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(16)

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Mr. Samuel J. Chilk
Secretary of the Commission
United State Nuclear Regulatory Commission
Washington, D. C. 20555

Attention: Docketing and Service Branch

Subject: Comments on Proposed Rule: Codes and Standards for Nuclear Power Plants; Subsection IWE and Subsection IWL (59 FR 979)

Gentlemen:

The Toledo Edison Company, a subsidiary of Centerior Energy Corporation, is partial owner of and is responsible for operation of the Davis-Besse Nuclear Power Station. Toledo Edison has been authorized for power operation of the Davis-Besse Nuclear Power Station since April 1977. As a 10 CFR 50 licensee, Toledo Edison has a vested interest in any policies the NRC may adopt which can affect the management and operation of a commercial nuclear power plant.

Toledo Edison personnel have reviewed the proposed rule, published in the Federal Register on January 7, 1994 entitled "Codes and Standards for Nuclear Power Plants; Subsection IWE and Subsection IWL" and provides the following comments regarding this issue.

1. In the supplementary background information, the NRC states that the rate of occurrence of corrosion and degradation of containments has been increasing at operating nuclear power plants. In addition, it was noted that over one-third of the operating containments have experienced corrosion or other degradation. A review of the instances of corrosion cited by the NRC shows that nearly all of the corrosion occurrences have occurred in the Boiling Water Reactor (BWR) Mark I steel containments or in the Pressurized Water Reactor (PWR) ice condenser containments. These occurrences appear related to the design of these containment structures and do not

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necessarily apply to other containment types. Furthermore, in Proposed Generic Communication (57 FR 54860) published by the NRC on November 20, 1992 the NRC acknowledges that the identified instances of containment degradation or corrosion are linked to certain containment designs. Thus, imposing these inspection requirements on all licensees, through rulemaking, is not warranted.

2. The NRC justifies this proposed rule, in part, by stating that the general visual inspection requirements of 10 CFR 50, Appendix J do not provide specific guidance on how to perform the necessary containment examinations. Subsection IWE is purported to serve the same underlying intent as 10 CFR 50, Appendix J (i.e., to detect evidence of degradation which may affect either the containment structural integrity or leak tightness). However, Subsection IWE requires an examination of either the interior or exterior surfaces of the containment vessel, whereas 10 CFR 50, Appendix J requires an examination of both the interior and exterior surfaces. As such, imposition of the requirements of Subsection IWE likely will not improve the inspection techniques over those presently used to meet 10 CFR 50, Appendix J and will serve to further confuse licensees with the conflicting requirements.

3. Subsection IWE provides for several inspections above those presently required by 10 CFR 50, Appendix J. Four of these inspections would impose an unwarranted additional burden on utilities.

   a. Subsection IWE requires a VT-3 visual examination of accessible surface areas over a 10 year inservice inspection interval. For the initial inspections, an expedited inspection schedule is required to implement these examinations over a 5 year period. The VT-3 requirements of Section XI require the examination be performed at a maximum direct examination distance of 4 feet under conditions such that a 0.105 inch lower case character can be read. Scaffolding as high as 165 feet for the interior surfaces or 253 feet for the exterior surfaces would be required to meet the maximum examination distance at Davis-Besse. Simply erecting and removing this large amount of scaffolding would unnecessarily prolong refueling outages. It is recognized that remote examination methods may be substituted for the direct examination, however, this equipment must be qualified to read the 0.105 inch character at the examination distance under the lighting conditions expected. It would be extremely difficult for a utility to be able to demonstrate that the lighting

levels at all locations of the containment would be sufficient to qualify the remote equipment to this unrealistic standard for use in the containment examinations. In addition, imposition of VT-3 visual examination requirements far exceeds examination requirements necessary to determine if flaking, blistering, peeling, discoloration or other forms of containment degradation are occurring.

b. Subsection IWE requires that gasketed joints installed to assure containment leak tight integrity receive a visual examination. This would include passive penetrations such as electrical penetrations. Inspection of electrical penetrations would require disconnection of all pertinent electrical circuits and removal of a flanged joint to inspect the gasketed surface. Inspections would be required on all electrical penetrations over the 10 year inservice inspection interval even though the gasketed joint integrity is demonstrated by local leak rate testing.

c. Subsection IWE requires all bolting be torque tested if the bolting has not been disassembled and reassembled during the 10 year inservice inspection interval. This requirement exceeds the requirements of Section XI for Class 1 bolting, which may be subject to cyclic and thermal stresses, even though the bolting in the containment system is not subject to similar cyclic or thermal stresses. Further, the bolted joint's ability to maintain leak tight integrity is demonstrated through local leak rate testing. Bolt torque testing would yield little additional benefit in safety.

d. Subsection IWE does not take into account the sampling techniques recognized in other subsections of Section XI. In particular, the containment moisture barrier, accessible surface areas, seals, gaskets, and bolting all require 100% inspection rather than sampling techniques similar to those contained in Subsections IWB, IWC, and IWD. This 100 percent inspection significantly increases the costs of inspections without a corresponding increase in safety.

