CENTERIOR ENERGY

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Subject: Environmental Consideration and Finding of No Significant Impact for Davis-Besse Steam Generator Tube Sleeving License Amendment Application

Gentlemen:

As requested by Mr. Jon B. Hopkins, NRC Senior Project Manager, enclosed is a copy of the Environmental Consideration prepared for Toledo Edison's proposed amendment to Davis-Besse Nuclear Power Station Unit No. 1 Technical Specification 3/4.4.5, Steam Generators, and its Bases. This proposed amendment was submitted to the NRC by letter (Serial Number 1927) dated August 16, 1991 and would allow the use of the Babcock and Wilcox sleeving method for steam generator tube repair. The enclosed Environmental Consideration and Finding of No Significant Impact concludes that the proposed amendment, if approved by the NRC, will have no significant effect on the environment.

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Should you have any questions or require additional information, please contact Mr. Robert W. Schrauder, Manager - Nuclear Licensing, at (419) 249-2366.

Very truly yours,

MHL/dlm

Enclosure

cc: A. B. Davis, Regional Administrator, NRC Region III
J. B. Hopkins, NRC Senior Project Manager
W. Levis, DB-1 NRC Senior Resident Inspector
J. R. Williams, Chief of Staff, Ohio Emergency Management Agency, State of Ohio (NRC Liaison)
Utility Radiological Safety Board

Environmental Consideration

Identification of Proposed Action:

The proposed action is an amendment to Davis-Besse Nuclear Power Station Unit No. 1 (DBNPS) Technical Specification (TS) 3/4.4.5, Steam Generators, and its Bases to allow the use of the Babcock and Wilcox (B&W) sleeving method for steam generator tube repair. The license amendment application was submitted to the Nuclear Regulatory Commission (NRC) by letter dated August 16, 1991 (Serial Number 1927).

The Need for the Proposed Action

The DBNPS has two B&W once-through-steam-generators. Although the DBNPS has a highly successful chemistry program, currently 20 tubes in Steam Generator 1-1 and 54 tubes in Steam Generator 1-2 have been removed from service due to tube defects. Technical Specification Surveillance Requirement 4.4.5.4 currently states that a steam generator (SG) tube containing a defect is a defective tube (a defect is currently defined as an imperfection that is equal to or greater than 40 percent of the nominal SG tube wall thickness). Presently, all defective tubes are removed from service by plugging. Repairs by means other than plugging are not currently addressed in the DBNPS TS.

Toledo Edison proposes to utilize tube sleeving as an alternative to plugging. The advantage of tube sleeving versus tube plugging is that the tube will remain in service with the structural integrity of the tube maintained and only a small reduction in flow and heat transfer capabilities. The repaired tube functions in the same manner as the original tube.

Environmental Impacts of the Proposed Action:

The proposed amendment would allow defective SG tubes to be repaired by the sleeving process. These repaired tubes will have a structural integrity similar to their original condition. Accordingly, accident radiological releases will not be greater than previously determined.

Tube repair by sleeving produces individual occupational radiation doses and solid radioactive wastes approximately in the same amount as that incurred by tube plugging. Tube plugging at the DBNPS has resulted in estimated radiation exposures of 40-45 mrem per tube. The estimated radiation exposure from installing OTSG sleeves utilizing the B&W sleeving process is approximately 35 mrem/sleeve, excluding equipment setup and tear down. This estimate is based on a tubesheet dose rate of 10 - 15 R/hr and a minimum quantity of 100 sleeves per OTSG outage. This exposure is representative of what is expected in the future at the DBNPS, with variations expected due to slightly higher tubesheet dose rates (16-23 R/hr at the DBNPS) and the location and total number of sleeves installed. The effect on the cumulative occupational radiation dose to plant workers is, therefore, projected

not to be significantly different from that discussed in Section 5.7.5.2, Occupational Radiation Exposure, of the Final Environmental Statement Related to the Operation of the DBNPS, NUREG-75/097, dated October, 1975.

The normal sleeving process does not directly produce any significant radioactive waste or effluent. No water, hydraulic fluid, machining chips, etc. are generated or expended during the sleeving process.

Some contaminated tools and setup equipment will require disposal. The contaminated equipment expected to result from installing sleeves includes roll expanders, flexpanders, ECT probes, sleeve samples, and tube samples.

Based on the above consideration of accident radiological releases, occupational radiation exposure, and radiological effluents, Toledo Edison concludes that there are no significant radiological impacts associated with the NRC approval of the proposed amendment.

With regard to potential non-radiological impacts, the proposed amendment involves systems located entirely within the restricted area as defined in 10 CFR Part 20. Toledo Edison has revieved the non-radiological impacts of the Final Environmental Statement Related to the Operation of the DBNPS, NUREG-75/097, dated October 1975, and identified no impacts that would be adversely affected by NRC approval of the proposed amendment. Non-radiological vaste generated by the sleeving process is comparable to that generated by the existing plugging process. It does not affect non-radiological plant effluents and has no other environmental impact.

Alternatives to the Proposed Action

The principal alternative would be to continue to repair degraded steam generator tubes by plugging rather than sleeving. This would not reduce the environmental impacts associated with the repair of steam generator tube imperfections and would result in reduced reactor coolant system flow, potentially leading to derating the plant. A derating of the plant would result in the need for replacement power produced from another generation source with a potentially resultant increase in its environmental impact.

Alternative Use of Resources

This action does not involve the significant use of resources not previously considered in the Final Environmental Statement Related to Operation of the DBNPS, NUREG-75/097, dated October 1975.

Finding of No Significant Impact

Toledo Edison has revieved the proposed license amendment against the criteria of 10 CFR 51.22 for environmental reviev. As demonstrated in the license amendment application submitted by letter (Serial Number 1927) dated August 16, 1991, the proposed change does not involve a significant hazards consideration, and as discussed above the proposed change does not significantly increase the types and amounts of effluents that may be released offsite, nor significantly increase individual or cumulative occupational radiation exposures. Based on the foregoing, Toledo Edison finds that there is no significant impact on the environment and that the proposed license amendment meets the criteria provided in 10 CFR 51.22(c)(9) for a categorical exclusion from the requirement for an Environmental Impact Statement.