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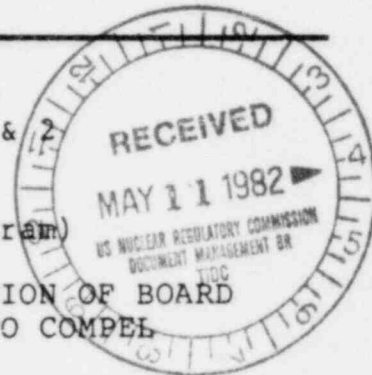
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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

Before the Atomic Safety and Licensing Board

Wisconsin Electric Power Company
POINT BEACH NUCLEAR PLANT UNITS 1 & 2
DOCKET NOS. 50-266 AND 50-301
Operating License Amendment
(Steam Generator Tube Sleeve Program)



ADDENDUM TO DECADE'S MOTION FOR RECONSIDERATION OF BOARD
MEMORANDUM AND ORDER CONCERNING MOTION TO COMPEL

By filing dated May 3, 1982, Wisconsin's Environmental Decade, Inc. ("Decade") moved the Atomic Safety and Licensing Board ("Board") for reconsideration of Part II of the Memorandum and Order Concerning Motion to Compel, entered April 22, 1982.

In that Motion, we argued that certain actions taken to ameliorate thermal shock could increase the consequences of a tube rupture following a loss-of-coolant-accident ("LOCA").

Subsequent to filing that Motion, we have received and reviewed a recent document issued by the Nuclear Regulatory Commission ("Commission") describing the January 25, 1982 tube rupture at Ginna Nuclear Plant. NRC Task Force, NRC Report on the January 25, 1982 Steam Generator Tube Rupture at R. E. Ginna Nuclear Power Plant (Apr. '82), NUREG-0909 ("Ginna Report").

That Report raises new questions concerning the thermal shock problem that strengthen our earlier Motion, and, for that reason, the Decade makes this addendum to its original filing to

reflect these new facts.

Specifically, the original Motion contended, among other things, that reconfiguration of the reactor core of Point Beach by the Licensee could increase the cooling requirements of the core at the same time as tube failures during LOCA would reduce reflood rates. This is due to secondary-to-primary in-leakage.

The Ginna Report points out that thermal shock is related to tube failures from an entirely separate sequence of events due to primary-to-secondary leakage. At Ginna, the accident was not precipitated from a break in the reactor coolant piping that caused instantaneous pressure reversal followed by collapse of steam generator tubes and in-leakage of steam. Rather, the Ginna accident was initiated by the tubes themselves rupturing, followed by other serious consequences, as are described in the Ginna Report:

"Based on Task Force analysis of available data from the instrumentation installed at Ginna, significant thermal shock of the reactor pressure vessel has not been ruled out. Significant thermal shock to the reactor pressure vessel wall could occur as a result of its exposure to the approximately 90°F water from the safety injection system after the reactor coolant pumps were tripped. During this event, the indicated temperature transient in the reactor coolant system cold-leg loop piping attached to the intact steam generator and the calculated magnitude of natural circulation flow precludes significant thermal shock to the reactor pressure vessel from safety injection flow into that loop. However, the indicated temperature transient in the cold-leg loop piping attached to the faulted steam generator does not by itself preclude the possibility of significant thermal shock from safety injection to this loop. The Task Force was able to closely approximate the indicated temperature transient of the faulted steam generator loop with a model which assumed flow toward the break location. The results of this model suggested that safety injection flow to the faulted loop may not have caused significant thermal shock to the reactor vessel."

Ginna Report, at p. 1-11.¹ [Emphasis added]

That is to say, the NRC Task Force investigation of the Ginna accident concluded that an event initiated by the rupture of a single tube could lead to thermal shock of the reactor vessel.² Id.

In turn, we know that thermal shock can cause a crack in the brittle steel of a reactor, Memorandum from D. G. Eisenhower to All Licensees, dated April 20, 1981, re Thermal Shock to Reactor Pressure Vessels (Generic Letter 81-19), and that the design of a nuclear plant does not provide any protection against reactor vessel failure, Resolution of the Reactor Vessel Materials Toughness Safety Issue (1981), NUREG-0744, at p. A-1.

The Licensee has only been able to provide assurances concerning adequate reactor vessel fracture toughness at Point Beach Nuclear Plant through October 1985. Letter from C. W. Fay to Harold R. Denton, dated January 15, 1982.

A Ginna-type accident has happened three times previously in this country, including once before at Point Beach. Ginna Report, at p. 3-44. Sleeving intended to counteract tube corrosion has been shown to weaken tubes and cause them to leak. Office of Nuclear Reactor Regulation, Items of Interest, Week Ending March 26, 1982, San Onofre Unit 1.

Therefore, Commission documents indicate that a tube rupture at Point Beach from a sleeve induced failure could lead to a reactor core meltdown at Point Beach were it to occur after October 1985.

The Decade believes that these newly reported facts demonstrate that the scope of this hearing must be expanded to embrace all embrittlement issues so that all significant safety

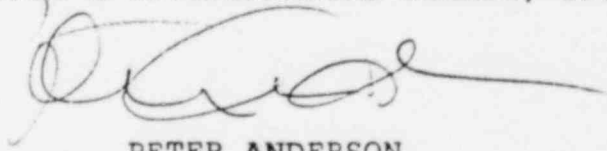
concerns related to sleeving will be considered. This means not only reconsidering the Board's April 22 Memorandum and Order Concerning Motion to Compel, but also granting the Decade permission to expand the preliminary contentions set forth in its letter dated January 18, 1982, to include the following in addition to ¶9:

"(9a) Sleeve induced tube failures may cause thermal shock and reactor vessel failure."

DATED at Madison, Wisconsin, this 7th day of May, 1981.

WISCONSIN'S ENVIRONMENTAL DECADE, INC.

by


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Footnotes

- 1 With regard to the last sentence of this quotation, it may be noted that the carefully guarded statement that thermal shock may not have occurred is predicated upon a series of complex and unverifiable assumptions derived from inferred, not actual, data concerning the possibility of a reverse flow rate in the cold leg over a significant period of time. Ginna Report, at 3-39. In any event, it should be emphasized the question in the case at bar is not whether thermal shock occurred in fact at Ginna or was narrowly averted on this occasion, but rather whether it is possible thermal shock could occur at Point Beach during a tube failure event in the future.
- 2 This is because recirculation through the steam generator without a tube rupture will have the cold safety injection water mixed with sufficient hot water that has been heated by the core to raise the temperature of the emergency core cooling water above the level at which thermal shock is a problem. But, in the cold leg that leaves the steam generator with a major tube rupture, a significant part of the heated recirculating water will have leaked out of the ruptured tube. Thus, there will be less hot water to mix with the cold safety injection and the water reentering the core may be sufficiently cold to crack an embrittled reactor vessel. Ginna Report, at p. 3-39.

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Docket Nos. 50-266 and 50-301
CERTIFICATE OF SERVICE

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I certify that true and correct copies of the foregoing document will be served this day by depositing copies of the same in the first class mails, postage pre-paid and correctly addressed, to the following:

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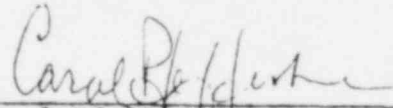
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