Docketing

WED-10/29/81-P:50266NRC.P14

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 Sleeving Program)

DECADE'S MOTION TO COMPEL ANSWER TO FIRST INTERROGATORIES

The intervenor Wisconsin's Environmental Decade, Inc.("Decade"), hereby moves the Atomic Safety and Licensing Board("Board") in the above-captioned matter, pursuant to 10 C.F.R. §2.740(f), for an order compelling an answer by the Licensee to the questions propounded in the Decade's First Interrogatories and Request for Production of Documents On the Sleeving Demonstration Program, dated October 23, 1981, for the reasons set forth below.

I

INTERROGATORIES 1 to 4

Nature of Interrogatories

Interrogatories 1 to 4 sought facts from the Licensee related to the measures being taken to minimize reactor vessel embrittlement at Point Beach Nuclear Plant and any study being done as to the interrelationship between those measures and degrading steam generator tubes.

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Description of the Objection

The "Licensee's Response to Decade's First Interrogatories and Request for Production of Documents on the Sleeving Demonstration Program," dated October 27, 1981, objects to Part A of the interrogatories, relating to the interrelationship between steam generator tube degradation, including the demonstration sleeving program, and reactor vessel embrittlement.

According to the Licensee, "reactor vessel embrittlement is in no way related to the sleeving of steam generator tubes, and is thus totally beyond the scope of the proceeding." Id., at 2.1/ For the following reasons, the objection should be overturned.

Reasons for Overruling Objection

Under the Commission's rules:

> "Parties may obtain discovery regarding any matter, not privileged, which is relevant to the subject mattter involved in the proceeding [and are related] only to those matters in controversy which have been identified by the Commission or the presiding officer * * * .
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> " * * * *
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> "It is not ground for objection that the information sought will be inadmissible at the hearing if the information sought appears reasonable calculated to lead to the discovery of admissible evidence."

See 10 C.F.R. §2.740(b)(1) and (2). [Emphasis added.]

1/ Licensee also objects to certain other interrogatories as being outside of the specific contentions made in the Decade's original Petition, but agrees to answer in the interest in an open discovery process. Id., at 2, 4, 8, and 11. The Decade would note, in passing, that the Board has established a broad contention to use as the basis of discovery, and therefore these objections are not well taken. Memorandum and Order, dated October 13, 1981, at 8 to 9.

The matters in controversy which have been identified by the Board are:

> "Wisconsin Electric Power Company has not demonstrated that Point Beach Nuclear Plant, Units 1 and 2, will operate as safely with its degraded steam generator tubes sleeved as it would if they were required to be plugged."

See Memorandum and Order, dated October 13, 1981, at 1.

Subsequently the Board amended the contention to read:

> "Wisconsn Electric Power Company has not demonstrated that its sleeving program for the Point Beach Nuclear Plant, Units 1 and 2, can be conducted without endangering the health and safety of the public and will be conducted in compliance with the Commission's regulations."

See Transcript, at p. 164.

The Board went on, in its Order, to explain that this simplified contention "will provide Decade latitude for discovery in rational areas concerning safety effects." See, Memorandum and Order, supra, at 9.

Thus, it should be clear, that the Licensee's objection is to be judged against an extremely expansive, not a narrow, standard that the Decade must meet to justify its discovery request.

For the following reasons, the reactor vessel embrittlement issue is relevant to the proceeding on steam generator tube degradation within the requirements for discovery.

Contentions 3, 4 and 5, as well as Contention 7, show that sleeving may impair the integrity of steam generator tubes, and do so to an extent worse than from plugging.

Reputable, independent scientists have concluded that a loss-of-coolant-accident may cause degraded or impaired steam generator tubes in a pressurized water reactor to rupture,

resulting in substantial in-leakage of heat energy from the secondary side to the depressurized primary side. This, in turn, may result in sufficiently serious steam binding as to "reduce the [reflood rates] to values so low that the core would not be adequately cooled." Report to the American Physical Society by the Study Group on Light Water Reactor Safety, 47 Review of Modern Physics (Supp. 1), Summer 1975, at p. S-91.

The American Physical Society Study Group goes on in its report to note that "the core thermal behavior in the reflood period represents a most critical problem area in the thermal history of the core." Id., at S-91. Not only are there serious questions of simple cooling problems due to inadequate reflood rates, but also those low reflood rates may create "substantial thermal shocks" on the "structural behavior" of the core as well from embrittled fuel cladding. Id., at S-90. Those additional loadings may cause "brittle cladding failure." Id., at S-91.

