

# ADJUDICATORY ISSUE

November 30, 1983

(NEGATIVE CONSENT)

SECY-83-488

DISTRIBUTION LIMITED TO COMMISSION LEVEL OFFICES

For:

The Commission

From:

James A. Fitzgerald

Assistant General Counsel

Subject:

REVIEW OF ALAB-739 -- WISCONSIN ELECTRIC

POWER COMPANY

Facility:

Point Beach Nuclear Plant, Units 1 and 2

Purpose:

To advise the Commission of an Appeal Board

decision which, in our view,

Review Time Expires:

December 16, 1983, as extended

Petition for Review:

The intervenor, Wisconsin's Environmental Decade,

petitioned for review. The petition was opposed

by the NRC staff and the licensee.

Background:

In this proceeding (the "sleeving proceeding") the licensee is seeking an operating license amendment to permit it to sleeve degraded steam generator tubes in both Units 1 and 2. The licensee also received, in a separate proceeding (the "replacement proceeding"), a license amendment to permit

CONTACT: Richard S. Mallory, OGC 4-1465

\*\* . . . . . Information in this record was deleted in accordance with the Freedom of Information Act, exemptions \_\_\_\_\_5

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it to replace two steam generators in Unit 1 which have been damaged by corrosion.

Due to the tight time constraints imposed on the hearing process by the applicants' proposed schedule for accomplishing the sleeving, the Licensing Board devised abbreviated procedures. It permitted Decade to intervene with broad contentions, but then required Decade to file a "Motion Concerning Litigable Issues", stating the genuine issues of material fact on which Decade sought a hearing. Staff and applicants responded and Decade replied to their response. This is a variation on the usual procedure, where the intervenor must file specific contentions and the staff or applicants may move for summary disposition, setting forth material facts as to which there is no genuine issue. No party complained about the procedures, but the Appeal Board has indicated that they should not be used in the future.

In ruling on Decade's Motion Concerning Litigable Issues, the Licensing Board dismissed all of Decade's contentions except one which concerned the adequacy of eddy current testing to detect flaws in sleeves or sleeved tubes. LBP-82-88, 16 NRC 1335 (October 1, 1982). That contention was set for hearing. At the conclusion of the hearing, the Licensing Board found that eddy current testing would be adequate to detect flaws, that the sleeved tubes would be safer than the unsleeved tubes which the licensee was already licensed to keep in operation, and that the sleeved tubes were safe without regard to whether they were safer than the unsleeved tubes. LBP-83-4, 17 NRC 109, 111 (February 4, 1983).

The Appeal Board found Decade's brief on appeal quite unclear and difficult to relate to its exceptions, as it had Decade's previous three briefs. Slip Op. at 4 & n.4 (Attachment 1). As

We have been informed by the staff that the sleeving of Unit 2 was completed during the spring 1983 outage; Unit 2 was returned to operation on June 30, 1983. The licensee sleeved about 1500 tubes and does not presently plan to sleeve more unless future tests indicate that further sleeving is advisable. No sleeving is currently planned for Unit 1 since its generators are currently being replaced. The outage began September 30, 1983 and the licensee expects to return Unit 1 to service by March 30, 1984.

best the Appeal Board could determine from Decade's brief, it raised two issues on appeal, neither of which concerned the issue covered in the hearing. Decade's primary concern appeared to be with its contention that degradation of as few as one to ten steam generator tubes could induce essentially uncoclable conditions during a LOCA and that the effects of steam generator tube failures during normal and accident conditions should be investigated. The Appeal Board agreed with the Licensing Board that these concerns were generic matters and that Decade had shown no link between them and the sleeving sought to be performed. Thus they were irrelevant to the issues in the sleeving proceeding and were properly dismissed. Slip Op. at 4-7.

The Appeal Board thought Decade's brief also argued that the Licensing Board erred in not establishing "the degree of assurance [necessary] to anticipate steam generator tube failures that is required in order to protect the public safety before it proceeded to determine whether the level of assurance shown was adequate. The Appeal Board interpreted this to be a claim that the Licensing Board should have determined the probability and consequences of steam generator tube failures before it concluded that the plant could operate safely with sleeved tubes; it concluded that such a broad inquiry was not required by the Commission's safety regulations and that the Licensing Board could apply only existing safety standards. Slip Op. at 7-9. However, the Appeal Board briefly discussed the basis for the Licensing Board's finding that sleeving is safe, in order to allay "Decade's apparent concern that sleeving will cause multiple tube failures." Id. at 10-12.

The Appeal Board also reviewed the record on its own and found "no error requiring corrective action." Slip Op. at 9. It agreed with the Licensing Board's conclusion regarding the acceptability of sleeving, with one exception: The Licensing Board had found no genuine issue regarding eddy current testing of the upper joint between the sleeve and the surrounding tube and consequently did not request the applicant and staff to address the efficacy of eddy current testing of this area. Decade took exception to the Board's handling of this issue but did not brief it on appeal, so the Appeal Board considered Decade's objection waived. However, the Appeal

Board sua sponte issued a separate memorandum and order (Attachment 2) directing three questions on this issue to the staff. See ALAB-739 at 10 n.9.

Discussion:

In its petition to the Commission (Attachment 3), Decade has raised the two issues the Appeal Board identified in Decade's brief, plus the issue on which the Appeal Board submitted questions to the staff. Decade does not allege that the matters in its petition meet the standards for Commission review under 10 CFR 2.786(b)(4)(i)-(iii), [and we do not believe that

| We discuss

each issue in sequence.

### Failure to Analyze the Consequences of Tube Failure

Decade's petition first observes that the Appeal Board affirmed the Licensing Board's dismissal, 16 NRC at 1342, of Decade's contention 1 on the effects of steam generator tube failures because Decade had "failed to provide any link demonstrating that sleeving may lead, or be related, to tube failures." Slip Op. at 7. Decade then argues that it provided such a link through its contention 3(b) that sleeving will create an annulus between the tube and the sleeve where secondary water impurities will collect and corrode the sleeve and the tube, just as they have collected in the annulus between the tube and the tube support plate and corroded the tube. As the licensee points out (Opposition at 3-5 (Attachment 5)), Decade made such a contention, but it was dismissed on a motion for summary disposition for failure to raise a genuine issue of fact. 16 NRC at 1348. Decade did not appeal the dismissal of its contention 3(b), but simply asserted that it had been admitted by the application and ignored the Licensing Board's ruling on the matter.

From a legal point of view, we think

II. Failure to Perform a Probabilistic Risk Assessment of Steam Generator Tube Failure

Decade also petitions for review of the Appeal Board's determination that "consideration of the

probability and magnitude of steam generator tube failures is not required. Decade makes the assertion, that the Commission's statutory duty to protect the public health and safety and General Design Criterion 14, requiring that the reactor coolant pressure boundary have "an extremely low probability of leakage, of rapidly propagating failure, and of gross rupture, 10 CFR Part 50 App. A, require an assessment of the probabilities and consequences of steam generator tube failure in order to determine "how safe is safe enough" before deciding that the sleeving operation is safe.

# III. Eddy Current Inspection of the Upper Joint

As the staff and the licensee point out, Decade did not brief the issue of eddy current inspection of the upper sleeve joint before the Appeal Board. Entirely unbriefed issues are waived. See our 3 review of ALAB-719 in SECY-83-369 at 19 & n.13. The Commission's regulations codify this requirement by providing that petitions for Commission review must concern issues that previously have been raised before the Appeal Board or explain why the issues could not have been so raised. 10 CFR 2.786(b)(2)(ii), (4)(iii).

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In addition, we see no reason

Coordination:

OPE concurs (see text).

James A. Fitzgerald

Assistant General Counsel

#### Attachments:

- ALAB-739 1.
- Memorandum and Order with questions on eddy current testing of the upper sleeve joint Decade's petition for Commission review
- 3.
- NRC staff's opposition to the petition 4.
- Licensees opposition to the petition 5. Decade's brief before the Appeal Board

SECY NOTE: In the absence of instructions to the contrary, SECY will notify OGC on Thursday, December 15, 1983 that the Commission, by negative consent, assents to the action proposed in this paper.

DISTRIBUTION: Commissioners OGC OPE SECY Attachment 1

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#### UNITED STATES OF AMERICA NUCLEAR REGULATORY COMMISSION

83 SEP -7 P4:05

ATOMIC SAFETY AND LICENSING APPEAL BOARD

Administrative Judges:

Thomas S. Moore, Chairman Dr. W. Reed Johnson Dr. Reginald L. Gotchy OCKETING & SEF .... BRANCH. September 7, 1983 (ALAB-739)

SERVED SEP 8 1983

In the Matter of

WISCONSIN ELECTRIC POWER COMPANY

(Point Beach Nuclear Plant, Units 1 and 2) Docket No. 50-266 OLA 50-301 OLA

Peter Anderson, Madison, Wisconsin, for the intervenor, Wisconsin's Environmental Decade.

Bruce W. Churchill and Delissa A. Ridgway, Washington, D.C., for the applicant, Wisconsin Electric Power Company.

Richard G. Bachmann for the Nuclear Regulatory Commission staff.

### DECISION

technical specifications such tubes would have to be plugged and removed from service. For the reasons discussed below, we affirm.

I.

The applicant filed its license amendment request on July 2, 1981. Decade petitioned to intervene and requested a hearing on the amendment application. The questions raised with regard to the sleeving repair proposal were determined by, in essence, a summary disposition proceeding on Decade's contentions. In LBP-82-88, 16 NRC 1335 (1982), the Board granted summary disposition of all but one of the contentions and ordered a hearing on the issue of whether eddy current testing can adequately detect corrosion in

The history of this proceeding is discussed in greater detail in ALAB-719, 17 NRC \_\_\_\_\_\_\_ & n.4 (Mar. 22, 1983) (slip opinion at 2-3 & n.4) and ALAB-696, 16 NRC 1245, 1250-54 (1982).

The Board ordered Decade to file a "Motion for Litigable Issues," in which Decade was required to come forward with evidence indicating the existence of genuine issues of fact concerning the sleeving program. The applicant and the staff responded with motions for summary disposition of the issues raised in Decade's filing. The Board's intent was that this procedure parallel the summary disposition mechanism provided in 10 CFR § 2.749 in all respects except that the intervenor was required to demonstrate, ab initio, the existence of actual disputed issues. See LBP-82-83, 16 NRC 1335, 1339 (1982); LBP-82-10, 15 NRC 341, 344-45 (1982); Tr. 890-92, 1192-93. See also Tr. 867-68, 882. Our admonition in ALAB-696, supra, 16 NRC at 1262 (handed down the same day as LBP-82-88) applies here as well: "In the future . . . procedures such as those employed by the Licensing Board should be avoided."

sleeved steam generator tubes. Id. at 1337, 1350. In addition, the Board asked the parties to address contingently the safety implications of sleeving should eddy current testing prove inadequate for detecting corrosion and cracking in sleeved tubes. Id. at 1338; LBP-83-4, supra, 17 NRC at \_\_ n.8 (slip opinion at 5 n.8). After a hearing, the Board authorized the license amendment permitting the applicant to undertake sleeving at Point Beach. The Board found eddy current testing adequate for detecting flaws in sleeved tubes that might lead to rupture under normal operating or accident conditions. It went on to find that sleeved tubes are not only "safer than other unsleeved tubes," but also "safe . . . without reference to whether they are safer than unsleeved tubes." LBP-83-4, supra, 17 NRC at \_ (slip opinion at 1-2). This appeal followed.

The applicant recently completed sleeving repairs in Unit 2 pursuant to the Board's authorization. As we noted in our prior decisions, the applicant now intends to replace both steam generators in Unit 1 and thus does not plan further sleeving in that unit. The applicant still seeks authorization to repair Unit 1, however, so that it retains the option of making further sleeving repairs before replacing the steam generators if that should become necessary. See ALAB-719, supra, 17 NRC at \_\_\_\_ n.4 (slip opinion at 3 n.4); ALAB-696, supra, 16 NRC at 1251 n.5.

