



**Wisconsin Electric** POWER COMPANY

231 W. MICHIGAN, P.O. BOX 2046, MILWAUKEE, WI 53201

January 26, 1983

Mr. Harold R. Denton, Director  
Office of Nuclear Reactor Regulation  
U.S. NUCLEAR REGULATORY COMMISSION  
Washington, D.C. 20555

Attention: Mr. Robert A. Clark, Chief  
Operating Reactors Branch 3

Gentlemen:

DOCKET NOS. 50-266 AND 50-301  
ENVIRONMENTAL QUALIFICATION OF  
SAFETY-RELATED ELECTRICAL EQUIPMENT  
POINT BEACH NUCLEAR PLANT, UNITS 1 AND 2

On December 22, 1982, Mr. Clark transmitted to Wisconsin Electric the new Safety Evaluation Reports (SERs) for the Environmental Qualification of Safety-Related Electrical Equipment at Point Beach Nuclear Plant, Units 1 and 2. You requested reaffirmation of the justification for continued operation for those equipment items (NRC Category I.B, "Equipment Qualification Pending Modifications," in the SERs) identified by us as deficient because they lacked environmental qualification documentation meeting the provisions of the DOR Guidelines or NUREG-0588. A majority of that equipment has already been replaced with new equipment environmentally qualified or being qualified to the provisions of NUREG-0588, Category I (i.e., IEEE Standard 323-1974). The justification for continued operation for the remaining equipment items in NRC Category I.B were provided to you in Mr. C. W. Fay's letter dated October 8, 1981 regarding "Supplemental Response to Safety Evaluation Report for Environmental Qualification of Safety-Related Equipment." These justifications for continued operation are still applicable. We are continuing our efforts to complete the environmental qualification of the remaining equipment items by the deadline imposed by the new rule 10 CFR 50.49, "Environmental Qualification of Electric Equipment Important to Safety in Nuclear Power Plants."

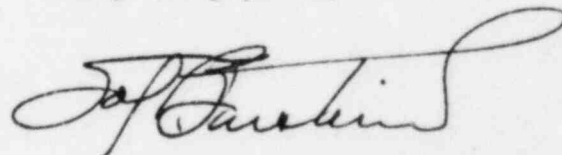
A048

January 26, 1983

The SERs also identified several additional equipment items (NRC Category II.A, "Equipment Qualification Not Established") for which your evaluation judged the environmental qualification documentation to be incomplete. We have reviewed these evaluations and believe the previous documentation can be supplemented to establish qualification without modification of the equipment. The attachment to this letter establishes the justification for continued operation for each equipment item in NRC Category II.A until the documentation deficiencies can be resolved with your Staff. No equipment items at PBNP were identified in NRC Category II.B, "Equipment Not Qualified." Therefore, we believe that Point Beach Nuclear Plant, Units 1 and 2, can continue to operate without undue risk to the public health and safety.

This letter is affirmed in accordance with the provisions of 10 CFR 50.54(f). We would be pleased to respond to any questions you may have in this matter.

Very truly yours,

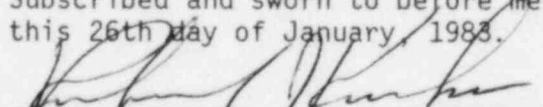


Executive Vice President

Sol Burstein

Attachment

Subscribed and sworn to before me  
this 26th day of January, 1983.

  
Notary Public, State of Wisconsin

My commission expires is permanent

cc: NRC Resident Inspector

JUSTIFICATION FOR CONTINUED OPERATION  
EQUIPMENT ITEMS IN NRC QUALIFICATION  
CATEGORY II.A  
POINT BEACH NUCLEAR PLANT, UNITS 1 AND 2

