Wisconsin Electric POWER COMPANY
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September 11, 1981

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
RESPONSE TO SAFETY EVALUATION REPORT FOR
ENVIRONMENTAL QUALIFICATION OF SAFETY-RELATED EQUIPMENT
POINT BEACH NUCLEAR PLANT, UNITS 1 AND 2

On May 21, 1981, Mr. Robert A. Clark of your Staff transmitted to Wisconsin Electric Power Company the Safety Evaluation Report (SER) for the Environmental Qualification of Safety-Related Electrical Equipment at Point Beach Nuclear Plant, Units 1 and 2 (PBNP). You requested that we provide additional information identified in Sections 3 and 4 of the SER. This letter transmits our response to your request.

Our responses to the requirements and/or questions listed in Section 3 of the SER are shown in Enclosure 1 to this letter. The responses are identified by the corresponding SER section number and title. Updated "master list" equipment sheets, the corresponding component evaluation worksheets, and related notes are provided in Enclosure 2. These updates resulted from a revision to the PBNP Emergency Operating Procedures dated July 15, 1981.

Our remaining component evaluation worksheets updated to address the requirements of Section 4 of the SER will be provided in a supplemental letter by October 8, 1981.

Our equipment qualification evaluations to date demonstrate that Point Beach Nuclear Plant, Units 1 and 2, can continue to operate until the requirements identified in the SER are fully resolved. We would be pleased to answer any further questions concerning this response.

Very truly yours,

Sol Burstein
Executive Vice President

Enclosures

cc: NRC Resident Inspector

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ENCLOSURE 1

3 Staff Evaluation: This section listed deficiencies identified by Mr. F. J. Jablonski of IE (Region III) in his site inspections of April 21 and October 10, 1980 which "included a lack of plant equipment identification numbers and nameplate data that did not correspond to the CES "[Component Evaluation Sheets]." The lack of identification numbers was identified only because valve air-operators at PBNP have an ID tag attached to and the associated solenoid valves, I/P transducers, and/or limit switches are not separately tagged.' Since these devices are physically connected to the operator, this method of identification is judged to be acceptable. The one RTD (component cooling heat exchanger outlet) which was not physically tagged was adequately identified by physical location as confirmed in Mr. Hayes' (IE Region III) October 21, 1980 memorandum concerning inspection of installed systems at Point Beach Unit 1. The only components for which the nameplate data did not exactly correspond were Westinghouse motors used for residual heat removal and component cooling. As stated in Mr. Hayes' October 21, 1980 memorandum, the Westinghouse model numbers were correct, but the insulation type on the submittal was not stamped on the motor nameplate. The insulation type for these motors was obtained by written correspondence from Westinghouse, copies of which are located in Wisconsin Electric's central equipment qualification file.

In addition, a question was raised as to the separation criteria applied to the arrangement of pump and valve motors of the safety injection and containment spray systems of Units 1 and 2. This issue was previously addressed in an April 9, 1981 letter from Mr. C. W. Fay of Wisconsin Electric to Mr. Harold R. Denton of the NRC Staff. Therefore, all potential deficiencies identified in this section are considered resolved.

3.1 Completeness of Safety-Related Equipment: The NRC Staff requested a listing of all systems both inside and outside potentially harsh environments required to "achieve or support: (1) emergency reactor shutdown, (2) containment isolation, (3) reactor core cooling, (4) containment heat removal, (5) core residual heat removal, and (6) prevention of significant release of radioactive material to the environment." Based on a detailed review of the PBNP FFDSAR, Technical Specifications, and Emergency Operating Procedures, the following table lists all the systems that are required to perform those functions at Point Beach Nuclear Plant, Units 1 and 2 in the event of a postulated Loss of Coolant Accident (LOCA) or High Energy Line Break (HELB) accident. The corresponding nomenclature identified by the DOR Guidelines, Appendix A, Typical Equipment/Functions Needed for Mitigation of a LOCA or MSLB Accident are also shown:

PBNP SYSTEMS REQUIRED TO MITIGATE
LOCA OR HELB ACCIDENTS

PBNP System	DOR Nomenclature	Comments
Safety Injection	Emergency Core Cooling; Containment Fission Product Removal	Includes High-Head Safety Injection and Containment Spray

