



Wisconsin Electric POWER COMPANY

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May 20, 1983

Mr. H. R. Denton, Director
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

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

Gentlemen:

DOCKET NOS. 50-266 and 50-301
ENVIRONMENTAL QUALIFICATION OF ELECTRIC EQUIPMENT
IMPORTANT TO SAFETY WITHIN THE SCOPE OF 10 CFR 50.49
POINT BEACH NUCLEAR PLANT, UNITS 1 AND 2

Paragraph (g) of the rule 10 CFR 50.49, "Environmental Qualification of Electric Equipment Important to Safety for Nuclear Power Plants," (Federal Register, Vol. 48, No. 15, p. 2729) requires that licensees identify the electric equipment within the scope of the rule already qualified and submit a schedule for either the qualification or replacement of the remaining electric equipment within the scope of the rule. Enclosure 1 to this letter provides a list of electric equipment important to safety which is to be environmentally qualified at Point Beach Nuclear Plant, Units 1 and 2, (PBNP) [i.e., equipment within the scope of 10 CFR 50.49(b)(1), (2), and (3)]. The actual or expected operation date and the expected qualification documentation schedule for each equipment item is also provided. The equipment list is organized by plant system and plant tag number. The equipment in Enclosure 1 is also identified by the equipment item number from the NRC's Technical Evaluation Reports (i.e., attachments to the NRC Safety Evaluation Report regarding Environmental Qualification of Safety-Related Electrical Equipment at PBNP dated December 22, 1982).

The list of equipment provided in Enclosure 1 to this letter is the same as that provided to you in our letter regarding "Supplemental Response to SER for Environmental Qualification..." dated October 8, 1981, (i.e., Master List of Electric Equipment at Point Beach Nuclear Plant for IE Bulletin 79-01B) with the following exceptions:

1. The scope of 10 CFR 50.49 does not include equipment required to achieve and maintain cold shutdown equipment (Federal Register, Vol. 48, No. 15, p. 2731). Therefore, the equipment required only to achieve or maintain cold shutdown has been removed from the list.

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2. Two safeguards motor control centers (MCCs 1&2-B32) were previously listed due to potential radiation exposure following a Loss of Coolant Accident. These MCCs have now been shielded and are located in a "mild environment" as defined in 10 CFR 50.49(c). Therefore, the MCCs themselves (not the associated cables which could be exposed to significant radiation) have been removed from the list.
3. Paragraph(b)(3) of 10 CFR 50.49 requires the environmental qualification of "certain post-accident monitoring equipment." Wisconsin Electric conducted a comprehensive review of Regulatory Guide 1.97 recommendations (including NUREG-0737 requirements) against the PBNP design for post-accident monitoring instrumentation in early 1981. As a result of this review Wisconsin Electric undertook the modification or installation of several instruments in addition to those instruments being installed or modified to meet the requirements of NUREG-0737. The instruments to be used for post-accident monitoring at PBNP were added to the list of equipment to be environmentally qualified.
4. Wisconsin Electric committed in our September 30, 1982 letter to you regarding NUREG-0737, Item II.B.3, Post-Accident Sampling Capability, to environmentally qualify some additional air-operated valves to enhance our capability to sample the reactor coolant and containment atmosphere following an accident. These components have also been added to the list. The equipment described in paragraphs 3 and 4 above comprises the equipment within the scope of 10 CFR 50.49(b)(3) (i.e., "Certain post-accident monitoring equipment"). This (b)(3) equipment is specifically identified in the Enclosure 1 list.
5. Wisconsin Electric committed to install eight additional air-operated containment isolation valves inside containment in response to NUREG-0737, Item II.E.4.2 and IE Bulletin 80-11. The air operators for these valves use environmentally qualified solenoid valves and limit switches. These valves have been added to the list.
6. The solenoid valves and limit switches associated with automatic closure of the Main Feedwater System control valves and bypass valves upon initiation of safety injection have now been identified as being within the scope of 10 CFR 50.49(b)(1). The solenoid valves were not previously assigned to our "Master List" due to their fail-safe design and the fact that they are deenergized electrically on a potential steam-line break in the turbine hall where they are located. Justification for continued operation is provided until the equipment is qualified by the fact that the solenoid valves are deenergized and shift to their fail-safe position immediately upon initiation of safety injection. Since these valves would be subjected to a harsh steam environment due to a postulated steam line break in the turbine hall for only a short time (less than 10 seconds) prior to operating, they are expected to properly perform their safety function. In addition, the main feedwater pumps are automatically tripped on a safety injection.