<u>SER</u> <u>Item</u> <u>No.</u>	<u>PBNP</u> <u>Unit</u>	<u>Equipment</u> <u>Description</u>	<u>Justification for Continued Operation</u>
24	1&2	Safety Injection Pump Motors (Westinghouse Thermalastic Epoxy Class B Insulation)	An analysis in the equipment qualification file justifies an in-plant service life of forty years as explained in Note T of our October 11, 1981 response. The motor-to-lead splices are constructed with Scotch #70 silicon rubber tape which was satisfactorily tested for thermal aging, radiation ( $2 \times 10^7$ Rads gamma), and steam exposure in WCAP 7829. FRC Report F-C3699 documents the qualification of a similar silicon rubber insulation material used on instrumentation cable. The bearing/lubricant system consists of shielded (sealed) anti-friction ball bearings with a petroleum-based, lithium-soap-thickened grease. The bearing system is inspected yearly with additional tests of the motors also conducted periodically. This type of lubricant has been tested satisfactorily for integrated radiation doses in excess of $10^7$ Rads gamma which exceeds the requirement for these motors. The aging of the bearing/lubricant system is addressed by satisfactory service of over 12 years at PBNP as well as tests documented in WCAP 7829. This meets the aging requirements of the DOR Guidelines as clarified by the NRC Generic Letter 82-09, Item 9. Therefore, these motors are considered qualified to the provisions of the DOR Guidelines. Additional documentation will be provided at a later date.
25	1&2	Containment Spray Pump Motors (Westinghouse Premium Moisture Resistant Class B Insulation)	See response to Item 24.
26	1&2	Component Cooling Pump Motors (Westinghouse Premium Moisture Resistant Class B Insulation)	See response to Item 24.

<u>SER Item No.</u>	<u>PBNP Unit</u>	<u>Equipment Description</u>	<u>Justification for Continued Operation</u>
27	1&2	Residual Heat Removal Pump Motors (Westinghouse Thermalastic Epoxy Class B Insulation).	See response to Item 24
28	1&2	Containment Emergency Fan Motors (Westinghouse Thermalastic Epoxy Class F (Class A Temp. Rise) Insulation).	An aging analysis was performed which justifies an in-plant service life of forty years based on the qualification tests documented in WCAPs 7829 and 8754. The motor-to-lead splice and bearing/lubricant system qualification are addressed in items 29 and 53, respectively. These motors are considered qualified to the provisions of the DOR Guidelines.
29	1&2	Motor-to-Lead Splices for Item 28	These splices were remade several years ago at PBNP to conform to the splices tested and qualified by WCAP 7829. Westinghouse Drawing No. 206C391 is the basis for this splice. Separate effects tests for radiation and steam exposure were also conducted satisfactorily on the individual splice materials. Therefore, the splice is considered qualified to the DOR Guidelines.
42	1&2	Okonite Instrumentation Cable	Documentation on our purchase orders establish that the cable tested in FRC Test Report F-C3694 (Group II cables, Item 4A) is similar to our cable. The differences were analyzed and determined to have no effect on the qualification status of these cables. Our cables have a PVC jacket in lieu of an overall glass braid. The insulation material is identical as confirmed by a telephone conversation with Dr. Jack Lasky of Okonite Company. Therefore, this cable is considered qualified to the DOR Guidelines.
50	1&2	Safety Injection Pump Bearing Lubricant (American Industrial 35 Oil)	Several references in our qualification file document the radiation testing of commercial-grade oils and greases. None of these documents demonstrates significant degradation of any oil or grease at radiation doses below approximately 10 <sup>7</sup> Rads. This oil has been used successfully at PBNP for approximately 12 years. The