PBNP System	DOR Nomenclature	Comments
Auxiliary Coolant	Emergency Core Cooling; Component Cooling; Residual Heat Removal	Includes Low-Head Safety Injection, Component Cooling, and RHR (Note 1)
Chemical and Volume Control	Chemical and Volume Control	Only Boric Acid Tanks and associated equipment are safety-related
Reactor Control and Protection	Engineered Safeguards Actuation; Reactor Protection; Emergency Shutdown	Only components required to initiate reactor trip, emergency safeguards actuation, and containment isolation are safety-related
Reactor Coolant	Reactor Coolant (Pressurizer Sprays, PORVs)	Note 1
Main Feedwater	Main Feedwater Shutdown and Isolation; Reactor Protection	Only instrumentation and associated components are safety-related and potentially exposed to harsh environments
Main Steam	Steamline Isolation; Engineered Safeguards Actuation; Reactor Protection	Only instrumentation and valve operators for steam supply to AFW pump turbines are safety-related and potentially exposed to harsh environments.
Containment Air Recirculation Cooling	Containment Heat Removal	Only emergency fan cooler units are safety-related
Containment Isolation	Containment Isolation; Containment Ventilation	Only Containment Isolation valves and associated equipment are safety-related
Auxiliary Feedwater	Auxiliary Feedwater	All electrical components except condensate storage tank level instrument are located in mild environments only
Electrical	Emergency Power	Only safeguards motor control centers are safety-related and potentially exposed to harsh environments

PBNP System	DOR Nomenclature	Comments
Service Water	Service Water	All safety-related electrical components located in mild environments
Radiation Monitoring	Radiation Monitoring; Containment Radiation Monitoring	Only components required to initiate containment purge isolation are important to safety and these are located in mild environments only.

Note 1: The design and licensing basis of Point Beach Nuclear Plant, Units 1 and 2, is to maintain the ability to achieve and maintain a hot shutdown condition following any design basis accident. Equipment required only to achieve a cold shutdown condition (e.g., PORVs or the RHR system) is not safety-related.

Only those systems required for mitigation of a LOCA or HELB accident based on the PBNP Final Facility Description and Safety Analysis Report (FFDSAR), Technical Specifications, and Emergency Operating Procedures and whose components are potentially exposed to a harsh environment from those accidents were listed in our responses to IE Bulletin 79-01B. The environmental qualification of components required for Post-Accident Sampling and Monitoring, Radiation Monitoring (including containment), and Safety-Related Display Instrumentation are being addressed as part of evaluations and modifications being undertaken to meet the intent of the TMI Action Plan (NUREG-0737). These evaluations and modifications will follow the schedule committed to in our numerous responses to the Staff related to the TMI Lessons Learned. The Heating, Ventilating and Air Conditioning (HVAC) systems for the control room and areas containing safety equipment are not located in potentially harsh environments and were, therefore, not identified in our system list. Venting is used as the containment combustible gas control system at Point Beach Nuclear Plant. This addresses all of the typical systems listed in Appendix A to the DOR Guidelines.

The Staff also requested us to provide "a complete list of instrumentation mentioned in the LOCA and HELB emergency procedures." The following is a list of that instrumentation by PBNP tag number and function with justification provided for not environmentally qualifying the instruments which are not safety-related:

Function	PBNP Tag No.	Comments
RCS Temperature, including T_{HOT}, T_{COLD}, and T_{AVG}	1&2-TE450A&B 1&2-TE451A&B	RCS Loop RTDs are being qualified rather than the bypass manifold RTDs because the loop RTDs can be used during natural circulation conditions. The operator will rely on the qualified instrument for operator action following the accident. Therefore, failure of the unqualified instruments will not adversely affect LOCA or HELB accident mitigation.