II.

As best we can determine from its brief, Decade appears to raise two issues on appeal. 4 The first issue relates to

[t]hey were drafted to insure that the arguments and positions of all parties -- applicants, staff and intervenors -- would be spread fully upon the record in order to permit fair rebuttal by those holding opposing views and to facilitate our ultimate evaluation of the competing contentions. Disregard of the Rules frustrates those salutary purposes and burdens rather than assists the adjudicator's task.

Pennsylvania Power and Light Co. (Susquehanna Steam Electric Station, Units 1 and 2), ALAB-693, 16 NRC 952, 955 (1982), quoting Consumers Power Co. (Migland Plant, Units 1 and 2), ALAB-270, 1 NRC 473, 476 (1975). Thus, at a minimum, briefs must identify the particular exceptions addressed and the precise portions of the record relied upon in support of the assertion of error. 10 CFR § 2.762(a); ALAB-696, supra, 16 NRC at 1255; Public Service Electric and Gas Co. (Salem Nuclear Generating Station, Unit 1), ALAB-650, 14 NRC 43, 49-50, aff'd sub nom. Township of Lower Alloways Creek v. Public Service Electric and Gas Co., 687 F.2d 732 (3d Cir. 1982). Because Decade's brief fails in this regard, we cannot accurately discern which of its exceptions, if any, it pursues in its brief. Accordingly, Decade must "bear" full responsibility for any possible misapprehension of its position caused by the inadequacies of its brief." ALAB-666, supra, 15 NRC at 278.

It should also be evident to Decade that it cannot preserve its unbriefed exceptions merely by stating its lack of (Footnote continued)

This is the fourth time in as many appellate decisions that we have had occasion to comment on Decade's failure to conform its appellate filings to the Commission's Rules of Practice. See ALAB-719, supra, 17 NRC at (slip opinion at 18-19); ALAB-696, supra, 16 NRC at 1254-55; ALAB-666, 15 NRC 277, 278 (1982). We have said before that those Rules are not mere niceties; rather,

its Exception C.1. In its brief (at 3), Decade asserts that the Board should not have dismissed the contention it proposed concerning the effects of steam generator tube failures during accident and normal operating conditions. In LBP-82-88, supra, the Board ruled that, absent a showing that sleeving would lead to tube failures, the issue of the consequences of steam generator tube failure was not relevant to this amendment proceeding and thus the contention should be dismissed. 16 NRC at 1342. We agree.

In a license amendment proceeding, a licensing board has only limited jurisdiction. The board may admit a party's issues for hearing only insofar as those issues are within the scope of matters outlined in the Commission's notice of hearing on the licensing action. Portland General Electric Co. (Trojan Nuclear Plant), ALAB-534, 9 NRC 287, 289 n.6 (1979); Public Service Co. of Indiana (Marble Hill Nuclear Generating Station, Units 1 and 2), ALAB-316, 3 NRC

<sup>(</sup>Footnote continued)
intent to waive them. Decade Brief at 1. See ALAB-696,
supra, 16 NRC at 1255 and cases cited. See also ALAB-719,
supra, 17 NRC at (slip opinion at 18-19).

<sup>5</sup> That contention stated that degradation of as few as one to ten steam generator tubes in a pressurized water reactor, such as Point Beach, could induce essentially uncoolable conditions during a loss of coolant accident.

167, 170-71 (1976). See Commonwealth Edison Co. (Zion Station, Units 1 and 2), ALAB-616, 12 NRC 419, 426 (1980). 6
Here, the notice of hearing stated the proceeding would concern the repair of steam generator tubes by sleeving and the operation of the Point Beach plant with sleeved tubes.

See 46 Fed. Reg. 40359 (Aug. 7, 1981). See generally ALAB-696, supra, 16 NRC at 1250. Thus, Decade had to put forth a cognizable claim that some element of the sleeving process gives rise to an enhanced likelihood of tube rupture and the allegedly concomitant consequences. As the Licensing Board stated:

This is not an application to build or operate a nuclear power reactor. In an amendment proceeding, the relationship of steam generators to the remainder of the plant is not germane. In this case, applicant already has an operating license, granted after the safety of its reactor was considered. . . The test of relevance [therefore] . . . is to ask whether an issue is relevant to

The Board, of course, has authority to raise, sua sponte, relevant health and safety matters other than those contained in an intervenor's contentions. In this instance, the Board explicitly decided not to investigate additional issues. See LBP-83-4, supra, 17 NRC at & n.60 (slip opinion at 24 & n.60).

The Licensing Board fully reviewed the evidence that supports its conclusion that tubes sleeved with heat treated Inconel 600 are less susceptible to corrosive attack than the original steam generator tubes at Point Beach.

LBP-83-4, supra, 17 NRC at (slip opinion at 18-23, 25, 32-33). The Board also notes that the sleeve will, in effect, partially insulate the surrounding tube, thus reducing the potentic for corrosion and the resultant exposure of the sleev to the secondary system water. Id. at (slip opinion at 20-21).

"how the sleeving program would cause problems" or whether it reflects "unfavorably on the safety of sleeving."

LBP-82-88, <u>supra</u>, 16 NRC at 1342 (citation omitted; emphasis in original). Decade was aware it had to make this showing (see Tr. 1204-05), yet it failed to provide any link demonstrating that sleeving may lead, or be related, to tube failures. Indeed, only on brief does Decade mention, without elaboration, that it is concerned with the consequences of "sleeve induced" tube failure. Decade Brief at 3.

Exception D.1. Decade claims the Board erred in not establishing "the degree of assurance [necessary] to anticipate steam generator tube failures that is required in order to protect the public safety before it proceeded to determine whether the level of assurance shown was adequate." Decade Exceptions at 2. In essence, Decade believes the Board first had to ascertain the probability and consequences of steam generator tube failures in order to conclude that Point Beach could operate safely with sleeved tubes. Decade Brief at 8. Absent this information, Decade argues, the Licensing Board could not conclude that Point Beach may operate safely after sleeving. In this regard, Decade points out that the Commission has not fully investigated the safety consequences of steam generator tube

failures, in particular those occurring during a loss of coolant accident. Id. at 7-11.8

Decade's argument fails. In evaluating the efficacy of eddy current testing to detect flaws in sleeved tubes and in reaching its ultimate conclusion whether the amendment should issue, the Board could apply only existing safety standards. See Nader v. NRC, 513 F.2d 1045, 1052-54 (D.C. Cir. 1975); Nader v. Ray, 363 F. Supp. 946, 954 (D.D.C. 1973). Consideration of the probability and magnitude of steam generator tube failures is not required by the Commission's existing regulations. Nor were such general issues encompassed within the scope of this license amendment proceeding. Absent a demonstration that sleeving would contribute to steam generator tube failure, the Licensing Board did not have to consider the probabilities

Decade is correct that the agency has not yet studied the consequences of multiple steam generator tube failures. Indeed, the agency has extant a long standing commitment to study these issues. See, e.g., Northern States Power Co. (Prairie Island Nuclear Generating Plant, Units 1 and 2), ALAB-343, 4 NRC 169, 171 (1976); NUREG-0410, "NRC Program for the Resolution of Generic Issues Related to Nuclear Power Plants, \* Appendix F, Technical Activity No. A-3 (1978). We note that in the staff's February 1982 "Steam Generator Status Report, \* attached to SECY-82-72, \*Overall Steam Generator Program\* (Feb. 18, 1982), the staff acknowledges (at 2) that the multiple tube failure problem has not yet been rigorously studied, but states (at 6-7) that many steam generator issues are resolved in a draft report (NUREG-0844). To our knowledge this document has not yet been published in either final or draft form.

and consequences of tube failures before considering whether sleeving of Point Beach steam generators would be inimical to the public health and safety. But, in any event, the Board did consider the safety aspects of sleeving — including the failure of eddy current testing to detect flaws in sleeved tubes — before authorizing issuance of the license amendment. See LBP-83-4, supra, 17 NRC at \_\_ (slip opinion at 13-34).

#### III

Independent of the issues raised by Decade's appeal, we have examined the Licensing Board's initial decision and the underlying record pursuant to our long standing practice to review, sua sponte, "'any final disposition of a licensing ! proceeding that either was or had to be founded upon substantive determinations of significant safety or environmental issues. '\* Sacramento Municipal Utility District (Rancho Seco Nuclear Generating Station), ALAB-655, 14 NRC 799, 803 (1981), quoting Washington Public Power Supply System (WPPSS Nuclear Project No. 2), ALAB-571, 10 NRC 687, 692 (1979). Our review of the record below on the substantive safety issues has disclosed no error requiring corrective action. Indeed, with one minor exception noted below (see note 9, infra), we generally agree with the Licensing Board's conclusions regarding the acceptability of sleeving as a repair technique for steam generator tubes at

Point Beach. An additional matter, however, merits our attention.

As we discussed earlier, the Licensing Board took evidence on the safety implications of sleeving so that the record would nevertheless be complete in the event it found eddy current testing inadequate to detect flaws in sleeved tubes. The Board then made findings on the safety of sleeved tubes even though this contingency did not arise. We have evaluated the complete record and believe that a brief discussion of the basis for the Board's safety finding

<sup>9</sup> There is one aspect of the Licensing Board's analysis that we do not endorse. The Board concluded there was no genuine issue concerning eddy current testing of the upper joint between the sleeve and its surrounding tube. LBP-83-4, supra, 17 NRC at (slip opinion at 22); LBP-82-88, supra, 16 NRC at 1348. Consequently, when it ordered the applicant and the staff to address the question of the safety implications of sleeving in the event the Board might find eddy current testing inadequate for detecting flaws in sleeved tubes, no evidence was presented regarding the efficacy of eddy current testing in this portion of the sleeve. Decade appears to take exception to the Board's handling of this point, but did not brief the issue and we therefore do not consider it before us on Decade's appeal. On sua sponte review, however, we note that the ability to inspect the upper tube joint is a matter of importance. Such inspections are, in our opinion, required by General Design Criterion 32, 10 CFR Part 50, App. A. The ability to inspect this region is analogous to the ability to inspect the upper transition region in the replacement steam generators, a matter we addressed in our July 8, 1983 Memorandum and Order in Docket No. 50-266 OLA-2. Our previous inquiry regarding eddy current testing at the transition in the steam generator replacement proceeding, and our new inquiry here with respect to the ability to inspect the upper sleeve joint, are the subject of a companion memorandum and order issued with this decision.

may help answer Decade's apparent concern that sleeving will cause multiple tube failures.

Before a steam generator tube composed of Inconel 600 (a tough, ductile material) can be weakened by corrosion cracking to the point that it would rupture during an accident, the crack must attain a certain critical length. Fletcher, fol. Tr. 1422, at 7-8; Appl. Exh. I (WCAP-9960 Rev. 1) at 6.121-122, 6.126. This fact bears upon the safety of steam generator operation in two ways. First, despite the limitations of the eddy current technique in detecting small tube flaws (see LBP-83-4, supra, 17 NRC at (slip opinion at 2, 13-15); Tr. 1500-01, 1691-92, 1704), if a crack is of such size as to threaten the structural integrity of the tube, it is likely to be large enough to be detected in an eddy current examination. LBP-83-4, supra, 17 NRC at (slip opinion at 17); Tr. 1846, 1848. Second, and perhaps of greater consequence in terms of the assurance of safety, before a tube crack reaches the size that it structurally weakens the tube, the crack likely would penetrate the tube wall, causing primary-to-secondary leakage. Fletcher, fol. Tr. 1422, at 7-9; Tr. 1747-49.10

This is the so called "leak-before-break" phenomenon.
The history of steam generator tube failures reflects over
200 instances of tube leakage. Murphy, fol. Tr. 1828, at
10; Tr. 1783 (Fletcher). In contrast, there have been only
(Footnote continued)

Because the radioactivity present in primary system water provides a sensitive means of detecting such leakage into the nonradioactive secondary system water, there is a mechanism to provide a timely warning of the serious degradation of even a single tube. See LBP-83-4, supra, 17 NRC at \_\_ (slip opinion at 26-27). Thus, there seems to be a progressively decreasing likelihood that, through corrosion cracking, one or more tubes could be weakened to the point that they could fail under accident conditions without this situation being heralded by detectable leakage.