If the accident at the Three Mile Island Nuclear Plant taught anything, it showed that major catastrophic events can be propagated by the interaction of widely separated components in a nuclear plant. See Report of the President's Commission on the Accident at Three Mile Island, The Need for Change (1979).

Thus, actions that may appear unrelated to steam generator tubes can play a major role in the safety of a nuclear plant, especially if, as here, they affect the cooling requirements of the core that tube failures can exacerbate.

Point Beach Nuclear Plant is one of the 20 older pressurized water reactors in this country suffering from worrisome reactor

vessel embrittlement.[2/] See Memorandum from L. C. Shao(Engineering Branch DOR) to D. G. Eisenhut(DOR Assistant Director), dated September 14, 1977, re Reactor Vessels with Marginal Toughness Properties.

In addition to and apart from the particular safety problems created by plants suffering from marginal vessel fracture toughness is the potentially compounding problems on other plant components created by measures intended to retard embrittlement.

One such proposed ameliorative measure is "changing the core design to reduce the vessel fluence * * * i.e. lower the neutron production in elements nearest the pressure vessel wall * * *." See Memorandum from T. J. Walker(Engineering Branch DOE) to S. S. Pawlicki(Chief, Engineering Branch DOE), dated April 7, 1981, re Minutes of PWR Owner's Group Meeting With NRC on March 31, 1981, at p. 2. That is say, higher neutron emitting elements may be relocated away from the perimeter to the center of the core and visa-versa.

2/ "Because the possibility of failure of nuclear reactor pressure vessels * * * is remote, the design of nuclear facilities does not provide protection against reactor vessel failure. Prevention of reactor vessel failure depends primarily on maintaining the reactor vessel material fracture toughness at levels that will resist brittle fracture during plant operation. At service times and operating conditions typical of current operating plants, reactor vessel fracture toughness properties provide adequate margins of safety against vessel failure; however, as plants accumulate more and more service time, neutron irradation reduces the material fracture toughness and initial safety margins. See Resolution of the Reactor Vessel Materials Toughness Safety Issue, NUREG-0744, at p. A-1.

It necessarily follows that this reconfiguration of the core may result in greater heat and neutron bombardment in the center of the core incurred in an attempt to reduce irradiation of the outer wall of the reactor along the beltline and will result in entirely different peaking characteristics. In turn, this implies that the cooling requirements in the center of the core will be higher, and, hence, lower reflood rates due to tube failures will be more severe in their consequences. It also implies that the fuel cladding may be subject to greater embrittlement which can suffer from the thermal shock exacerbated by tube failures during LOCA.

Recalling the low standard required to justify a discovery request, it is clear that these potential interactive effects as between measures intended to reduce reactor vessel embrittlement and the severity of accidents following from tube failures during a LOCA are worthy of further investigation.

At the same time, it should be emphasized that this does not mean that the safety of plants with embrittled vessel walls will be collaterally attacked, but rather only that the interactive effects will be considered of measueres intended to ameliorate that embrittlement.

Whether these potential areas of concern are subsequently born out at trial is an entirely separate issue which has no bearing on the instant motion to compel discovery.

II

INTERROGATORIES 6, 8, 11, 12 and 14

Nature of the Interrogatories

Interrogatories 6, 8, 11, 12, 14 ask the Licensee to describe any study, analysis or consideration given to a variety of concerns relating to sleeving at Point Beach Nuclear Plant.

Description of Failure to Respond

The Licensee's response to these interrogatories refers to citations in the documents previously filed with the Board where these concerns are described, but is completely silent on whether any other documents or information exists on these subjects which have not been submitted for the record.

Reasons for Compelling Response

The Commission's rules provide that an answer to a discovery request may be compelled not only to overrule an objection but if the deponant "fails to respond". See 10 C.F.R. §2.740(f).

It may be that there are no further documents or information bearing on the interrogatories than those cited in the Licensee's answer. But, on the face of the filing, it is impossible to draw such a conclusion.

Parties are entitled to responsive answers to interrogatories and the Licensee should be compelled to state whether or not there are any other documents or information than those already cited, and, if there are, to complete its answer.

III

CONCLUSION

For the foregoing reasons, the Motion to Compel Answer to First Interrogatories should be granted.

DATED at Madison, Wisconsin, this 29th day of October, 1981.

WISCONSIN'S ENVIRONMENTAL DECADE, INC.

By

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CERTIFICATE OF SERVICE

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, or by personal service, upon the following:

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