Function	PBNP Tag No.	Comments
RCS Pressure	1&2-PT420	
Pressurizer Pressure	1&2-PT429, 430, 431, and 449	
Pressurizer Level	1&2-LT426, 427, and 428	
Radiation Monitors (Containment, Air Ejector, Steam Generator Blowdown)		These instruments are being evaluated and upgraded per TMI Lessons Learned. They are not required to mitigate a LOCA or HELB accident per the PBNP FFDSAR or Technical Specifications. Therefore, failure of these instruments will not adversely affect LOCA or HELB accident mitigation.
Core-Exit Thermocouples and Subcooling	1&2-TE1-39	These instruments are being evaluated and upgraded per the TMI Lessons Learned. They are not required to mitigate a LOCA or HELB accident per the PBNP FFDSAR or Technical Specifications. Therefore, failure of these instruments will not adversely affect LOCA or HELB accident mitigation.
Steam Generator Level	1&2-LT460, 461, 462, and 463 1&2-LT470, 471, 472 and 473	
Main Steam Flow (i.e., S/G Steam Flow)	1&2-FT464 and 465 1&2-FT474 and 475	
Main Feedwater Flow	1&2-FT466 and 467	These instruments are not required to mitigate a LOCA or HELB accident per the PBNP FFDSAR or Technical Specifications. Main feedwater is secured automatically on these accidents. Therefore, failure of these instruments will not adversely affect LOCA or HELB accident mitigation.

Function	PBNP Tag No.	Comments
Main Steam Pressure (i.e., S/G Pressure)	I&2-PT468, 469, and 482 I&2-PT478, 479, and 483	
Containment Pressure	I&2-PT945, 946, 947, 948 949, and 950	
Containment Sump B Water Level	I&2-LC942A&B I&2-LC943A&B	
Containment Temperature, Humidity, and Sump A Level		These instruments are not required to mitigate a LOCA or HELB accident per the PBNP FFDSAR or Technical Specifications. The operator is not required to take accident-mitigating action based on these instruments. Therefore, failure of these instruments will not adversely affect LOCA or HELB accident mitigation.
Boric Acid Storage Tank Level	I&2-LT106, 172, 190 LT-102, 171, 189	
Auxiliary Feedwater Flow		All components for these components are located in mild environments.
Volume Control Tank Level Charging Flow; Letdown Flow; Charging Pump Speed		The components of the Charging and Volume Control System and their associated instrumentation are not required to mitigate LOCA or HELB accidents per the PBNP FFDSAR or Technical Specifications. The operator takes no required accident-mitigating action based on this instrumentation. Therefore, failure of these instruments will not adversely affect LOCA or HELB accident mitigation.
Refueling Water Storage Tank Level		All components for these instruments are located in mild environments only.
Condensate Storage Tank Level	LT-4025 and 4031	

Function	PBNP Tag No.	Comments
Diesel Generator Output Voltage, Frequency, and KW Load		All components of these instruments are located in mild environments only.
Safety Injection Pump Flow	1&2-FT924 and 925	
Safety Injection Pump Discharge Pressure	1&2-PT922 and 923	
Low Head SI (RHR) Flow	1&2-FT626 and 928	
Low Head SI (RHR) Pump Discharge Pressure	1&2-PT628 and 629	
RHR Temperature	1&2-TE627 and 630	
Containment Spray Additive Tank Level	1&2-LT931	
Component Cooling Flow	1&2-FT619	
Component Cooling Heat Exchanger Outlet Temperature	1&2-TE621	
Containment Spray Additive Flow		This instrument is not required to mitigate a LOCA or HELB accident per the PBNP FFDSAR or Technical Specifications. The operator is directed by the EOP's to spray additive valve position indication and spray additive tank level, which are being environmentally qualified, to verify that all NaOH has been added to the containment spray. Therefore, failure of this instrument will not adversely affect LOCA or HELB accident mitigation.

Function	PBNP Tag No.	Comments
Reactor Power Level; Control Rod Position Indication; Pressurizer Temperature; Waste Holdup Tank Level		These instruments are not required to mitigate LOCA or HELB accidents per the PBNP FFDSAR or Technical Specifications. The operator is not required to take accident-mitigating action based on these instruments. Therefore, failure of these instruments will not adversely affect LOCA or HELB accident mitigation.