<u>SER Item No.</u>	<u>PBNP Unit</u>	<u>Equipment Description</u>	<u>Justification for Continued Operation</u>
			oil is replaced and the bearing checked at one year intervals. Therefore, the bearing system using this oil has an extremely high probability of operating satisfactorily under accident conditions for which gamma radiation up to about $5 \times 10^8$ Rads is the only harsh environmental parameter. The normal humidity and temperature are not expected to change appreciably during accident conditions. Therefore, the continued safe operation of PBNP is justified until additional qualification documentation can be provided.
51	1&2	Component Cooling Pump Bearing Lubricant (American Industrial 21 Oil).	See response to Item 50.
52	1&2	Containment Spray and RHR Pump Bearing Lubricant (American Rykon Industrial 15 Oil)	See response to Item 50.
53	1&2	Containment Emergency Fan Cooler Bearing Lubricant (Chevron BRB 2 Grease)	This grease was tested for irradiation and "working" to simulate the conditions in containment following a design-basis LOCA as documented in the PBNP FSAR, p. 6-3-16. The results show that the grease was still suitable after irradiation to $1.8 \times 10^8$ Rads gamma. A similar Westinghouse grease was tested in the qualification tests documented by WCAP 7829. Therefore, it is concluded that the grease will perform its safety function satisfactorily until additional documentation on its qualification can be provided. Therefore, the continued safe operation of PBNP is justified until the item is resolved.
54	1&2	Limitorgue Valve Motor Operator Lubricant (Amolith #1EP)	The grease is a petroleum-base, lithium-soap-thickener grease with extreme pressure (EP) additives. A number of similar greases were radiation tested satisfactorily to $2.7 \times 10^7$ Rads and higher as documented in an ASLE paper. The greases are checked annually and have shown excellent service in over twelve years of operation at PBNP. Similar greases have been used in numerous qualifi-

			<p>cation tests of Limitorque operators under LOCA and SLBA conditions. Therefore, continued safe operation of PBNP is assured until additional documentation is generated regarding similarity and aging.</p>
55	1&2	Pump Motor Bearing Lubricant (Amolith #2)	See response to Item 24 regarding bearing/lubricant system.
56	1&2	Limitorque Valve Operator Geared Limit Switch Assembly Lubricant (Mobil Model #28)	Mobil 28 grease is a synthetic lubricant which has been <sup>g</sup> radiation tested satisfactorily to $3 \times 10^6$ Rads mixed gamma/neutron radiation and tested satisfactorily in bearings at temperatures of 580°F. The grease is checked annually to ensure satisfactory service. Therefore, since radiation and high temperature are the only adverse environmental conditions encountered by the grease under postulated accident conditions, the continued safe operation of PBNP is assured until additional qualification documentation can be provided.
61	1&2	Power Operated Relief Valve Blocking Valve Limitorque Motor Operators (Peerless Motor with Class B insulation)	This item is not required to mitigate a LOCA or HELB accident and is not considered safety-related. Therefore, lack of qualification documentation does not affect plant safety.
62	1&2	Safety Injection Line Valve Limitorque Motor Operators (Peerless Motor with Class B insulation)	These valves are administratively maintained in this required position for safety injection and are therefore, not normally required to operate on receipt of a safety injection signal. These valves may be opened within 14 hours of a small-break LOCA to aid in coolant mixing to prevent boron precipitation. As discussed in Mr. Sol Bursteins' letter to your staff dated May 7, 1975 regarding "ECCS Long Term Cooling," boron precipitation is not a problem at PBNP even if these valves failed to open within 14 hours of a LOCA. Therefore, PBNP can continue to operate safely until this item is resolved.
63	1&2	Safety Injection Line Valve Limitorque Motor Operators (Reliance Motors with Class B insulation)	These valves are administratively maintained open during normal operation which is their required position upon receipt of a safety injection signal. If these valves were initially closed, they would open immediately upon receipt of a safety

injection signal. Their required operating time should be 1/2 hour and not 14 hours as stated on the SCEWs. Similar valve operators operated satisfactorily for 8 hours in simulated LOCA conditions as documented in WCAP 7410L. Therefore, PBNP can continue to operate safely until this item is resolved.

65

1&2

Auxiliary Feedwater Pump Steam Supply Valve Limitorque Operators (Peerless Motor with Class B Insulation) Limitorque has confirmed that the valve motor operators at PBNP are identical to those tested in Limitorque Test Report No. B0003 except for the Peerless motors. The Peerless motors were tested as documented in WCAP 7410-L. Since the temperature/pressure profile used for qualification of these valves is extremely conservative, the operators are judged to be able to perform their safety function based on a combination of the two test reports. Since these valves are located in an area normally maintained between 65°F and 85°F and based on their satisfactory service for over 12 years at PBNP, no significant thermal aging degradation has occurred up to this point. Therefore, the continued safe operation of PBNP is assured until this item is resolved.