

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of)	
WISCONSIN ELECTRIC POWER COMPAN.)	Docket Nos. 50-266
)	50-301
(Point Beach Nuclear Plant,)	(Repair to Steam Generator
Units 1 and 2))	Tubes)

AFFIDAVIT OF TIMOTHY G. COLBURN

I, Timothy G. Colburn, being duly sworn, depose and state:

1. I am presently the Project Manager assigned to the Point Beach Nuclear Plant, Units 1 and 2, Docket Nos. 50-266 and 50-301, in the Office of Nuclear Reactor Regulation, Division of Licensing, Operating Reactor Branch No. 3 of the Nuclear Regulatory Commission.

2. The purpose of this affidavit is to address questions 1, 3 and 4 raised by the Licensing Board in the on-the-record telephone conference of September 9, 1982. Tr. 1178-1341.

3. Board Question No. 1

Judge Bloch addressed the following question to Staff counsel:

On page 4 of the SER I think that there is a typographical error. There is a sentence that says "A functional requirement for reference upper joints is that they must be sufficiently leak-limiting such that the total leakage between the primary and secondary through all the sleeves, taken together, is less than the technical specification leak rate limit during normal operation."

Mr. Bachmann, is that right, or should it be for all of the tubes in the generator? In other words, there is no special leak limit on the sleeves, is there? Tr. 1331.

Staff counsel replied:

No, sir, there isn't. I do not have the SER in front of me, but your reading of that, I would say without fear of contradiction that that should be the tubes, not the sleeves. Tr. 1331.

4. The following is a clarification of Staff counsel's reply.

The technical specification limit on primary to secondary leakage that applies to the steam generator applies to the entire steam generator and not just the sleeved tubes. There is no specific leak rate limit on any individual sleeved tube.

5. Page 4 of the SER refers to the leak limiting capability of the reference joint as it pertains to its effect on the overall primary to secondary leakage.

6. In order to provide assurance that the leak limiting capability of the reference joint will not "limit" the leakage during normal operation to some number of gallons per day in excess of the technical specification limit (requiring an immediate plant shutdown), Westinghouse made it a functional requirement that leakage from sleeves utilizing the reference joint would be less than the technical specification limit during normal operation.

7. Board Question No. 3

This question refers to page 5-61 of the R. E. Ginna Nuclear Power Plant SER and asks:

Why we should be comfortable with allowing all of the plugged tubes, even those that are close to the new sleeves, to remain within the generator -- the steam generator -- even though we can't any longer non-destructively test those plugged tubes to see whether they have retained their integrity. Tr. 1332-33.

8. Portions of tubes were removed from the Ginna steam generator following the steam generator tube rupture incident which were structurally degraded or suspected to be structurally degraded. The portions of the tubes removed were from the top of the tube sheet to a point two inches below the first support plate on the hot leg side. No other parts of these tubes were suspected to be degraded.

9. The reason these portions of tubes were removed from the Ginna steam generator was because of real or suspected loose parts-induced damage, not due to their proximity to sleeved tubes nor due to the fact that they were previously plugged. No other portions of plugged tubes either near sleeved tubes or otherwise were removed from the Ginna steam generator, only those near the ruptured tube which were suspected of being damaged.

10. The Staff does not generally require tube removal from steam generators when the tube is degraded beyond the plugging limit. Plugging eliminates the concern of primary to secondary leakage from a degraded tube. Further nondestructive monitoring of the tube by ECT is not necessary. The conclusion of the Ginna SER p 5-36 was that plugged tubes even with locally collapsed sections would not be subject to vibrations that could result in a tube failure that might possibly interact unfavorably upon adjacent tubes.

11. Lastly, removal of tubes or tube portions involves considerable man-rem exposure and therefore, if done unnecessarily, would not be consistent with ALARA considerations.

12. Board Question No. 4

This question also refers to Ginna and asks:

Why a loose parts monitoring program isn't being required at Point Beach even though it was required at Ginna. Tr. 1333.

13. The tube rupture at Ginna was deemed to be the result of loose parts in the secondary side of the steam generator. Also, the damage caused by the loose parts succeeded in creating more loose parts in the form of broken or severed tubes. Removal of debris and damaged tube

portions was conducted at Ginna. Loose parts monitoring at Ginna was thought to be a prudent preventative measure to prevent recurrence of the conditions leading to the tube rupture.

14. Point Beach has conducted visual inspections of the secondary side of the steam generator and has only identified one foreign object. This consisted of a welding rod corroded to the top of the tube sheet. This object was subsequently removed. Point Beach has not had problems with loose parts in the steam generator other than mentioned above.

15. The Staff has included as one of the proposed generic requirements for steam generators that all licenses may be required to develop a loose parts monitoring program consisting of visual inspection, QA/QC procedures, and/or loose parts monitors installation. Finalization and approval of these recommendations and proposals and subsequent development into generic requirements have not yet taken place.

16. Point Beach does not plan any secondary side work in relation to tube sleeving; therefore, there is no need to inspect the secondary side for loose parts.

17. Neither Board Questions 3 and 4 relate to steam generator tube sleeving. On the basis of experience to date, it is my judgment as the Point Beach Project Manager that any Staff decision to recommend removing plugged tubes or portions of plugged tubes from all steam

generators or to recommend installing loose part monitoring systems for steam generators would not be predicated on whether or not sleeves are installed in any of the tubes.

Timothy G. Colburn
Timothy G. Colburn

Subscribed and sworn to before me
this 23 day of September, 1982.

NOTARY

Edythe S. Becker
Notary Public

My Commission expires: 7/1/86