Only those instruments that are required for mitigation of design-basis LOCA and HELB accidents per the PBNP FFDSAR, accident analyses, Technical Specifications, and Emergency Operating Procedures and are potentially exposed to harsh environments from those accidents are considered within the scope of IE Bulletin 79-01B. Those instruments in the above list which were listed without comments were included in the master list of equipment under the plant system to which they belong. In addition, the RCS Loop RTDs and Core-Exit Thermocouples were included in the updated master list and component evaluation worksheets which were submitted to the NRC Staff on January 30, 1981 in response to IE Bulletin 79-01B, Supplement No. 3. Our detailed evaluation of the remaining instruments in the above list leads to the conclusion that their failure will not affect the performance of any safety system or mislead the operator in such a manner as to adversely affect LOCA or HELB accident mitigation.

Wisconsin Electric is actively pursuing the evaluation and upgrading of additional instruments in response to the TMI Action Plan (i.e., NUREG-0737), NUREG-0696, and Regulatory Guide 1.97. The schedule for this effort, however, is consistent with Wisconsin Electric's commitments related to the above documents which were previously provided to the Staff.

3.2 Service Conditions: In its review of the service conditions inside containment, the Staff assumed that the Main Steam Line Break (MSLB) conditions are enveloped by the large-break LOCA conditions. The Staff required us to verify the assumption that PBNP is equipped wth an automatic containment spray system which satisfies the single-failure criterion. The PBNP FFDSAR, Section 6.4, Containment Spray System, Subsection 6.4.3, Design Evaluation, states "A single failure analysis has been made on all active components of the system to show that the failure of any single active component will not prevent fulfilling the design function. This analysis is summarized in Table 6.4-4." This statement and an additional design review verify that the Containment Spray System is initiated automatically and satisfies the single failure criterion of 10 CFR 50, Appendix A. Therefore, the Containment Spray Systems at Point Beach Nuclear Plant, Units 1 and 2, satisfy the requirements of Section 4.2.1 of the DOR Guidelines.

3.3 Temperature, Pressure, and Humidity Conditions Inside Containment: The NRC Staff has now concluded, contrary to the requirements of the DOR Guidelines, Section 4.2.1, that the containment temperature profile for equipment qualification purposes should include an additional "margin to account for higher-than-average temperatures in the upper regions of the containment that can exist due to stratification, especially following a postulated MSLB. Use of the steam saturation temperature corresponding to the total building pressure (partial pressure of steam plus partial pressure of air) versus time will provide an acceptable margin for either a postulated LOCA or MSLB..." The DOR Guidelines, Section 4.2.1, states that "equipment qualified for LOCA environment is considered qualified for a MSLB accident environment in plants with automatic spray systems not subject to disabling single component failures." The Commission's Memorandum and Order CLI-80-21, dated May 23, 1980, and the Staff's Order for Modification of License, dated October 24, 1980, Concerning Environmental Qualification of Safety-Related Electrical Equipment at Point Beach Nuclear Plant, Units 1 and 2, both endorse the use of the DOR Guidelines or NUREG-0588, as appropriate, for establishing the adequacy of environmental qualification. It is Wisconsin Electric's position that the use of the containment temperaure profile calculated for a design-basis, large-break LOCA, which has been previously approved by the NRC Staff, is acceptable for equipment qualification inside containment. Therefore, the required temperature profile referenced in the component evaluation worksheets for equipment located inside containment remains valid and will not be changed.

From a technical standpoint, the use of the saturation temperature corresponding to total building pressure versus time is overly conservative except in two cases. The first case is where equipment is located extremely high in containment and stratification effects following a MSLB may cause temporary superheated conditions until the containment spray system starts at a maximum of one minute following the initiation of the accident. In this case, the thermal lag of the safety-related equipment would prevent the critical internal temperatures from exceeding the equilibrium temperatures reached during qualification to the conservatively-calculated LOCA temperature profile. Since a typical MSLB containment temperature profile (see NUREG-0458, Figure 1) for a Westinghouse PWR shows a temperature reduction to 240°F or less almost immediately after spray initiation, the qualification to the LOCA temperature profile provides adequate assurance of safety from an equipment qualification standpoint.