We recognize the evidence just outlined does not constitute the equivalent of a rigorous, quantitative determination of the likelihood and consequences of multiple tube failures. Nevertheless, we believe that the record in this proceeding supports the current staff requirement that only single, random tube failures be analyzed.

The decision of the Licensing Board authorizing the grant of the license amendment (LBP-83-4, 17 NRC \_\_) is affirmed.

<sup>(</sup>Footnote continued)
four cases of catastrophic tube failure-rupture, and the
circumstances surrounding each of these are distinguishable
from the type of corrosive attack and cracking that may be
expected at Point Beach. Tr. 1596, 1775-81 (Fletcher);
Marsh, fol. Tr. 1822, at 3.

It is so ORDERED.

FOR THE APPEAL BOARD

Barbara A. Tompkins
Secretary to the
Appeal Board

Attachment 2

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#### UNITED STATES OF AMERICA 83 SEP-7 P4:26 NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING APPEAL BOARDCE CF SECRETARY DOCKETING & SERVICE Administrative Judges:

Thomas S. Moore, Chairman Dr. W. Reed Johnson Dr. Reginald L. Gotchy

September 7, 1983

SERVED SEP 8 1983

In the Matter of WISCONSIN ELECTRIC POWER COMPANY ) Docket No. 50-266 OLA-2 (Point Beach Nuclear Plant, Units 1 and 2)

175

50-301 OLA

### MEMORANDUM AND ORDER

On July 8, 1983, we issued an order in the Point Beach Unit 1 steam generator replacement case requesting that the NRC staff provide us with an evaluation of the eddy current testing procedures to be carried out at the transition region of the fully expanded tubes of the replacement generator. We have now received the staff response to that request in the form of an affidavit of Herbert F. Conrad. That affidavit, however, leaves several questions unanswered.

- In addition, we have issued today an opinion rejecting the appeal of Decade in the Point Beach Units 1 and 2 steam generator tube sleeving proceeding. In that case also there remain several questions regarding eddy current testing at the location of the upper sleeve-tube joint. See ALAB-739,

18 NRC \_\_\_, \_\_ (slip opinion at \_\_\_ n. \_\_). Because that joint is a region of uniform diametric change in the sleeve, it appears that standard eddy current testing techniques suffer from the same lack of sensitivity as those in the transition region of fully expanded tubes. See Memorandum and Order (unpublished), July 8, 1983, at 2-3. We would like to obtain more information on the procedures and staff requirements for eddy current testing for this portion of the sleeved tubes as well.

Therefore, we are addressing a series of questions to the staff that, once answered, should provide us with a more complete understanding of the efficacy of eddy current inspection at the transition region of fully expanded tubes. To the extent that these questions also pertain to eddy current testing in the upper joint region of sleeved tubes, the answers should be expanded to address explicitly this latter situation. If eddy current testing in the vicinity of the upper joint of sleeved tubes is not carried out in a manner similar to that for testing the transition region of fully expanded tubes, the staff should discuss the program used to assure that the upper joint region of sleeved tubes is adequately inspected. The level of detail the answers should contain may be ascertained from our questions relating to the transition region tests.

- 1. In paragraph 3 of the Conrad Affidavit, it is stated that the comparison of standard eddy current test data with a preoperational baseline "signature" has been successful in detecting the presence of tube flaws. What is the minimum size flaw that is detectable using this technique, particularly in relation to the 40 percent degradation limit and "critical crack size"? Actual in-service or test results should be quoted if available.
- 2. Paragraph 3 goes on to point out that the baseline comparison method is limited with regard to determining the size of flaws, and that the staff expects the use of more sophisticated techniques to determine actual flaw size.

  What are the exact circumstances where more sophisticated techniques are required? Provide examples and results of the use of such techniques and describe the constraints with respect to time, cost, or personnel exposure that must be considered when requiring the use of the more sophisticated techniques. How are these considerations balanced against the need for accurate flaw size information?
- 3. Explain what is meant by the last sentence in paragraph 3 of the Conrad Affidavit. In particular, how would the Technical Specifications for a plant having fully expanded tubes, or sleeved tubes, differ from a plant without either of these characteristics?

4. With regard to the last sentence of paragraph 4 of the Conrad Affidavit, explain what other methods the staff uses to prevent the consequences of tube degradation.

It is so ORDERED.

FOR THE APPEAL BOARD

Barbara A. Tompkins

Secretary to the Appeal Board

Attachment 3

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DOCKETED

UNITED STATES OF AMERICA

83 SEP 27 P12:06

BEFORE THE NUCLEAR REGULATORY COMMISSION

BET NEW YORK

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)

PETITION FOR REVIEW OF APPEAL BOARD DECISION

Pursuant to 10 C:F.R. §2.786 (b), Wisconsin's Environmental Decade, Inc. ("Decade"), hereby serves upon the U.S. Nuclear Regulatory Commission ("Commission") its petition for review of the Decision of the Atomic Safety and Licensing Appeal Board ("Appeal Board") entered September 7, 1983, and served September 8, 1983, concerning "sleeving" degraded steam generator tubes in the Point Beach Nuclear Plant ("Point Beach").

As in the Decade's petition for review, dated April 7, 1983, in a parallel proceeding concerning replacement of the steam generators at the other unit of Point Beach, the issue continues to be the safety of the facility and the unrelenting refusal of the Commission and its agents to consider one of the major generic safety questions presently afflicting most pressurized water reactors in the country.

### THE NATURE OF THE DECISION UNDER REVIEW

The Appeal Board in a Decision, entered September 7, 1983, as did the Atomic Safety & Licensing Licensing Board ("Licensing Board") in an Initial Decision, dated March 16, 1983, rejected the Decade's challenge to sleeving at Point Beach. This petition

for review seeks Commission review of those two orders.

#### THE NATURE OF THE PROCEEDINGS BELOW

The Point Beach Nuclear Plant Units 1 and 2 are suffering from steam generator tube degradation. The Licensee proposed to address the problem by either sleeving the degraded tubes or by replacing the steam generators. In the proceedings below, the Licensee sought a license amendment to authorize sleeving, in lieu of plugging, degraded tubes.

### STATEMENT OF ANY MATTERS NCT RAISED BELOW

This petition for review does not raise any matters which were not raised below before the Licensing Board and before the Appeal Board, as is more fully cited in the text that follows.

### REASONS WHY THE DECISIONS UNDER REVIEW ARE ERRONEOUS

The Appeal Board, as did the Licensing Board, has approved the Licensee's proposals and ignored the unresolved generic issues by pretending major issues do not exist and by hiding behind irrelevant legal homolies.

It agreed with the Licensing Board over the Decade's objection that no evaluation of the consequences of an accident was necessary before finding that the probability of an accident from the license amendment posed acceptable risks; and with one hand it disdained intervenor's concerns over the inspectability of sleeved tubes while conceding them with the other.

Three salient errors by the Appeal Board arise from those conclusions: (i) the Appeal Board erroneously denied that a linkage was shown between sleeving and tube failures; (ii) the Appeal Board erroneously claimed that applicable statutes and

rules preclude consideration of safety concerns; and (iii) the Appeal Board arbitrarily and capriciously disclaimed the importance of an issue raised by the intervenor that it conceded was important by raising it sua sponte.

# (i) Linkage Between Sleeving and Failures

The Appeal Board sustained the Licensing Board's refusal to consider the effects of tube failures on the grounds that "the Decade had not put forth a cognizable claim that some element in the sleeving process gives rise to an enhanced likelihood of tube rupture". That is to say, according to the Appeal Board, before accident concerns arise, some nexus must be shown between sleeving and the possibility of an accident. Decision, at p. 6.

The claimed absence of such a linkage is patently untrue. In fact, the Decade did allege just such a connection in its intervention papers to the Licensing Board, see Decade's Motion Concerning Litigable Issues, dated July 21, 1982, at p. 6, and on appeal, see Decade's Brief in Support of Exceptions, dated March 16, 1983, at p. 6,

That linkage which the Decade raised concerned the fact that the narrow space between the sleeve and the tube created the same type of highly corrosive crevice-like conditions that was previously the apparent source of run-away tube degradation within the tubesheet at Point Beach since 1979. Moreover, the Decade pointed out that this time the annullus, which is created by the sleeve, would be located above, not below, the tube sheet. In that location, secondary-to-primary inleakage would no longer be constrained as it would have been inside the tube sheet, and safety systems would be fatally compromised in case of a loss-of-

coolant-accident.

In its Motion, the Decade alleged:

"The process of sleeving steam generator tubes increases the probability of tube failures generally, and, of even greater significance, it substantially increases the risk of failures in the unconstrained free standing region of the steam generator specifically in, among other things, the following manner:

"The annullus between the original tube and the sleeve may give rise to a corrosive environment in the unconstrained free standing region of the steam generator in cases where the original tube is or may be suffering in the future from a through-wall crack permitting secondary water impurities (including copper and iron oxides from the feedwater heaters that are an unintended byproduct of the conversion to all volatile treatment) to seep into the narrow space and concentrate to eventually corrode the sleeve as well."

Motion, at p. 6. See, also, pp. 8 to 10 for detailed citations.

In its Brief, the Decade argued:

\*The Board stated that this evidence is relevant only 'if tube weakening is assumed to have occurred,' and then, without ever ruling on the possibility of tube weakening, it determined the safety issue to be irrelevant.

"For the limited purpose of making a pre-trial ruling on which issues may be adjudicated, it would be impossible to preclude the possibility of failures in sleeved tubes, and therefore the exclusionary ruling cannot stand.

"The previous problem of corrosion-inducing environments in confined spaces such as the tube-totubesheet crevice in steam generators at pressurized water reactors is well known. Nuclear Reactor Regulation, Steam Generator Tube Experience (1982), NUREG-0886, at p. 14. In turn, the insertion of sleeves inside the original tubes creates a new confined space, this time in the sleeve-totube annulus, and, in those cases where the original tube is degraded through-wall, secondary water with its inevitable impurities will enter the annulus and concentrate corrodents. This fact cannot be in serious dispute inasmuch as it is admitted in the Licensee's own application:

'The behavior of the annulus between the tube and sleeve, with respect to the capability to concentrate secondary side bulk water inpurities [sic], is judged

to be similar to that of that original tube/tubesheet crevice.' Appl. Ex. 1, at p. 6.7

"Thus, the possibility of failures in tube failures must be acknowledged, and the Board's reasoning for excluding consideration of safety must fall."

Brief, at p. 6.

Although the Licensing Board refused to admit it into evidence, the Commission may wish to note in passing that a sister utility to the Licensee, Northern States Power Company, took much the same position as the Decade:

"Consideration of sleeving should anticipate that any corrosion problems that existed before sleeving will continue, and that sleeving itself is likely to introduce some new ones.

\*Incomel is particularly sensitive to crevice corrosion. Sleeving creates another crevice between tube and sleeve. Any secondary corrosion attack that penetrates the original tube then makes the sleeve vulnerable to secondary side crevice corrosion attack. \* \* \*

Letter from G. B. Neils (NSP) to S. Burstein (WEP), dated February 2, 1982.