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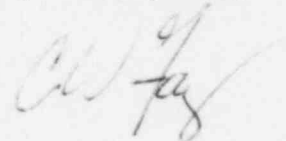
tion signal followed by automatic closure of their respective discharge isolation valves. This provides a redundant means to isolate main feedwater flow to the steam generators following a steam-line break accident. Therefore, the continued safe operation of PBNP is assured until these equipment items can be replaced with environmentally qualified equipment.

The anticipated schedule for installation of the qualified equipment and the schedule for completion of the environmental qualification documentation has been provided in Enclosure 1. Our letter to you dated May 4, 1983 requested an extension of the environmental qualification deadline on certain equipment items for which the qualification cannot be completed by the 10 CFR 50.49(g) deadline (i.e., second refueling outage after March 31, 1982). The schedule provided in Enclosure 1 assumes that these extension requests will be granted. An extension of the environmental qualification deadline is now also requested for PBNP Unit 2 only, in accordance with the provisions of 10 CFR 50.49(g), for the additional equipment items described in item 6 above until November 1, 1984 (i.e., the end of next refueling outage for Unit 2). The basis of this extension request is that this equipment was just recently identified as requiring environmental qualification. Replacement equipment cannot be specified, purchased, and installed by the end of the current Unit 2 outage scheduled to end on June 30, 1983, (i.e., the end of the second refueling outage after March 31, 1982 referenced in paragraph(g) of 10 CFR 50.49). The schedules provided in Enclosure 1 also assume that the environmental qualification documentation questions raised by the PBNP Safety Evaluation Report (SER) dated December 22, 1982 can be fully resolved in a meeting requested by Wisconsin Electric with the NRC Staff.

In your letter to us dated March 28, 1983 regarding "Clarification of Environmental Qualification Safety Evaluation Report" it was requested that we describe the methods used to identify the equipment covered by 10 CFR 50.49(b)(2) (i.e., "Nonsafety-related electric equipment whose failure under postulated environmental conditions could prevent satisfactory accomplishment of safety functions..."). The methodology employed to review the equipment within the scope of 10 CFR 50.49(b)(2) is described in Enclosure 2 to this letter. This review was conducted since the effective date of the rule (i.e., February 22, 1983) and no additional equipment items were identified which were not previously identified in our reviews for IE Bulletin 79-01B.

We would be pleased to answer any questions you may have regarding this information.

Very truly yours,



C. W. Fay

Vice President - Nuclear Power

Enclosures

cc: NRC Resident Inspector

ENCLOSURE 1

LIST OF ELECTRIC EQUIPMENT IMPORTANT
TO SAFETY TO BE ENVIRONMENTALLY QUALIFIED
POINT BEACH NUCLEAR PLANT, UNITS 1 AND 2

(May 20, 1983)

- Notes:
1. A request for an extension of the environmental qualification deadline imposed by 10 CFR 50.49(g) (i.e., "the end of the second refueling outage after March 31, 1982") was requested for the final environmental qualification documentation only (not installation or operation) of this equipment in our letter to Mr. H. R. Denton dated May 4, 1983. The end of the second refueling outage after March 31, 1982 is expected to be June 30, 1983 for PBNP, Unit 2, and March 30, 1984 for PBNP, Unit 1.
 2. Some equipment items were listed in NRC Qualification Category II.A ("Equipment Qualification Not Established") or II.C ("Equipment Satisfies All Requirements Except Qualified Life or Replacement Schedule Justified") in the Technical Evaluation Report (TER) attached to the PBNP Safety Evaluation Report dated December 22, 1982 regarding "Environmental Qualification of Safety Related Electrical Equipment." A meeting has been requested with the NRC Staff to resolve the documentation questions raised in the TER. Wisconsin Electric considers this equipment to be environmentally qualified in accordance with 10 CFR 50.49 (i.e., DOR Guidelines).
 3. This equipment is within the scope of 10 CFR 50.49(b)(3) (i.e., "Certain post-accident monitoring equipment"). An extension of the environmental qualification deadline imposed by 10 CFR 50.49(g) (i.e., "the end of the second refueling outage after March 31, 1982") was requested until November 1, 1984 in our letter to Mr. H. R. Denton dated May 4, 1983.
 4. A request for extension of the environmental qualification deadline has been requested for the equipment until 11/1/84 by this letter in accordance with 10 CFR 50.49(g).
 5. The "installation/operation" date is the date by which the equipment was turned over to the operations group for operation. The final official turnover may not be completed by the specified date due to the lack of certain formal quality assurance documentation required. The final operation configuration may also not be complete due to various power supply, instrumentation loop, and control board modifications being implemented at PBNP.