The second case is where equipment is located in the direct vicinity of a high-energy line with no physical barrier such as a wall or floor in between and, therefore, could experience higher temperatures than calculated during a postulated accident. The superheated steam escaping from the break in this case may not mix with and/or be cooled by the containment air or surfaces before it reaches the safety-related equipment. A detailed review of equipment locations inside containment with respect to elevation and to vicinity of high-energy lines was conducted. The only safety-related equipment which falls into either of the above two cases is the solenoid valves and limit switches associated with the containment purge supply and exhaust valves, 1&2-HV3213 and 3245. Those components are being replaced with components qualified to well above the maximum saturation temperature.

In the interim, continued operation is justified in spite of the higher temperature profile by the fact that purge supply and exhaust valves and their redundant backups outside containment are administratively "red-tagged" closed unless the plant is in a cold shutdown condition. Therefore, failure of these components could not adversely affect LOCA or HELB accident mitigation.

The Staff has also requested that the relative humidity associated with each service condition (i.e., temperature and pressure) profile be provided. As stated on the component evaluation worksheet, a relative humidity of 100% was assumed as the worst case. Temperature and pressure are the only parameters related to steam and moisture which are significant in qualification of equipment to LOCA or HELB accidents. In fact, the DOR Guidelines do not even mention humidity as a parameter to be considered in qualification except for equipment in confined spaces in areas where fluids are recirculated from inside containment to accomplish long-term core cooling following a LOCA (See DOR Guidelines, Section 4.3.2). Therefore, the identification of 100% relative humidity on the component evaluation worksheets is considered sufficient and the service condition profiles do not need to be changed.

The Staff also requested that a pressure, temperature, and humidity profile be provided "for all areas subject to a potential HELB." In addition, room numbers or other applicable designation should be used to specify the area to which each profile applies. Temperature and pressure profiles were developed and submitted for all safety-related components potentially exposed to a HELB accident environment outside containment. The profiles were identified by component rather than room number because the profile is different for every location within the room. The pressure profile is a function of distance from the high-energy line due to expansion of the steam jet as a function of distance from any potential break location. There is no need to provide profiles for all areas. Humidity profiles are not required by the DOR Guidelines, as discussed in the above paragraph. Therefore, our previous submittal is considered sufficient in this regard and no changes to existing profiles or additional profiles are provided.

3.4 Temperature, Pressure, and Humidity Conditions Outside Containment: See the last paragraph of Section 3.3 response above.

3.5 Submergence: The Staff has requested additional information concerning the submergence of several components identified as having the potential for submergence. It was also requested that potential submergence of safety-related electrical equipment outside containment be addressed. The information requested will be provided with the updated component evaluation worksheets.

3.6 Chemical Spray: The Staff has requested the exact chemical concentration of boric acid and sodium hydroxide used in qualification testing and a further discussion of the effects of chemical spray. This information will be provided with the updated component evaluation worksheets.

3.7 Aging: The NRC Staff has requested additional information to verify the degree of compliance with the aging requirements of the DOR Guidelines for safety-related electrical equipment potentially exposed to harsh accident environments. The requirements include the following actions:

1. Existing equipment must be analyzed to identify any "materials which are known to be susceptible to significant degradation due to thermal and radiation aging." If the device contains such material, a qualified life "must be established on a case-by-case basis;"

2. Establish preventative maintenance, surveillance, and/or replacement schedules which take into account the specific aging characteristics of the installed equipment; and

3. Establish an ongoing program to review surveillance and maintenance records to assure that equipment exhibiting age-related degradation is maintained and/or replaced as necessary.

The first requirement to evaluate equipment for potential degradation due to thermal and radiation aging has been met by two methods. For equipment which was pre-aged prior to design-basis event testing, the pre-aging program was evaluated and compared to the plant-specific application to establish an expected minimum life including margin. For equipment which was not pre-aged during environmental qualification tests, the organic materials (i.e., those other than metals or ceramics) were identified and evaluated for potential degradation due to thermal or radiation aging in order to establish an expected minimum life including margin. Appendix C to the DOR Guidelines as well as other references were used in these evaluations. Examples of both methods of establishing an expected life are shown in the notes for the updated component evaluation worksheets.