The Appeal Board was only able to reject this plethora of information that demonstrates the possibility of a linkage by the erroneous -- and irresponsible -- expedient of ignoring it. If one were to believe the Appeal Board, the "Decade was aware it had to make this showing [of a linkage], yet it failed to provide any link demonstrating that sleeving may lead, or be related, to tube failures." Decision, at p. 7 (emphasis added). Such perverted reasoning defies any claim to responsible conduct.

(ii) Applicable Rules Require an Assessment of Safety

Also, in overturning the Decade's insistence on a safety evaluation, the Appeal Board held that \*[c]onsideration of the probability and magnitude of steam generator tube failures is not

required by the Commission's existing regulations." "[T]he Board could apply only existing safety standards." Decision at p. 8.

However, in fact, the existing regulations require such consideration.

Congress has established as the statutory standard to control the Commission's action:

"In any event, no license may be issued to any person within the United States if, in the opinion of the Commission, the issuance of a license to such person would be inimical to the common defense and security or to the health and safety of the public." 42 U.S.C. §2133.

In turn, the Commission has established as the administrative regulation to control its conduct, as well as its Licensing Board's actions:

"In determining that a license will be issued to an applicant, the commission will be guided by the following considerations:

"(a) The processes to be performed, the operating procedures, the facility and equipment, the use of the facility, and other technical specifications, or the proposals, in regard to any of the foregoing collectively provide reasonable assurance that the applicant will comply with the regulations in this chapter, including the regulations in Part 20, and that the health and safety of the public will not be endangered." 10 C.F.R. §50.40(a). [Emphasis added.]

"The reactor coolant pressure boundary shall be designed, fabricated, erected, and tested so as to have an extremely low probability of abnormal leakage, of rapidly propagating failure, and of gross rupture." 10 C.F.R. Part 50 App. A. Crit. 14. [Emphasis added.]

The Licensing Board had before it below a proceeding to determine whether to approve a new procedure (sleeving) intended to repair one part of the reactor coolant pressure boundary (steam generator tubes) that is failing. Tr. 1385.

Sleeving involves the insertion of a nominal 3/4 inch tube, approximately [extremely thin] inch in wall thickness, into a

nominal 7/8 inch tube, approximately .005 inch in wall thickness, from the confined radicactive primary side of the steam generator by temporary workers, and then joining the ends of the first tube to the inside face of the second tube by a complex proprietary process. Appl. Ex. 1.

When it made its determination as to whether to approve this sleeving process, the Board was not free to act arbitarily, but rather it was required to make a reviewable record on whether the new procedure was "inimical to the health and safety of the public," 42 U.S. C. §2133, whether the "public health and safety will be endangered", 10 C.F.R. §50.40(a), and whether it will provide a "low probability of abnormal leakage, of rapidly propagating failure or of gross rupture", 10 C.F.R. Part 50 App. A Crit. 14.

In making this factual determination of whether sleeving met these tests, the Licensing Board should have compiled evidence on the consequences to "the health and safety of the public" from a sleeve induced tube failure under various accident conditions, 10 C.F.R. §50.40(a), and weigh that in relation to whether there is a "low probability" of such a failure, 10 C.F.R. Part 50 App. A Crit. 14.

Instead of proceeding rationally and in accordance with the Commission's regulations, however, the Licensing Board improperly excluded as irrelevant evidence on both the safety consequences of a tube failure and on the number of such failures sufficient to precipitate those consequences. 

By excluding this evidence, the Board incapacitated its ability to ascertain "how safe is

safe enough\*, because a lower probability of occurrence is required when the consequences of its occurrence are more injurious.

Both Boards have implied that these safety issues have been dealt with before, such that any further consideration would be duplicative. It should be emphasized that this is patently untrue. In fact, the Commission has not yet formally investigated the consequences of steam generator tube failure during loss-of-coolant-accident ("LOCA") conditions -- whether in a sleeved or unsleeved tube, as shown by the statements of the Commission's own staff, as well as by outside agencies:

"One area [of research] that has not been considered sufficiently using recent accident analysis codes is estimation of the consequences of a transient or some other failure that might lead in turn to the failure of a significant number of tubes. Such failures could lead to the degradation of ECCS function." Office of Reactor Safety Research Group, Report to the President's Nuclear Safety Oversight Committee (1981), at p. I-2.

"The consequences of multiple tube failure, excess of the design base, have not yet been rigorously studied. \* \* \* In the event of a LOCA, the core reflood rate could be retarded by steam binding. \* \* \* S[team] G[enerator] tube failures would create a secondary to primary leak path which aggravates the steam binding effect and could lead to ineffective reflooding of the core." Nuclear Reactor Research, Steam Generator Status Report(Feb. 1982), at p. 2 to 3("Status Report").

"At the times Point Beach Unit 1, Surry Unit 2, and Prairie Island Unit 1 were licensed, there were no specific analysis requirements for S[team] G[enerator] T[ube] rupture events. \* \* \*

"The staff does not require licensees to analyze loss-of-coolant accidents (LOCAs) concurrent with an SGT break, but does require all LOCA analyses to include the effects of the plugged tubes on reduced RCS flow." Nuclear Reactor Regulation, Evaluation of Steam Generator Tube Rupture Events (March 1980), NUREG-0651, at p. 1-2.

This demonstrates that the Commission has never made any

determination whether the possibility of a failure in an unsleeved tube during LOCA poses an unacceptable risk. That being given, it is totally irresponsible to claim that there "is no serious safety issue", see Initial Decision, at p. 34, from failures in sleeved tubes solely with reference to the possibility of failures in unsleeved tubes which has never been considered.

The Appeal Board only deigns to acknowledge the fact that multiple tube ruptures have not been studied -- while inexplicably ignoring the other failings -- and then hesitantly dismisses the concern-without explanation by noting that one report that it has seen makes a reference to an unpublished report which it has not seen on the subject. Decision, at p. 8 n. 8.

Contrary to the Appeal Board's assertions, the statutes and rules require a rational decision-making process in which conclusions as to adequate levels of safety cannot be meaningless boiler plate, but rather must be based upon a probablitistic assessment of probabilities and consequences. Concocting a standard ostensibly pegged to presently evaluated risks is arbitrary when the existing risks have, themselves, never been evaluated.

# (iii) Importance of Inspectability Concern

The Appeal Board accepted the Licensing Board's assurances as to the inspectability of sleeved tubes, including the inspectability of the upper joint. See Decision, at pp. 9 to 10. This was an issue raised by the Decade that the Licensing Board had previously found of insufficient importance to even be

investigated through a hearing. <u>See</u> Memorandum and Order, dated October 21, 1982, at p. 15.

Then, the Appeal Board turned around and issued a concurrent Memorandum and Order, dated September 7, 1983, requesting more information on the inspectability of the upper joint. Id., at p. 2.

This presents the exact same arbitrary and capricious action that we challenged in our April 7, 1983 petition for review in the same docket which is still pending. It is erroneous and should be reversed.

STATEMENT WHY THE COMMISSION SHOULD GRANT REVIEW

Due to limitations of time and space, we refer the Commission to the reasons set forth in our parallel petition, dated April 7, 1983, for review to be granted here, as well.

WISCONSIN'S ENVIRONMENTAL DECADE, INC.

by

PETER ANDERSON President

114 North Carroll Street Madison, Wisconsin 53703 Dated: September 23, 1983

The Appeal Board asserts that the Licensing Board did "consider" safety. Decision, at p. 9. This is grossly misleading. In fact, the Licensing Board first precluded intervenors from presenting affirmative or rebuttal evidence by granting summary disposition on the subject, see Memorandum and Order, dated October 1, 1982, at pp. 7 to 8, and then, over the Decade's objection, made its own inquiries of Staff on the subject during the hearing, see Transcript. p. 1822. This may be a meretricious veneer to a bad decision, but it does not comport with the most basic rudiments of due process.

\*83 SEP 27 P12:06

# UNITED STATES OF AMERICA BEFORE THE NUCLEAR REGULATORY COMMISSION

OFFICE OF SEURE AND DOCKETING & SERVICE BRANCH

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)

CERTIFICATE OF SERVICE

I certify that true and correct copies of the Petition for Review, dated September 23, 1983, in the above-captioned matter, were served this day by depositing the same in the first class mails, correctly addressed, postage prepaid, upon Messrs. Gerald Charnoff (WEPCO), Richard G. Bachmann (Staff), Hon. Peter B. Bloch (ASLB) and Hon. Thomas S. Moore (ASLAB).

Dated: 9/23/83

Attachment 4

. . . .

Release

183 DCT 12 PI2:17

COOKE OF SECRETARY

#### UNITED STATES OF AMERICA NUCLEAR REGULATORY COMMISSION

### BEFORE THE COMMISSION

In the Matter of

WISCONSIN ELECTRIC POWER COMPANY

(Point Beach Nuclear Plant,
Units 1 and 2)

Docket Nos. 50-226
50-301

NRC STAFF'S ANSWER IN OPPOSITION TO WISCONSIN'S ENVIRONMENTAL DECADE PETITION FOR REVIEW

Richard G. Bachmann Counsel for NRC Staff

#### UNITED STATES OF AMERICA NUCLEAR REGULATORY COMMISSION

# BEFORE THE COMMISSION

In the Matter of

WISCONSIN ELECTRIC POWER COMPANY

(Point Beach Nuclear Plant,
Units 1 and 2)

Docket Nos. 50-226
50-301

NRC STAFF'S ANSWER IN OPPOSITION TO WISCONSIN'S ENVIRONMENTAL DECADE PETITION FOR REVIEW

### I. INTRODUCTION

On September 23, 1983 Intervenor Wisconsin's Environmental Decade ("Decade") filed a Petition for Review of Appeal Board Decision ("Petition") pursuant to 10 C.F.R. § 2.786(b) requesting that the Commission undertake review of the Atomic Safety and Licensing Appeal Board's ("Appeal Board") Decision, ALAB-739, \_\_\_\_ NRC \_\_\_ (Slip Opinion, September 7, 1983). In ALAB-739 the Appeal Board affirmed the Initial Decision, LBP-83-4, 17 NRC 109 (1983) of the Atomic Safety and Licensing Board ("Licensing Board") issued on February 4, 1983 which authorized the issuance of a license amendment 1/2 for the Point Beach Nuclear Plant that allows degraded steam generator tubes to be repaired by sleeving. As discussed below, the NRC staff opposes the Petition and urges that it be denied.

<sup>1/</sup> Pursuant to 10 C.F.R. § 2.764, the Staff issued the amendment on April 4, 1983. 48 Fed. Reg. 16153.

# II. BACKGROUND

This license amendment proceeding was initiated on July 2, 1981, when Wisconsin Electric Power Company ("Licensee") filed its license amendment request which would permit the plant to operate with steam generator tubes that had degraded past the plugging limit when such tubes had been repaired by sleeving. 2/ The Commission subsequently published a notice of opportunity for hearing. 46 Fed. Reg. 40359 (August 7, 1981). The Staff agrees with and adopts the Appeal Board's description of the early history of this proceeding set forth in previous decisions and referenced in ALAB-739. ALAB-739, Slip op. at 2, n.1.

On October 1, 1982, the Licensing Board issued its Memorandum and Order (Concerning Summary Disposition Issues), LBP-82-88, 16 NRC 1335 (1982) ("Summary Disposition Order"). As noted by the Appeal Board (ALAB-739, Slip op. at 2-3), the Licensing Board granted summary disposition of all but one of Decade's contentions and ordered a hearing on the following issue:

That the license amendment should be denied or conditioned because applicant has not demonstrated that eddy current testing is adequate to detect serious stress corrosion cracking or intergranular attack, in excess of the technical specification prohibiting more than 40 percent degradation of the sleeve wall, in sleeves that would be inserted within steam generator tubes. LBP-82-88, 16 NRC at 1337.