MASTER LIST OF ELECTRICAL EQUIPMENT IMPORTANT
TO SAFETY TO BE ENVIRONMENTALLY QUALIFIED
POINT BEACH NUCLEAR PLANT, UNITS 1 AND 2

System: I. Safety Injection

Page: I-1
Date: May 20, 1983

| Item No. | PBNP Tag No. | NRC TER No. | Description | Expected or Actual Installation/ Operation Date | Expected Environmental Qualification Documentation Date |
|----------|----------------------|--|--|---|---|
| 1. | 1-P15A&B 2-P15A&B | 24 None 41 50 | a. Westinghouse Motors - High-Head Safety Injection Pumps b. Motor-to-Lead Splices - Scotch #70 Silicon Rubber Tape Insulation with Vinyl Tape Overall or Equivalent c. Power Cables - Okonite Okonex-Insulated and Okoprene-Jacketed 5000 Volt Power d. Motor & Pump Bearing Lubricant - American Oil Co. No. 68 Oil or Equivalent | Original Equipment | 6/30/83 ⁽²⁾ |
| 2. | 1&2-SI878 P&D | 63 43 43 None 36 35 54 56 | a. Limitorque Valve Motor Operators - High-Head Cold Leg Injection Line Isolation Valves b. Power Cable - Kerite 600 Volt Power Cable c. Control Cable - Kerite 600 Volt Control Cable d. Motor-to-Lead Splices - Scotch #70 Silicon Rubber Tape Insulation with Vinyl Tape Overall or Equivalent e. Electrical Penetration Splices - Bechtel Dwg. No. SK-E-165/Raychem Type SFR f. Electrical Penetration Assembly - Westinghouse/Crouse Hinds Welded Canister Penetration g. Main Gear Case Lubricant - American Oil Co. Amolith #1 EP or AMDEX #2 EP Greases h. Geared Limit Switch Assembly Lubricant - Mobil Oil Co. No. 28 Grease | Original Equipment | 6/30/83 ⁽²⁾ |
| 3. | 1&2-SI878 A&C | 62 43 43 None 36 35 54 56 | a. Limitorque Valve Motor Operators - High-Head Reactor Vessel Injection Line Isolation Valves b. Power Cable (see Item 2.b) c. Control Cable (see Item 2.c) d. Motor-to-Lead Splices (see Item 2.d) e. Electrical Penetration Splices (see Item 2.e) f. Electrical Penetration Assembly (see Item 2.f) g. Main Gear Case Lubricant (see Item 2.g) h. Geared Limit Switch Assembly Lubricant (see Item 2.h) | Original Equipment | 6/30/83 ⁽²⁾ |

MASTER LIST OF ELECTRICAL EQUIPMENT IMPORTANT
TO SAFETY TO BE ENVIRONMENTALLY QUALIFIED
POINT BEACH NUCLEAR PLANT, UNITS 1 AND 2