The second and third aging requirements from the DOR Guidelines concern maintenance, replacement, and surveillance programs. These programs already exist at Point Beach Nuclear Plant for the purpose of ensuring that safety-related equipment will be able to perform its design function throughout its installed lifetime. These programs and supporting administrative procedures, however, are being re-evaluated and will be upgraded, if necessary, before the environmental qualification deadline (presently June 30, 1982) to comply with the intent of the DOR Guidelines. Existence of these programs will be documented in Wisconsin Electric's central equipment qualification file by the deadline and will be available for audit by the NRC Staff.

3.8 Radiation (Inside and Outside Containment): The NRC Staff has found the required radiation doses used for equipment qualification inside and outside containment to be acceptable. Therefore, no further response is provided. The methodology employed in dose and dose rate calculations is maintained in our central equipment qualification file and is available at our general offices for NRC audit.

ENCLOSURE 2

ENCLOSURE 1

FACILITY: Point Beach Nuclear Plant, Units 1 and 2

DOCKET NO.: 50-266 and 50-301

MASTER LIST

(CLASS 1E ELECTRICAL EQUIPMENT REQUIRED TO FUNCTION UNDER POSTULATED ACCIDENT CONDITIONS)

I.SYSTEM: Safety Injection

COMPONENTS			
		LOCATION	
PLANT IDENTIFICATION NUMBER	GENERIC NAME	INSIDE PRIMARY CONTAINMENT	OUTSIDE PRIMARY CONTAINMENT
1-P14A&B 2-P14A&B	Pump Motors		X
1-P15A&B 2-P15A&B	Pump Motors		X
1-SI851A&B 2-SI851A&B	Valve Motor Operators		X
1-SI871A&B 2-SI871A&B	Valve Motor Operators		X
1-SI860A, B, C, & D 2-SI860A, B, C, & D	Valve Motor Operators		X
1-SI852A&B 2-SI852A&B	Valve Motor Operators	X	
1-SI878A, B, C, & D 2-SI878A, B, C, & D	Valve Motor Operators	X	
1-SI836A&B 2-SI836A&B	Electro-Pneumatic Transducers		X
Namco "Snap-Lock" D2400X	Limit Switches		X
1-PT922&923 2-PT922&923	Pressure Transmitters		X
1-FT924&925 2-FT924&925	Flow Transmitters		X
1-FT928 2-FT928	Flow Transmitters		X
1-LT931 2-LT931	Level Transmitters		X
1-LC942A&B, 943A&B 2-LC942A&B, 943A&B	Level Switches	X	
American Oil Co. Amolith #2	Lubricant (Grease)		X
American Oil Co. Amolith #1EP	Lubricant (Grease)	X	X
Mobil Oil Co. #28	Lubricant (Grease)	X	X
American Oil Co. Industrial #35	Lubricant (Oil)		X
American Oil Co. Rykon Industria '5	Lubricant (Oil)		X
Okonite	5,000 Volt AC Power Cables		

MASTER LIST

(CLASS IE ELECTRICAL EQUIPMENT REQUIRED TO FUNCTION UNDER POSTULATED ACCIDENT CONDITIONS)

XII. SYSTEM: Electrical

COMPONENTS			
		LOCATION	
PLANT IDENTIFICATION NUMBER	GENERIC NAME	INSIDE PRIMARY CONTAINMENT	OUTSIDE PRIMARY CONTAINMENT
1-B32	Motor Control Center		X
2-B32	Motor Control Center		X
Kerite	600 V Power Cable		X
Rome	600 V Control Cable		X