The Licensing Board has provided a "Description of Sleeving" in its Initial Decision, LBP-83-4, 17 NRC 109, 111-112 (1983). See also Wisconsin Electric Power Company (Point Beach Nuclear Plant, Unit 1), ALAB-696, 16 NRC 1245, 1250 (1982).

Were we to find that eddy current testing of sleeves is inadequate, we would be unable to assess the significance of that finding unless we are informed about the relationship of the inadequacy of the probability of occurrence of events of differing degrees of seriousness. Obviously, no system of measurement is perfect. Errors of measurement are to be expected. The significance of errors of measurement must be assessed in relationship to the resulting risks. (emphasis added) 16 NRC at 1338.

The Licensing Board further informed the parties as to the scope of its inquiry into the issue at the hearing:

We expect the hearing to address questions concerning the reliability of eddy current testing for detecting stress corrosion cracking in sleeved and unsleeved tubes (this latter evidence is relevant to our developing an adequate understanding of the ability to detect flaws in the sleeved tubes), the reliability with which rates of corrosion may be predicted within the tubesleeve assemblies and the changing probability, over time, of undetected defects leading to a rupture of one or more sleeved steam generator tubes that: (a) will cause one or more leaks whose combined effect is not a serious safety problem, or (b) will cause one or more leaks whose combined effect is serious either because of the accompanying risk of release of radiation or because it would cause a serious risk of leading to a full or partial core melt condition. We are interested in expert opinion on these questions and in exploring the reasons for these opinions. Id.

Thus, the Licensing Board had set the stage, prior to the hearing, not only for litigation of the adequacy of eddy current testing, but also for an exploration of the probability and seriousness of undetected flaws in steam generator tubes. See ALAB-739, Slip op. at 3 (Appeal Board's characterization of Licensing Board's directions).

The evidentiary hearing was held on November 17 and 18, 1982 in Milwaukee, Wisconsin. Both the Licensee and the Staff submitted direct testimony and presented qualified witnesses to address the issue as

See LBP-83-4, 17 NRC at 131, 132. Decade presented no witnesses, submitted no direct testimony and filed no formal findings pursuant to the Licensing Board's request. <u>Id.</u> at 112. As noted above, the Licensing Board issued its Initial Decision on February 4, 1983. Decade appealed the decision by filing exceptions on February 14, 1983 and its Brief in Support of Exceptions to Board's Initial Decision ("Brief") on March 16, 1983.

The Appeal Board determined that Decade had raised two issues on appeal: (1) the Licensing Board should not have summarily dismissed as irrelevant Decade's contention concerning the effects of steam generator tube failures and (2) the Licensing Board erred in not first ascertaining the probability and consequences of steam generator tube failures before deciding on the issue of safety of sleeved tubes.

ALAB-739, Slip op. at 4-5, 7. The Appeal Board agreed with the Licensing Board as to the irrelevance of Decade's contention on the effects of steam generator tube failures, noting that Decade had failed to provide any link between sleeving and tube failures. Id. at 5-7. Likewise, the Appeal Board rejected Decade's assertion that the Licensing Board was bound to explore the probability and consequences of tube failures, thus creating a new safety standard, before ruling on the safety of tube sleeving. Id. at 7-9. Accordingly, the Appeal Board affirmed the

<sup>3/</sup> For the views of the Staff on the probability of a core melt, See Testimony of Ledyard B. Marsh, fol. Tr. 1822.

Licensing Board's Initial Decision. 4/ On September 23, 1983, Decade filed the instant Petition seeking Commission review of ALAB-739.

# III. DISCUSSION

The Commission's Regulations provide the procedure for parties to petition the Commission for a discretionary review of a decision or action of the Atomic Safety and Licensing Appeal Board. 10 C.F.R. § 2.786. - Such a petition may only be filed on the ground that the decision or action is erroneous with respect to an important question of fact, law, or policy. 10 C.F.R. § 2.786(b)(1).

Section 2.786 establishes a framework and sets forth criteria against which a petition for review should be judged. Among the requirements is that a petition shall contain:

(ii) A statement (including record citation) where the matters of fact or law raised in the petition for review were previously raised before the Atomic Safety and Licensing Appeal Board and, if they were not why they could not have been raised. (emphasis added) 10 C.F.R. § 2.786(b)(2).

As a consequence, a petition will not be granted to the extent that it relies upon matters which could have been, but were not raised before the Appeal Board. 10 C.F.R § 2.786(b)(4)(iii). Although the Commission has

In addition to rejecting Decade's assertions of error by the Licensing Board, the Appeal Board conducted its usual sua sponte review of the Initial Decision. ALAB-739, Slip op. at 9. With one minor exception, the Appeal Board agreed with the Licensing Board's conclusions. Id. at 9-10. However, the Appeal Board did discover the need for more information concerning the ability to inspect the upper sleeve joint. Id. at 10, n.9. Such information was requested from the Staff in a companion Memorandum and Order issued with the Appeal Board's Decision on September 7, 1983. Id.

the ultimate discretion to review any decision of its subordinate boards, petitions for review of matters of law or policy "will not ordinarily be granted" unless important environmental, safety, common defense, antitrust, procedural or public policy questions are involved. 10 C.F.R. § 2.786(b)(4).

Decade has raised three issues in its Petition for which Commission review is sought. It has labeled the issues as follows:

- 1. Linkage between sleeving and failure;
- 2. Applicable rules require an assessment of safety;
- 3. Importance of inspectability concern. Petition at 3, 5, 9.

Decade's first two concerns meet the standard of 10 C.F.R.
§ 2.786(b)(2)(ii) in that they were previously raised before the Appeal
Board. Decade's third issue does not. A careful reading of Decade's
appeal brief reveals no mention of inspectability of the upper sleeve
joint as a matter before the Appeal Board. Decade's assertion (Petition
at 9-10) that this issue was raised before the Licensing Board is not
responsive to the requirement of 10 C.F.R. § 2.786(b)(2)(ii). Section
2.786, by its own terms, contemplates a review of Appeal Board, not
Licensing Board, decisions or actions. Nor does Decade's Petition contain
a statement as to why this matter could not have been raised before the

Decade does not allege any errors of fact by the Appeal Board as contemplated in 10 C.F.R. § 2.786(b)(4)(ii).

As noted <u>supra</u>, the Appeal Board "determined" that Decade appeared to raise these two issues on appeal. ALAB-739 at 4. At the same time, however, the Appeal Board commented on Decade's failure to conform its appellate filings to the Commission's Rules of Practice, which made it difficult to accurately discern which of its exceptions it pursued in the Brief. <u>Id.</u>, n.4.

the Appeal Board in accordance with 10 C.F.R. § 2.786(b)(2)(ii). Moreover, Decade's third issue does not come within the exception of matters raised sua sponte by the Appeal Board. The Appeal Board did follow its "long standing practice" of conducting a sua sponte review of the Initial Decison and the underlying record. ALAB-739 at 9. And, as noted supra, n.4, the Appeal Board requested further information from the Staff on inspectability. Neither of these actions constitutes "a matter raised sua sponte by an Appeal Board" pursuant to 10 C.F.R. § 2.786(b) (4)(iii). Accordingly, Decade's third issue, concerning inspectability of the upper sleeve joint should be summarily rejected as not having been raised before the Appeal Board without explanation of why it could not have been raised, pursuant to 10 C.F.R. § 2.786(b)(2)(ii).

As stated above, the Staff believes that Decade's first two issues in its Petition were raised before the Appeal Board within the meaning of 10 C.F.R. §§ 2.786(b)(2)(ii) and (b)(4)(iii). These issues constitute matters of law, and, in the case of the second issue, application of Commission policy. Before discussing the substance of Decade's issues, it is important to note that 10 C.F.R. § 2.786 is not a vehicle to pursue an appeal as of right. As stated in that section the Commission may, in its discretion, review decisions or actions of an Appeal Board "in cases of exceptional legal or policy importance." 10 C.F.R. § 2.786(a). A petition for review must be filed "on the ground that the decision or action is erroneous with respect to an important question of fact, law, or policy." 10 C.F.R. § 2.786(b)(1). Decade does not assert, nor does it provide any information to demonstrate that its issues are

"important" within the ambit of section 2.786 of the Commission's Regulations. Morrover, on their face, the issues raised by Decade do not appear to raise an important question of fact, law or policy. Rather, they simply constitute matters upon which Decade's views have been rejected by the Boards below. Since, pursuant to 10 C.F.R. § 2.786(b)(4)(i), the Commission will not ordinarily grant a petition for review unless such "important" matters are raised, and Decade has not met this requirement, Decade's Petition should be denied on this basis.

Even assuming <u>arguendo</u> that the issues Decade wishes to raise are appropriate for Commission review, Decade has misinterpreted the applicable law and policy and its Petition should be denied on these grounds. Decade's first claim is that that Appeal Board erroneously upheld the Licensing Board in its summary disposition of Decade's contention concerning the consequences of steam generator tube failures. Petition at 3. This matter arose in the context of summary disposition when Decade filed its Motion Concerning Litigable Issues before the Licensing Board on July 21, 1982.7/

In its Summary Disposition Decision, the Licensing Board dismissed Decade's contention as irrelevant since no showing had been made that tube sleeving was connected to tube failure. LBP-82-88, 16 NRC at 1342. In its brief before the Appeal Board, Decade's only attempt at connecting sleeving to tube failure was an assertion concerning the possibility of concentration of impurities in the annulus between a tube

An explanation of the procedure used by the Licensing Board may be found in LBP-82-88, 16 NRC 1335, 1339-1341 (1982) and ALAB-739, Slip op. at 2, n.2.

and its sleeve. Brief at 6, cited in Petition at 3. Based on this bare assertion, Decade leaps to the conclusion that sleeving induces tube failures. Id., cited in Petition at 5. This argument was properly rejected by the Appeal Board. Decade's allegation concerning "concentration effects" in the tube-sleeve annulus was summarily disposed of by the Licensing Board on the facts. LBP-82-88, 16 NRC at 1348. Decade did not seek review of that dismissal before the Appeal Board; rather, Decade attempted to use its rejected allegation to demonstrate a link between sleeving and tube failure. Petition at 6. The Appeal Board, upon a consideration of the applicable caselaw, affirmed the Licensing Board on the basis that, absent any showing that sleeving produces tube failures, an allegation of the consequences of such failures is irrelevant and beyond the scope of the instant proceeding. ALAB-739, Slip op. at 5-7. The Appeal Board properly applied the Commission's caselaw and Commission review of this portion of the decision of the Appeal Board is not warranted.

Decade's second claim of error deals with the level of assurance necessary for the Licensing Board to determine if the proposed sleeving process is safe. See ALAB-739, Slip op. at 7. Specifically, in Decade's own words:

Contrary to the Appeal Board's assertions, the statutes and rules require a rational decision-making process in which conclusions as to adequate levels of safety cannot be meaningless boiler plate, but maken must be based upon a probabilitistic [sic] assessment of probabilities and consequences. Concocting a standard ostensibly pegged to presently evaluated risks is arbitrary when the existing risks have, themselves, never been evaluated. Petition at 9.

Irrespective of Decade's views on what is required by the "statutes and rules," the Commission has not imposed such requirements. As correctly stated by the Appeal Board, "「clonsideration of the probability and magni-

tude of steam generator tube failures is not required by the Commission's existing regulations." ALAB-739, Slip op. at 8.

Moreover, the Commission has made the following policy statement:

The qualitative safety goals and quantitative design objectives contained in the Commission's Policy Statement will not be used in the licensing process or be interpreted as requiring the performance of probabilistic risk assessments by applicants or licensees during the evaluation period. ... The staff should continue to use conformance to regulatory requirements as the exclusive licensing basis for plants.