4. The interior surfaces of the containment vessel are coated with paint purchased, applied, and inspected under a 10 CFR 50, Appendix B Quality Assurance Program. This paint has been qualified to adhere to the containment surfaces

under Design Basis Accident (DBA) conditions and protect the containment surfaces from degradation. Environmental conditions expected in a dry containment vessel are far less severe than those during a DBA, therefore, the likelihood of finding blistered, flaking, or discolored paint during the inspections mandated under Subsection IWE is extremely remote and the expenditures necessary to meet the proposed inspection requirements are not justified.

5. The backfit statement in the proposed rule claims this to be a "compliance exception" and it is therefore exempt from the cost benefit analysis that would normally be required for a backfit. Toledo Edison challenges this conclusion, for the reasons described below.

   a. The construction permit for Davis-Besse was issued on March 24, 1971. As such, literal compliance with the General Design Criteria (GDCs) is not required since backfitting the GDCs to older plants would provide little or no safety benefit while requiring an extensive commitment of resources (Reference: Staff Requirements Memo from Samuel J. Chilk, Secretary to James M. Taylor, EDO dated September 18, 1992). Recognizing that the imposition of the original GDCs is an unnecessary backfit, invoking of the "compliance exception" for plants of the vintage of Davis-Besse would be inappropriate, as the proposed rule seeks to redefine compliance with GDC 16 and GDC 53.

   b. As was mentioned earlier, the implementation of a program to meet Subsection IWE would consume substantial resources. Initial cost estimates indicate a cost of approximately $1 million would be incurred at Davis-Besse to implement the inspection program and perform the initial inspections, without accounting for refueling outage extensions. The small incremental safety benefit is not expected to warrant such expenditures.

   c. The burden imposed on the utility to comply with the proposed rule is significantly larger than that which would have been incurred had a proposed revision to 10 CFR 50, Appendix J been adopted. Yet the NRC concluded that the proposed Appendix J revision was "clearly a backfit" (Reference: Letter from David A. Ward, Chairman of ACRS to Kenneth M. Carr, Chairman of USNRC dated May 17, 1991). This proposed rule seeks to enhance the conduct of 10 CFR 50, Appendix J inspection and testing, as was the case with the earlier proposed revision to Appendix J.

6. Toledo Edison concurs that a reliable and effective means to ensure the continued integrity of the containment is necessary. However, the proposed rule, imposing the 1992 Edition of ASME Code Section XI, Subsection IWE is not an effective means. It is clearly documented that localized corrosion of the base metal is the primary degradation mechanism of concern. In the cases cited, some form of general, galvanic or chemical (e.g., boric acid) corrosion occurred. These corrosion mechanisms require the presence of moisture.

   Internal NRC correspondence recommends selective inspection of susceptible areas, stating that in certain areas additional ISI requirements would enhance safety and integrity of existing containment structures. The NRC further cites the need to include criteria for inspection of base metal parts that are subject to corrosion due to construction and design aspects of a particular containment (Reference: Letter from Goutam Bagchi, Chief of Structural and Geosciences Branch, to James E. Richardson, Director of Division of Engineering Technology dated January 3, 1989). The supporting documentation for the proposed rule itself states that the proposed amendments specify requirements to assure that critical areas of containments are routinely inspected to detect defects. Compliance with GDC 53 results in a containment structure that is designed and built in such a manner as to permit appropriate periodic inspection of all important areas, such as penetrations. Thus, it stands that there are critical areas of concern and there are less important areas where credible degradation mechanisms do not exist.

   Toledo Edison concludes that an appropriate surveillance program should seek to identify those areas where corrosion is likely to occur, then devote its resources to a careful examination of those areas. Other areas, where the absence of moisture makes corrosion unlikely (such as the upper regions of large, dry containments), would receive a less detailed inspection. Contrary to this philosophy of directing efforts to areas where problems may exist, the proposed rule requires extensive examinations of regions not likely to be subject to the known corrosion mechanisms.

   These requirements would drain utility resources and will yield neither meaningful information nor an improvement in safety. The unwarranted imposition of this proposed rule appears to conflict with the NRC's stated intention to minimize rules of marginal benefit to safety.

7. In the supporting documentation for the proposed rule, it is stated that almost half of the degraded conditions were found either during NRC inspections or by licensees in response to notification of degraded conditions at other sites. It is implied that this present situation is unacceptable. This appears to be in conflict with the NRC philosophy on the use of Information Notices, Bulletins and Generic Letters where it is expected that licensees will take proactive steps in response to notification of problems at other sites. It would seem evident from this discussion that an effective means for detecting degraded conditions presently exists as a result of prior notifications from the NRC, thus obviating the need for further rulemaking.

Should you have any questions or require additional information, please contact Mr. William T. O'Connor, Manager - Regulatory Affairs, at (419) 249-2366.

Very truly yours,

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