FACILITY: Point Beach Nuclear Plant
UNIT: 1
DOCKET: 50-266

SYSTEM COMPONENT EVALUATION WORK SHEET

Equipment Description	ENVIRONMENT			DOCUMENTATION REFERENCES (See Attached Sheets)		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION	QUALIFICATION	SPECIFICATION	QUALIFICATION		
SYSTEM: Safety Injection PLANT ID NO.: 1-SI878A&C COMPONENT: Valve Motor Operators MANUFACTURER: Limitorque/Peerless MODEL NO.: SMB/ Frame PH56F/Class B Ins. FUNCTION: Remotely Controlled Valve Operation ACCURACY: N/A SERVICE: Reactor Vessel Safety Injection Line Valves LOCATION: Containment 26'. Elevation FLOOD LEVEL ELEV. 14' 10" ABOVE FLOOD LEVEL YES	OPERATING TIME	14 Hours	1 Day	1A (Table Q6.4-1)	1B (Vol. I, p. D-1) 16b (p. 10)	Simultaneous Test	None
	TEMPERATURE	Figure 1A	Figure 1B	1A (Figure Q6.4-5)	1B (Vol. I, p D-10)	Simultaneous Test	None
	PRESSURE	Figure 2A	Figure 2B	1A (Figure 14.3.4-8)	1B (Vol. I, p. D-10)	Simultaneous Test	None
	RELATIVE HUMIDITY	100%	100%	Note 2	1B (Vol. I, p. D-1) 16B (p. 15)	Simultaneous Test	None
	CHEMICAL SPRAY	H_3BO_3-NaOH Solution pH: 7.9-10.0	H_3BO_3-NaOH Solution pH: 7.85	1A (p. 6.4-15)	1B (Vol. I, p. D-8 & 10)	1.Simultaneous Test 2.Engineering Analysis	None
	RADIATION	2.30×10^7 Rads	2×10^3 Rads, 2×10^7 Rads	1A (Figure Q6.4-4)	1B (Vol. I, p. 5-4) 16B (p. 2)	Sequential Test	None
	AGING	40 Years	40 Years	1A (pp. 4.1-11&13)	1B (Vol. I, pp. 5-1 & 5-2)	Sequential Test	None
	SUBMERGENCE	Note 1	----	----	----	----	None

See attached sheet for notes.

FACILITY: Point Beach Nuclear Plant
UNIT: 2
DOCKET: 50-301

SYSTEM COMPONENT EVALUATION WORK SHEET

Equipment Description	ENVIRONMENT			DOCUMENTATION REFERENCES (See Attached Sheets)		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION	QUALIFICATION	SPECIFICATION	QUALIFICATION		
SYSTEM: Safety Injection PLANT ID NO.: 2-SI878A&C COMPONENT: Valve Motor Operators MANUFACTURER: Limitorque/Reliance MODEL NO.: SMB/Frame P56/Class B Ins. FUNCTION: Remotely Controlled Valve Operation ACCURACY: N/A SERVICE: Reactor Vessel Safety Injection Line Valves LOCATION: Containment 26' Elevation FLOOD LEVEL ELEV. 14' 10" ABOVE FLOOD LEVEL YES	OPERATING TIME	14 Hours	1 Day	1A (Table Q6.4-1)	1B (Vol. I, p. D-1) 16B (p. 10)	Simultaneous Test	None
	TEMPERATURE	Figure 1A	Figure 1B	1A (Figure Q6.4-5)	1B (Vol. I, p. D-10)	Simultaneous Test	None
	PRESSURE	Figure 2A	Figure 2B	1A (Figure 14.3.4-8)	1B (Vol. I, p. D-10)	Simultaneous Test	None
	RELATIVE HUMIDITY	100%	100%	Note 2	1B (Vol. I, p. D-1) 16B (p. 15)	Simultaneous Test	None
	CHEMICAL SPRAY	H_3BO_3-NaOH Solution pH: 7.9-10.0	H_3BO_3-NaOH Solution pH: 7.85	1A (p. 6.4-15)	1B (Vol. I, pp. D-8 & D-10)	Sequential Test	None
	RADIATION	2.30×10^7 Rads	2×10^8 Rads 2×10^7 Rads	1A (Figure Q6.4-4)	1B (Vol I, p. 5-4) 16B (p.2)	Sequential Test	None
	AGING	40 Years	40 Years	1A (pp. 4.1-11&13)	1B (Vol. I, pp. 5-1 & 5-2) 16B (p. 15)	Sequential Test	None
	SUBMERGENCE	Note 1	----	----	----	----	None

See attached sheet for notes.

