401st meeting of the Advisory Committee on Reactor Safeguards, September 9-10, 1993, we discussed the subject proposed rules and draft regulatory guide. Our Subcommittee on Materials and Metallurgy reviewed these matters in detail at a meeting on August 16, 1993. During these meetings, we had the benefit of discussions with representatives of the NRC staff. We also had the benefit of the document referenced.

The need for these proposed rules and the draft guide was, in part, highlighted during the evaluation of the integrity of the Yankee Nuclear Power Station's reactor pressure vessel. We believe these rules and this guide should prove useful to the licensees and the NRC staff and recommend that they be issued for public comment. We would like an opportunity to review the proposed final version of these rules and guide after the public comments have been reconciled and before publication.

Additional comments by ACRS Members Ivan Catton and William J. Lindblad are presented below.

Sincerely,

J. Ernest Wilkins, Jr., Chairman
Advisory Committee on Reactor

Safeguards

Additional Comments By ACRS Members Ivan Catton and William J. Lindblad

Although we agree with the essence of the above letter, we oppose the elimination of the provision in Appendix H which currently permits a reduction of testing in Integrated Surveillance Programs where "initial results agree with predictions." The licensee's program is, after all, subject to staff approval on a "case-by-case basis." Licensees should have some flexibility in scheduling when they actually test specimens. This does not mean that specimens would not be irradiated.

Reference:

Memorandum dated August 20, 1993, from Allen L. Hiser, Jr., Office of Nuclear Regulatory Research, for Elpidio G. Igne, ACRS, Subject: Response to Request at ACRS Subcommittee Meeting, with the following:

- a. Federal Register Notice for Proposed Rule, 10 CFR Part 50, "Fracture Toughness Requirements for Light Water Reactor Pressure Vessels"
- b. A proposed rule (10 CFR 50.66) on thermal annealing of the reactor pressure vessel, "Requirements for Thermal Annealing of the Reactor Pressure Vessel"
- c. Amendments to 10 CFR Part 50 Appendix G, "Fracture Toughness Requirements"
- d. Amendments to 10 CFR Part 50 Appendix H, "Reactor Vessel Material Surveillance Program Requirements"
- e. A draft regulatory guide (DG-1027), "Format and Content of Application for Approval for Thermal Annealing of Reactor Pressure Vessels"