Policy Statement on Safety Goals for the Operation of Nuclear Power Plants, 48 Fed. Reg. 10772 (March 15, 1983).

Finally, as noted p. 3, <u>supra</u>, the Licensing Board did inquire into the possibility of undetected sleeve flaws and the seriousness of their occurence. <u>See ALAB-739</u>, Slip op. at 9.

Therefore, Decade's second claim of Appeal Board error is without merit and should be denied.

# IV. CONCLUSION

For the reasons discussed above, the Commission should deny Decade's Petition for Commission Review of ALAB-739.

Respectfully submitted,

Richard G. Bachmann Counsel for NRC Staff

Dated at Bethesda, Maryland this 11th day of October, 1983

#### UNITED STATES OF AMERICA NUCLEAR REGULATORY COMMISSION

### BEFORE THE COMMISSION

In the Matter of
WISCONSIN ELECTRIC POWER COMPANY
(Point Beach Nuclear Plant,
Units 1 and 2)

Docket Nos. 50-266 50-301

### CERTIFICATE OF SERVICE

I hereby certify that copies of "NRC STAFF'S ANSWER IN OPPOSITION TO WISCONSIN'S ENVIRONMENTAL DECADE PETITION FOR KEVIEW" in the above-captioned proceeding have been served on the following by deposit in the United States mail, first class or, as indicated by an asterisk, through deposit in the Nuclear Regulatory Commission's internal mail system, this 11th day of October, 1983:

Thomas S. Moore, Chairman
Atomic Safety and Licensing Appeal Board
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555 \*

Dr. W. Reed Johnson Atomic Safety and Licensing Appeal Board U.S. Nuclear Regulatory Commission Washington, D.C. 20555 \*

Dr. Reginald L. Gotchy
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#### UNITED STATES OF AMERICA NUCLEAR REGULATORY COMMISSION

# BEFORE THE COMMISSION

In the Matter of
WISCONSIN ELECTRIC POWER COMPANY
(Point Beach Nuclear Plant,
Units 1 and 2)

Docket Nos. 50-266 50-301

# CERTIFICATE OF SERVICE

I hereby certify that copies of "NRC STAFF'S ANSWER IN OPPOSITION TO WISCONSIN'S ENVIRONMENTAL DECADE PETITION FOR REVIEW" in the above-captioned proceeding have been served on the following by deposit in the United States mail, first class or, as indicated by an asterisk, through deposit in the Nuclear Regulatory Commission's internal mail system, this 11th day of October, 1983:

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Attachment 5

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October 17, 1983

DOCKETED

# UNITED STATES OF AMERICA NUCLEAR REGULATORY COMMISSION

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# BEFORE THE COMMISSION

In the Matter of

WISCONSIN ELECTRIC POWER COMPANY

(Point Beach Nuclear Plant,
Units 1 and 2)

Docket

Docket Nos. 50-266 (OLA-1) 50-301 (OLA-1)

# LICENSEE'S OPPOSITION TO DECADE PETITION FOR REVIEW OF ALAB-739

# I. INTRODUCTION

<sup>1/</sup> As authorized by the license amendment, a repair program involving the sleeving of steam generator tubes in Unit 2 was completed on June . 11, 1983.

<sup>2/</sup> Decade's Petition erroneously indicates that the February 4, 1983 Initial Decision was issued on March 16, 1983. See Petition at 1.

<sup>3/</sup> Petitioner failed to serve the Petition on Licensee's counsel of record in this proceeding. As explained in counsel's October 7, 1983 letter to the Secretary of the Commission, counsel of record did not receive a copy of the Petition until October 6, 1983. Accordingly, Licensee's response is due October 17, 1983.

### II. BACKGROUND

The background of this proceeding is detailed in the "NRC Staff's Answer In Opposition To Wisconsin's Environmental Decade Petition For Review," dated October 11, 1983.

### III. DISCUSSION

The Commission's Rules of Practice authorize petitions to the Commission for review of decisions or actions of the Appeal Board.

See 10 C.F.R. § 2.786. These procedures were established to constitute:

a discretionary review system, based in part on the certiorari practice of various federal agencies and the United States Supreme Court....

41 Fed. Reg. 54206 (December 13, 1976). Discretionary Commission review of Appeal Board decisions is undertaken only "in cases of exceptional legal or policy importance ...." 10 C.F.R. § 2.786(a).

A petition for Commission review of an Appeal Board decision must include, inter alia:

(ii) A statement (including record citation) where the matters of fact or law raised in the petition . . . were previously raised before the [Appeal Board] and, if they were not, why they could not have been raised.

10 C.F.R. § 2.786(b)(2). The Commission will not review matters that could have been but were not raised before the Appeal Board. 10 C.F.R. § 2.786(b)(4)(iii). Similarly, the Commission will not review questions of fact unless the Appeal Board "has resolved a factual issue necessary for decision in a clearly erroneous manner contrary to the resolution of that same issue by the [Licensing Board]..." 10 C.F.R. § 2.786(b)(4)(iii). Petitioner does not allege any such errors of

fact by the Appeal Board.

Petitioner seeks Commission review of three issues, discussed seriatim below.

# A. The "Linkage" Argument

Petitioner first asserts that the Appeal Board erred in affirming the Licensing Board's dismissal of a contention (Contention 1) which alleged, generally, the consequences of steam generator tube failures, Petition at 3-5, but which did not relate the cause of such failures to the sleeving repair. The Appeal Board affirmed the Licensing Board's reasoning that the contention was beyond the scope of the proceeding, since Petitioner had "failed to provide any link demonstrating that sleeving may lead, or be related, to tube failures."

ALAB-739, 18 N.R.C. \_\_, slip op. at 7; see generally id. at 4-7.

Petitioner claims that it did assert such a linkage by advancing a contention in the proceedings below which alleged that the presence of the crevice between the sleeve and the original tube would create an environment conducive to tube degradation.

Petitioner did indeed advance such an allegation before the Licensing Board (Contention 3(b)), but failed to substantiate it in

<sup>4/</sup> In addition, both Licensee and the NRC Staff presented affidavits in support of summary disposition of Contention 1 which demonstrated that the consequences of tube failure alleged in Contention 1 would not occur as a result of sleeving steam generator tubes. See Licensee's Response to Decade's Motion Concerning Litigable Issues, August 9, 1982, at 52-55; NRC Staff Response to Decade's Motion Concerning Litigable Issues, August 16, 1982, at 18-21. Petitioner presented no affidavits in support of its Contention 1 or in refutation of Licensee's and the NRC Staff's affidavits.

any way. Both Licensee and the NRC Staff filed affidavits demonstrating that the tube-sleeve crevice would not present a more corrosive environment than that which unsleeved tubes normally experience. The Licensee's affidavit further explained that the sleeving material is more resistant to corrosive degradation than the original tube material.

Petitioner filed no affidavits either in support of its own position or in refutation of the affidavits of Licensee and the NRC Staff.

Based on the affidavits before it, the Licensing Board factually disposed of Contention 3(b) on summary disposition, including Petitioner's allegations of "concentration effects" in the tube-sleeve crevice.

LBP-82-88, 16 N.R.C. 1335, 1348 (1982).

Despite the prehearing dismissal of Contentions 1 and 3(b), the Licensing Board nevertheless instructed the parties to address the overall safety considerations associated with sleeving (including the consequences of undetected tube leakage) at the evidentiary hearing on the remaining contention, which concerned the adequacy of eddy current testing. LBP-82-88, 16 N.R.C. at 1338. Although Petitioner presented no testimony at the hearing, both Licensee and the Staff adduced extensive evidence on the overall safety implications of sleeving, including detailed consideration of the tube-sleeved crevice environment which is the subject of Petitioner's Contention 3(b).

<sup>5/</sup> See "Licensee's Response to Decade's Motion Concerning Litigable Issues" (August 9, 1982), at 62-63; "NRC Staff Response to Decade's Motion Concerning Litigable Issues" (August 16, 1982), at 29.

<sup>6/</sup> LBP-83-4, 17 N.R.C. at 120-22 (temperature and accumulation of corrosiv materials in annulus less than for unsleeved tube).

Thus, as the Licensing Board observed in its Initial Decision, the evidentiary record developed at the hearing goes well beyond the efficacy of eddy current testing, to include:

thorough consideration of both the likelihood of not finding flaws and the consequences of not finding them.

LBP-83-4, 17 N.R.C. at 113, n.8. The Licensing Board concluded that the sleeved tubes are not only "safer than other unsleeved tubes," but also "safe, without reference to whether they are safer than unsleeved tubes." LBP-83-4, 17 N.R.C. at 111.

Against this background, there are several reasons why Petitioner's first allegation of Appeal Board error cannot lie. Petitioner's sole claim here is that, because it advanced Contention 3(b), the Appeal Board was incorrect in affirming the Licensing Board's finding that Petitioner had not demonstrated a linkage between sleeving and the consequences of tube failure alleged in Contention 1. In fact, the Licensing Board considered, substantively and comprehensively, the Contention 3(b) allegations, rejecting the allegations first on summary disposition, and then again at the evidentiary hearing after (effectively) giving Petitioner another chance to develop didentiary support for its allegations. Petitioner failed to avail itself of either opportunity, and has badly mischaracterized the record in asserting that the Licensing Board refused to consider the effects of tube failure, Petition at 3, and that the Appeal Board ignored the issue, id. at 5.

Beyond the fact that Petitioner's claim is simply incorrect, Petitioner has failed to satisfy the threshold requirements of the Rules of Practice for discretionary Commission review of an Appeal

Board decision. The most obvious infirmity is that Petitioner never sought Appeal Board review of the disposition of Contention 3(b).

Indeed, Petitioner's only reference to the crevice environment before the Appeal Board appeared to be a belated attempt to demonstrate a link between sleeving and tube failure, in conjunction with its appeal of the dismissal of its Cortention 1. See "Decade's Brief In Support of Its Exceptions To Board's Initial Decision" (March 16, 1983), at 6.

Petitioner's failure to challenge the Licensing Board's disposition of Contention 3(b) before the Appeal Board (or to explain why the issue could not have been raised there) precludes Commission consideration of Petitioner's first assertion of Appeal Board error here. See 10 C.F.R.

5 2.786(b) (4) (iii).

Commission review of the first assertion of error is further precluded because the issue raised does not rise to the level of "an important matter that could significantly affect . . . the public health and safety . . . . " 10 C.F.R. § 2.786(b)(4)(i). Although Petiticher strains to frame its concern as an exceptional issue of law and public policy, its Petition merely reiterates allegations which have already been resolved once -- and, in some cases, twice -- adversely to it.

Because the Licensing Board gave comprehensive and exhaustive

<sup>7/</sup> The parties, like the Appeal Board, had great difficulty in determining what Petitioner was challenging in its exceptions. See generally, ALAB-739, 18 N.R.C. \_\_, slip op. at 4-5, n.4. Petitioner's brief to the Appeal Board reiterated the allegations made in its Contention 3(b), but alleged no Licensing Board error in dismissing that contention, or in the Licensing Board's factual treatment of that issue, and failed to relate that passage in its brief to any of its exceptions.

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consideration to the safety aspects of sleeving (including the tubesleeve crevice environment), both in summary disposition proceedings
and at the evidentiary hearing, and because the Appeal Board affirmed
the Licensing Board's findings, and because, even yet, Petitioner has
provided no explanation of why those findings were in error, there is
no question that the Commission is not here presented with an important
issue warranting its discretionary review.

# B. The Safety Standard Issue

Petitioner next asserts that the Appeal Board erred in affirming the Licensing Board's holding that the Licensing Board is neither required nor permitted to modify the safety standards established by the Commission. In essence, Petitioner argues that the Licensing Board should first have determined the consequences of steam generator tube failure before addressing whether the sleeved tubes would meet existing safety standards, i.e., "have an extremely low probability of abnormal leakage, of rapidly propagating failure, and of gross rupture."