FACILITY: Point Beach Nuclear Plant
UNIT: 1
DOCKET: 50-266

SYSTEM COMPONENT EVALUATION WORK SHEET

Equipment Description	ENVIRONMENT			DOCUMENTATION REFERENCES (See Attached Sheets)		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION	QUALIFICATION	SPECIFICATION	QUALIFICATION		
SYSTEM: Electrical PLANT ID NO.: 1-B32 COMPONENT: Motor Control Center MANUFACTURER: Westinghouse MODEL NO.: Type W FUNCTION: 480 Volt Electrical Power Dist. ACCURACY: N/A SERVICE: Safeguards Electrical Loads LOCATION: Auxilairy Building 8' Elevation Outside Charging Pump Cubicles FLOOD LEVEL ELEV. N/A ABOVE FLOOD LEVEL Yes	OPERATING TIME	1 Year	-----	1A (Table Q6.4-1)	-----	-----	Note V
	TEMPERATURE	Note 1	-----	-----	-----	-----	None
	PRESSURE	Note 1	-----	-----	-----	-----	None
	RELATIVE HUMIDITY	Note 1	-----	-----	-----	-----	None
	CHEMICAL SPRAY	Note 1	-----	-----	-----	-----	None
	RADIATION	1.02×10^5 Rads		2A			Note V
	AGING	40 Years		1A (pp. 4.1-11&13)			Note V
	SUBMERGENCE	Note 1	-----	-----	-----	-----	None

See attached sheet for notes.

FACILITY: Point Beach Nuclear Plant
UNIT: 2
DOCKET: 50-301

SYSTEM COMPONENT EVALUATION WORK SHEET

Equipment Description	ENVIRONMENT			DOCUMENTATION REFERENCES (See Attached Sheets)		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION	QUALIFICATION	SPECIFICATION	QUALIFICATION		
SYSTEM: Eletrical PLANT ID NO.: 2-B32	OPERATING TIME	1 Year		1A (Table Q6.4-1)			Note V
COMPONENT: Motor Control Center	TEMPERATURE	Note 1	-----	-----	-----	-----	None
MANUFACTURER: Westinghouse	PRESSURE	Note 1	-----	-----	-----	-----	None
MODEL NO.: Type W	RELATIVE HUMIDITY	Note 1	-----	-----	-----	-----	None
FUNCTION: 480 Volt Electrical Power Dist.	CHEMICAL SPRAY	Note 1	-----	-----	-----	-----	None
ACCURACY: N/A	RADIATION	3.55×10^5 Rads		2A			Note V
SERVICE: Safeguards Electrical Loads	AGING	40 Years		1A (pp. 4.1-11&13)			Note V
LOCATION: Auxiliary Building 8' Elevation Outside Charging Pump Cubicles FLOOD LEVEL ELEV. N/A ABOVE FLOOD LEVEL Yes	SUBMERGENCE	Note 1	-----	-----	-----	-----	None

See attached sheet for notes.

OUTSTANDING ITEM NOTES
(Continued)

T. The acoustic monitor transducers and cable connectors on the pressurizer code safety valve discharge lines have not been environmentally qualified. This system is not required, however, to mitigate any design-basis accidents, therefore, continued safe operation of the plant is assured. It is our intention to obtain environmental qualification data for the presently installed system from the supplier by June 30, 1982.

U. The pressurizer heaters and bolted lug-type electrical connectors have not been environmentally qualified. The pressurizer heaters are not required for mitigation of postulated design-basis accidents and are not safety-related, therefore, continued safe operation of the plant is assured. The heaters provide, however, one method of controlling Reactor Coolant System pressure while achieving and maintaining cold shutdown conditions. Our preliminary evaluation indicates that the heaters and connectors should be able to survive postulated accident environment. The cable is presently environmentally qualified. It is our intention to continue evaluation of the environmental qualification of the heaters and connectors through the vendor.

V. The Westinghouse Type W motor control centers (MCCs) are going to be analyzed by Westinghouse to evaluate the effects of radiation and aging on the materials used to construct these MCCs. The results of this analysis will be placed in Wisconsin Electric's central equipment qualification file. In the interim, operation of PBNP can continue since the radiation dose calculated using Design Basis Accident source terms are well below the values which could cause measurable degradation. In addition, all short-term safety functions are accomplished before the MCCs are exposed to any radiation. The long-term functions (i.e., following the initiation of ECCS recirculation) can be accomplished by improvised operator actions (i.e., LOCA and HELB accident mitigation can be accomplished even assuming a failure of the MCCs in the long term).