10 C.F.R. Part 50, App. A, General Design Criterion 14 ("GDC-14").

Petitioner does not dispute that the Licensing Board evaluated the sleeving process against GDC-14. <u>See</u> LBP-83-4, 17 N.R.C. at 114, 128. Nor has Petitioner argued -- either before the Appeal Board or the Commission -- that the Licensing Board erred in its determination that the established standard, GDC-14, had been met. Rather,

<sup>8/</sup> Petitioner's characterization of the applicable standard, GDC-14, is subtly but significantly misleading. The standard is not merely a "low probability" of failure, as Petitionar emphasizes (Petition at 6,7), but rather "an extremely low probability" of failure (emphasis added).

Petitioner makes sweeping references to unspecified "statutes and rules" which allegedly require "a probabilistic assessment of probabilities and consequences." Petition at 9. To the contrary, as the Appeal Board noted, "[c]onsideration of the probability and magnitude of steam generator tube failures is not required by the Commission's existing regulations." ALAB-739, 18 N.R.C. at \_\_\_, slip op. at 8. Given the Appeal Board's affirmance of the Licensing Board's straightforward and exhaustive application of the undisputed applicable safety standard -- and in the absence of any allegation of error in the evaluation of the safety implications of sleeving against that standard -- Petitioner's second assertion of error fails to merit yet a third level of agency review.

Indeed, the Commission itself has already recently clarified the role of probabilistic risk assessment in its regulatory scheme:

The qualitative safety goals and quantitative design objectives contained in the Commission's Policy Statement will not be used in the licensing process or be interpreted as requiring the performance of probabilistic risk assessments by applicants or licensees during the evaluation period... The staff should continue to use conformance to regulatory requirements as the exclusive licensing basis for plants.

"Policy Statement on Safety Goals for the Operation of Nuclear Power Plants," 48 Fed. Reg. 10775 (March 14, 1983) (emphasis added). And, in any event, as discussed above in Section III.A, the Licensing Board actually did inquire into the possibility of undetected flaws in sleeves and the consequences of their occurrence. See ALAB-739, 18 N.R.C. at \_\_, slip op. at 9. Accordingly, Petitioner's second assertion of Appeal \_\_\_\_\_\_. Board error should be denied.

# C. The Inspectability Issue

Finally, Petitioner claims that the Licensing Board erred in dismissing its contention relating to the inspectability of the upper joint of the sleeved tube (Contention 3(a)). Both Licensee and the NRC Staff moved for summary disposition of that contention, with supporting affidavits which demonstrated that: (a) at the transition areas (which include the upper joint), standard eddy current techniques can detect degradation smaller than that which would cause a tube rupture during normal operation or postulated accidents; (b) available equipment and techniques can provide inspectability of the upper joint comparable to standard techniques on the non-transition portions of the sleeve; (c) inspectability of sleeved tubes is sufficient to locate degradation with the potential for tube rupture; (d) the region of the tube where the upper joint is located has been virtually free of corrosion, and corrosion is not expected to occur in the immediate vicinity of the upper joint; and (e) undetected corrosion in the vicinity of the upper joint (if it should occur) would not be a significant safety concern because, even under the worst postulated conditions, leakage at that location would be constrained by the sleevetube configuration such that it would be detected and the plant could be safely shut down in an orderly manner. Petitioner provided no affidavits contesting these sworn factual statements and, on that basis,

<sup>9/</sup> See "Licensee's Response to Decade's Motion Concerning Litigable Issues" (August 9, 1982), at 60-61. See also "NRC Staff Response to Decade's Motion Concerning Litigable Issues" (August 16, 1982), at 26-27.

the issue of upper joint inspectability was dismissed by the Licensing Board on summary disposition. See LBP-82-88, 16 N.R.C. at 1349.

Petitioner failed to challenge the summary disposition of its Contention 3(a) before the Appeal Board, and has not explained why the issue could not have been raised before the Appeal Board. Accordingly, pursuant to 10 C.F.R. § 2.786(b)(4)(iii), Petitioner is barred from  $\frac{10}{10}$  seeking discretionary Commission review of the matter.

### III. CONCLUSION

For all of the foregoing reasons, the matters raised in the Petition are not properly reviewable by the Commission under 10 C.F.R. § 2.786. The Petition must therefore be denied.

Respectfully submitted,

SHAW, PITTMAN, POTTS & TROWBRIDGE

4 44 4

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Dated: October 17, 1983

<sup>10/</sup> Petitioner's assertions that it raised this issue before the Licensing Board, Petition at 2, 9-10, are of no moment. The regulation governing discretionary Commission review on its face contemplates review of Appeal Board -- not Licensing Board -- actions. See 10 C.F.R. § 2.786.

Further, while the Appeal Board adhered to its "long standing practice" of conducting a sua sponte review of the Initial Decision and the underlying record, ALAB-739, 18 N.R.C. at \_, slip op. at 9, and though the Appeal Board did request some additional information on inspectability, the Appeal Board has never declared inspectability of the upper joint to be a sua sponte issue as that concept is defined in 10 C.F.R. § 2.785(b)(2) and used in 10 C.F.R. § 2.786(b)(4)(iii).

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# UNITED STATES OF AMERICA NUCLEAR REGULATORY COMMISSION

# DOCKETING & SERVING A SERVING

# BEFORE THE COMMISSION

WISCONSIN ELECTRIC POWER COMPANY ) Docket Nos. 50-266 (OLA-1)
(Point Beach Nuclear Plant, Units 1 and 2)

# CERTIFICATE OF SERVICE

This is to certify that copies of "Licensee's Opposition To Decade Petition For Review Of ALAB-739" were served, by deposit in the U.S. Mail, first class, postage prepaid, to all those on the attached Service List, this 17th day of October, 1983.

Brace W. Churchill, P.

Dated: October 17, 1983

#### UNITED STATES OF AMERICA NUCLEAR REGULATORY COMMISSION

# BEFORE THE COMMISSION

In the Matter of	)				
WISCONSIN ELECTRIC POWER COMPANY	)	Docket	No.	50-266 50-301	
(Point Beach Nuclear Plant, Unit 1)	)				

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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

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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 BRIEF IN SUPPORT OF ITS EXCEPTIONS
TO BOARD'S INITIAL DECISION

Pursuant to 10 C.F.R. §2.762, Wisconsin's Environmental Decade, Inc. ("Decade"), hereby submits its Brief in Support of Its Exceptions to Board's Initial Decision, dated February 11, 1983. This brief focuses on the refusal of the Atomic Safety and Licensing Board ("Board") to first establish the degree of assurance necessary to protect the public safety before it found that the level of assurance proffered was adequate, without waiving the other exceptions that are not specifically addressed in this brief due to limited time and resources.

THE BOARD REFUSED TO MAKE PREREQUISITE FINDINGS ON THE DEGREE OF ASSURANCE NECESSARY TO PROTECT THE PUBLIC SAFETY

As an administrative agency, the Nuclear Regulatory Commission ("Commission") and its designated agents must act according to clear standards, and may not act arbitrarily and capriciously. 42 U.S.C. §706.

Congress has established as the statutory standard to control the Commission's action:

"In any event, no license may be issued to any person

within the United States if, in the opinion of the Commission, the issuance of a license to such person would be inimical to the common defense and security or to the health and safety of the public." 42 U.S.C. §2133.

In turn, the Commission has established as the administrative regulation to control its conduct, as well as its Licensing Board's actions:

"In determining that a license will be issued to an applicant, the commission will be guided by the following

considerations:

"(a) The processes to be performed, the operating procedures, the facility and equipment, the use of the facility, and other technical specifications, or the proposals, in regard to any of the foregoing collectively provide reasonable assurance that the applicant will comply with the regulations in this chapter, including the regulations in Part 20, and that the health and safety of the public will not be endangered." 10 C.F.R. \$50.40(a). [Emphasis added.]

"The reactor coolant pressure boundary shall be designed, fabricated, erected, and tested so as to have an extremely low probability of abnormal leakage, of rapidly propagating failure, and of gross rupture." 10 C.F.R. Part 50 App. A. Crit. 14. [Emphasis added.]

The Board had before it below a proceeding to determine whether to approve a new procedure (sleeving) intended to repair one part of the reactor coolant pressure boundary (steam generator tubes) that is failing. Tr. 1385.

Sleeving involves the insertion of a nominal 3/4 inch tube, approximately [extremely thin] inch in wall thickness, into a nominal 7/8 inch tube, approximately .005 inch in wall thickness, from the confined radioactive primary side of the steam generator by temporary workers, and then joining the ends of the first tube to the inside face of the second tube by a complex proprietary process. Appl. Ex. 1.

When it made its determination as to whether to approve this sleeving process, the Board was not free to act arbitarily, but

new procedure was "inimical to the health and safety of the public," 42 U.S. C. §2133, whether the "public health and safety will be endangered", 10 C.F.R. §50.40(a), and whether it will provide a "low probability of abnormal leakage, of rapidly propagating failure or of gross rupture", 10 C.F.R. Part 50 App. A Crit. 14.

In making this factual determination of whether sleeving met these tests, the Board should have compiled evidence on the consequences to "the health and safety of the public" from a sleeve induced tube failure under various accident conditions, 10 C.F.R. 350.40(a), and weigh that in relation to whether there is a "low probability" of such a failure, 10 C.F.R. Part 50 App. A Crit. 14.

Instead of proceeding rationally and in accordance with the Commission's regulations, however, the Board improperly excluded as irrelevant evidence on both the safety consequences of a tupe failure and on the number of such failures sufficient to precipitate those consequences. By excluding this evidence, the Board incapacitated its ability to ascertain "how safe is safe enough", because a lower probability of occurrence is required when the consequences of its occurrence are more injurious.

In our Motion Concerning Litigable Issues, dated July 21, 1982, for example, we proffered the following evidence in support of the proposition that tube failures could precipitate uncoolable conditions in the core, and that the failure of just one tube out of 6520 tubes could lead to these conditions, such

that an extremely high degree of assurance was required:

"The basis for our concern about the present course of actions being pursued by the task force \* \* 1 lies in the indeterminancy of the adequacy of the present code formulations. \* \* \* [A] clear demonstration of coolability by wide margins is necessary to satisfy this uncertainties[sic] regarding the ECCS capability; that is, cooling by narrow margins would have to be regarded by him as an essentially uncoolable situation. \* \* \* Some of the essential areas of uncertainty in predicting ECCS performance are reflooding and steam binding. \* \* \* Of paramount concern in this area, however, is the possible effect of steam generative tube failures on the ECCS." REG ECCS Task Force, Memorandum to ECCS Task Force Members, dated June 16, 1972.

"[I]t was the consensus of the [American Physical Society] group that steam generator tube failure during a severe LOCA could occur frequently. Moreover, it appears that rupture of a few tubes (and the order of one to ten) dumping secondary steam into the depressurized primary side of the reactor system could exacerbate steam binding problems and induce essentially uncoolable conditions in the course of a LOCA \* \* \*." Report to the American Physical Society by the Study Group on Light-Water Reactor Safety, 4/ Review of Modern Physics (Summer 1975), at p. 585.

"Furthermore, serious weakening of these tupes from similar causes [of tube degradation] could, in the event of a loss-of-coolant-accident (LOCA), result in tube failures that would release the energy of the secondary system into the containment." Regulatory Guide 1.83 (Rev. 1), at p. 1.

"If the shock loads imposed by the LOCA cause a critical number of tubes to fail, say by a double ended (guillotine) break, the inflow from the secondary side can cause choking of flow during ECC preventing adequate cooling of the core. The critical number of tubes is relatively small." Office of Nuclear Reactor Regulation, NRC Program for the Resolution of Generic Issues Related to Nuclear Power Plants(1978), NUREG-0410, at p. C-29.

"The failure of a number of steam generator tubes as a result of the pressure transients during a loss of coolant accident could render the emergency core cooling system inerfective." Risk Assessment Review Group, Report to the U. S. Nuclear Regulatory Commission(1978), NUREG/CR-0400, at p. 48.

"Recent studies have shown that as few as ten tubes would need to have ruptured during a LOCA (assuming a leakage rate of 130 gal/min per ruptured tube) before the cladding temperature would be significantly affected (i.e. peak cladding temperature (PCT) [greater than] 2200°F)." Evaluation of Steam Generator Tube Rupture Events(1980), NUREG-0651, at p. I-2.

"One area [of research] that has not been considered sufficiently using recent accident analysis codes is estimation of the consequences of a transient or some other failure that might lead in turn to the failure of a significant number of tubes. Such failures could lead to the degradation of ECCS function." Office of Reactor Safety Research Group, Report to the President's Nuclear Safety Oversight Committee(1981), at p. I-2.

"The consequences of multiple tube failure, excess of the design base, have not yet been rigorously studied. \* \* \* In the event of a LOCA, the core reflood rate could be retarded by steam binding. \* \* \* S[team] G[enerator] tube failures would create a secondary to primary leak path which aggravates the steam binding effect and could lead to inerfective retlooding of the core." Nuclear Reactor Research, Steam Generator Status Report (Feb. 1982), at p. 2 to 3.

In response to this proferred evidence during the summary disposition phase of the proceeding, the Board summarily excluded even the consideration of this critical evidence with the statement that:

"Decade's allegedly litigable issues \* \* \* do not relate to the safety of tube sleeving and are irrelevant to an application for a license amendment concerning steam generator tube sleeving. These alleged issues are relevant to tupe sleeving only if tube weakening is assumed to have occurred. \* \* \*

"This is not an application to build or operate a nuclear power reactor. In an amendment proceeding, the relationship of steam generators to the remainder of the plant is not germane. In this case, applicant already has an operating license, granted after the safety of its reactor was considered." Memorandum and Order, dated October 1, 1982, at pp. 7 to 8.

The Board stated that this evidence is relevant only "if tupe weakening is assumed to have occurred," and then, without ever ruling on the possibility of tube weakening, it determined

the safety issue to be irrelevant.

For the limited purpose of making a pre-trial ruling on which issues may be ajudicated, it would be impossible to preclude the possibility of failures in sleeved tubes, and therefore the exclusionary ruling cannot stand.

The previous problem of corrosion-inducing environments in confined spaces such as the tube-to-tubesheet crevice in steam generators at pressurized water reactors is well known. Nuclear Reactor Regulation, Steam Generator Tube Experience (1982), NUREG-0886, at p. 14. In turn, the insertion of sleeves inside the original tubes creates a new confined space, this time in the sleeve-to-tube annulus, and, in those cases where the original tube is degraded through-wall, secondary water with its inevitable impurities will enter the annulus and concentrate corrodents. This fact cannot be in serious dispute inasmuch as it is admitted in the Licensee's own application:

"The behavior of the annulus between the tube and sleeve, with respect to the capability to concentrate secondary side bulk water inpurities [sic], is judged to be similar to that of that original tube/tubesheet crevice." Appl. Ex. 1, at p. 6.7

Thus, the possibility of failures in tube failures must be acknowledged, and the Board's reasoning for excluding consideration of safety must fall.

It may be expected that the Licensee will respond with claims that the effect of failures in sleeved tubes may be delayed or retarded relative to failures in unsleeved tubes for various reasons. But that kind of response of wholly irrelevant.

Regardless of the fraility of these expected claims, even if taken as true, they would only speak to the ultimate weighing of

the merits by the decision maker. They would not go to the pretrial question of excluding from ajudication all evidence on the consequences of a failure and on the number of failures necessary to precipitate those consequences, evidence which is essential to drawing conclusions on whether the public health and safety is adequately protected.

The Board also implied that these safety issues have been dealt with before, such that any further consideration would be duplicative. It should be emphasized that this is patently untrue. In fact, the Commission has not yet formally investigated the consequences of steam generator tube failure during loss-of-coolant-accident ("LOCA") conditions -- whether in a sleeved or unsleeved tube, as shown by the statements of the Commission's own staff, as well as by outside agencies:

"One area [of research] that has not been considered sufficiently using recent accident analysis codes is estimation of the consequences of a transient or some other failure that might lead in turn to the failure of a significant number of tubes. Such failures could lead to the degradation of ECCS function." Office of Reactor Safety Research Group, Report to the President's Nuclear Safety Oversight Committee(1981), at p. I-2.

"The consequences of multiple tube failure, excess of the design base, have not yet been rigorously studied. \* \* \* In the event of a LOCA, the core reflood rate could be retarded by steam binding. \* \* \* S[team] G[enerator] tube failures would create a secondary to primary leak path which aggravates the steam binding effect and could lead to inertective reflooding of the core." Nuclear Reactor Research, Steam Generator Status Report(Feb. 1982), at p. 2 to 3("Status Report").

"At the times Point Beach Unit 1, Surry Unit 2, and Prairie Island Unit 1 were licensed, there were no specific analysis requirements for S[team] G[enerator] T[ube] rupture events. \* \* \*

"The starf does not require licensees to analyze loss-of-coolant accidents (LOCAs) concurrent with an SGT break,

but does require all LOCA analyses to include the effects of the plugged tubes on reduced RCS flow." Nuclear Reactor Regulation, Evaluation of Steam Generator Tube Rupture Eyents (March 1980), NUREG-0651, at p. 1-2.

In its final order, the Initial Decision dated February 4, 1983, the Board reiterated its refusal to consider the magnitude of the consequences of a ruptured sleeved tube in order to determine the level of assurance required. Id., at p. 5 n. 8. This time the Board defended its action by a line of argument that concluded that the probabilities of a failure is lower in a sleeved tube than in a sleeved tube:

"We therefore conclude that there is no serious safety or environmental issue of which we are aware that requires us to undertake our own further inquiry." Id., at p. 34.

As stated above, the Commission has never made any determination whether the possibility of a failure in an unsleeved tube during LOCA poses an unacceptable risk. That being given, it is totally irresponsible to claim that there "is no serious safety issue" from failures in sleeved tubes solely with reference to the possibility of failures in unsleeved tubes which has never been considered.

The sheer enormity of the Commission's steadfast refusal over a period that spans ten years to even consider the safety implications of failing steam generator tubes must be recounted. The Commission, and its predecessor Atomic Energy Commission, has refused to act on these concerns from the very begining when they were first raised in 1972 by its own scientists. Indeed, the Atomic Energy Commission later conceded that, although there had been some discussion of the subject, no one was even assigned to study the question. In the Matter of Generic ECCS Rule-Making,

AEC Docket RM-50-1, Tr. 2335.

Two years later, citizen organizations uncovered these concerns that had been submerged inside the bureaucracy and attempted to insert them into a pending Atomic Energy Commission generic safety hearing. But, the agency abruptly cut off questions on the subject. Id., Tr. 2337.

That refusal to act on safety concerns nearly a decade ago on its own or when pressed by others was criticized soon thereafter by the nation's most prestigious scientific body, the American Physical Society, which found that "the potential for steam generator tube leakage is a serious problem which was precluded from evaluation at the [generic safety hearings in 1973]." Report to the American Physical Society bythe Study Group on Light -Water Reactor Safety, 47 Review of Modern Physics(Summer 1975), at p. S-85.

Chastized by the American Physical Society, the tube integrity issue was raised in a succeeding licensing proceeding a year later, involving the Prairie Island Nuclear Plant, but the record was closed without resolution after "the staff made a commitment \* \* \* to conduct a 'generic appraisal of the likelihood and consequences of the customary transient and accident analyses with assumed tube failure'". In the Matter of Northern States Power company, Docket 50-282 and 50-306, Dec. of ALAB (Sept. 2, 1976), at p. 198, n. 41.

However, this commitment was not fulfilled. Two years later, another independent scientific panel known as the Lewis Committee pointed to the still unresolved nature of the problem, Risk Assessment Review Group, Report to the Nucl.



Regulatory Commission(1978), NUREG/CR-0400, at p. 48, and three years later the agency's starf was still discussing what should be done to evaluate the problem at some point in the future.

Nucler Regulatory Commission, Task Action Plans for Unresolved Safety Issues Relted to Nuclear Plants(1980), NUREG-0649, at A-3.

Then, beginning in 1979 -- seven years after the first warning -- the nuclear industry experienced the outbreak of runaway corrosion in the steam generators of several nuclear plants including Point Beach. Nuclear Reactor Regulation, team Generator Tube Experience(1982), NUREG-0886, at pp. 14 to 31.

Prodded by the threat of legal action from concerned citizens, the Nuclear Regulatory Commission agreed to hold a series of hearings on Point Beach, but, following in its earlier footsteps, the agency restricted the scope of these hearings in such a way as to exclude testimony on the very safety questions which were at issue.

This action was so far outside the bounds of responsible behavior that two of the five Commissioners issued a stinging dissent, stating in relevant part:

"One need not have high expectations about the contribution that a hearing might make to the safety of the plant in any given case to be distressed abou the levels of illusion involved \* \* \*.

"The agency so misstates history that it is clearly either incapable of giving an accurate account of its own past doings or else its legal positions are being chosen after the desired result (in this case no meaningful opportunity for hearing) has been decided.

"The hearing being offered \* \* \* is a sham \* \* \*.

"Most unfortunate of all is the way in which the Commission's pell melt retreat from meaningful public inquiry \* \* \* suggests to the staff and the outside world that the agency is run by people living in fear of their own citizenry.

"In the wake of the Kemeny and Rogovin Report's calls for more effective public involvement, the Commission responds with a hearing offer that is a transparent sham." In the Matter of Wisconsin Electric Power Company Docket 50-266, Order (May 12, 1980).

The Board's retusal to act rationally and in accordance with applicable regulations in the case at bar continues the sad legacy left by the Commission itself. Unless rectified on appeal, that unwavering adbdication of regulatory responsibility will someday, soon, inevitably lead to a nuclear nightmare.

DATED at Madison, Wisconsin, this 16th day of March, 1983.

Respectfully submitted,

WISCONSIN ENVIRONMENTAL DECADE, INC.

py

PETER ANDERSON Co-Director

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#### UNITED STATES OF AMERICA

#### NUCLEAR REGULATORY COMMISSION

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BRANCH VICE

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 BRIEF IN SUPPORT OF ITS EXCEPTIONS TO BOARD'S INITIAL DECISION

# AFFIDAVIT OF MAILING

STATE OF WISCONSIN)

COUNTY OF DANE

CAROL PFEFFERKORN, being duly sworn on oath, deposes and states that on March 16, 1983, she personally deposited into the United States First Class Mails, a copy of the Decade's Exceptions to the Board's Initial Decision, in the above-captioned matter, to the following Service List.

Atomic Safety and Licensing Appeal
Board
Attn: Peter B. Bloch, Ch.
Dr. Jerry R. Kline
U. S. Nuclear Regulatory Commission
Washington, DC 20555

Washingto

1800 M Street, NW Washington, DC 20036
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Bruce W. Churchill

Shaw, Pittman & Potts

Richard G. Bachmann, Esq. US Nuclear Regulatory Comm. Washington, DC 20555

Dr. Bugh C. Paxton 1229 41st St. Los Alamos, New Mexico 87544

Carol Pfefferkorh

Subscribed and sworn to before me this leth day of March, 1983.

Notary Public, State of Wisconsin My commission is permanent.