System: I. Safety Injection

Page: I-2

Date: May 20, 1983

| Item No. | PBNP Tag No. | NRC TER No. | Description | Expected or Actual Installation/ Operation Date | Expected Environmental Qualification Documentation Date |
|----------|--------------------|--|--|---|---|
| 4. | 1&2-SI852 A&B | 63 43 43 None 36 35 54 56 | a. Limitorque Valve Motor Operators - Low-Head Reactor Vessel Injection Line Isolation Valves b. Power Cable (see Item 2.b) c. Control Cable (see Item 2.c) d. Motor-to-Lead Splices (see Item 2.d) e. Electrical Penetration Splices (see Item 2.e) f. Electrical Penetration Assembly (see Item 2.f) g. Main Gear Case Lubricant (see Item 2.g) h. Geared Limit Switch Assembly Lubricant (see Item 2.h) | Original Equipment | 6/30/83 ⁽²⁾ |
| 5. | 1&2-SI851 A&B | 66 (Unit 1) 70 (Unit 2) 43 39 None 54 56 | a. Limitorque Valve Motor Operators - Low-Head Safety Injection Suction from Containment Sump B Isolation Valves b. Power Cable (see Item 2.b) c. Control Cable - Rome 600 Volt Control Cable d. Motor-to-Lead Splices (see Item 2.d) e. Main Gear Case Lubricant (see Item 2.g) h. Geared Limit Switch Assembly Lubricant (see Item 2.h) | Original Equipment | 6/30/83 ⁽²⁾ |
| 6. | 1&2-PT922 & 923 | 1 None 40 | a. Foxboro Pressure Transmitters - Safety Injection Pump Discharge Pressure b. Cable Splices - Raychem Type WCSF-N c. Instrumentation Cable - Boston Insulated Wire & Cable Co. Bostrad 7 Twisted Shielded Pair | 12/10/82 (Unit 1) 6/30/83 (Unit 2) | 3/30/84 ⁽¹⁾ |
| 7. | 1&2-FT924 & 925 | 4 None | a. Foxboro Differential Pressure Transmitters - High-Head Safety Injection Line Flow b. Instrumentation Cable - Anaconda, Rockbestos, or Brand Rex Twisted, Shielded Pair | 6/30/83 (Unit 2) 3/30/84 (Unit 1) | 3/30/84 ⁽¹⁾ |
| 8. | 1&2-FT928 | 3 None | a. Foxboro Differential Pressure Transmitters - Low-Head Safety Injection Line (Train B) Flow b. Instrumentation Cable - Anaconda, Rockbestos, or Brand Rex Twisted, Shielded Pair | 6/30/83 (Unit 1) 3/30/84 | 3/30/84 ⁽¹⁾ |

MASTER LIST OF ELECTRICAL EQUIPMENT IMPORTANT
TO SAFETY TO BE ENVIRONMENTALLY QUALIFIED
POINT BEACH NUCLEAR PLANT, UNITS 1 AND 2

System: I. Safety Injection

Page: I-3
Date: May 20, 1983

| <u>Item No.</u> | <u>PBNP Tag No.</u> | <u>NRC TER No.</u> | <u>Description</u> | <u>Expected or Actual Installation/ Operation Date</u> | <u>Expected Environmental Qualification Documentation Date</u> |
|-----------------|----------------------------|---|---|--|--|
| 9. | 1&2-PT936, 937, 940, & 941 | None 42 36 35 | a. Foxboro Pressure Transmitters - Safety Injection Accumulator Pressure b. Instrumentation Cable - Okonite Okotherm-Insulated and Okoseal-Jacketed Twisted, Shielded Pair or Okonite PVC-Insulated and Jacketed Twisted, Shielded Pair (1-PT937 only) c. Electrical Penetration Splices - Bechtel Dwg. No. SK-E-165/Raychem Type SFR d. Electrical Penetration Assembly - Westinghouse/Crouse Hinds Welded Canister Penetration | 12/10/82 (Unit 1) 6/30/83 (Unit 2) | 3/30/84 ⁽³⁾ |
| 10. | 1&2-LT960 & 961 | 5 None None None None None | a. Gems Delaval Level Transmitter - Containment Sump B Water Level b. Conax Electrical Conductor Seal Assembly (ECSA) c. ECSA-to-Cable Splice - Raychem Type WCSF-N d. Instrumentation Cable - Anaconda, Rockbestos, or Brand Rex Twisted, Shielded Triple e. Cable-to-Penetration Splices - Raychem Type WCSF-N f. Electrical Penetration Assembly - Westinghouse Modular Penetrations | 12/10/82 (Unit 1) 6/30/83 (Unit 2) | 3/30/84 ⁽¹⁾ |

MASTER LIST OF ELECTRICAL EQUIPMENT IMPORTANT
TO SAFETY TO BE ENVIRONMENTALLY QUALIFIED
POINT BEACH NUCLEAR PLANT, UNITS 1 AND 2

System: II. Containment Spray

Page: II-1
Date: May 20, 1983

| <u>Item No.</u> | <u>PBNP Tag No.</u> | <u>NRC TER No.</u> | <u>Description</u> | <u>Expected or Actual Installation/ Operation Date</u> | <u>Expected Environmental Qualification Documentation Date</u> |
|-----------------|-----------------------|--|--|--|--|
| 1. | 1-P14A&B 2-P14A&B | 25 None 43 55 52 | a. Westinghouse Motors - Containment Spray Pumps b. Motor-to-Lead Splices - Scotch #70 Silicon Rubber Tape Insulation with Vinyl Tape Overall or Equivalent c. Power Cables - Kerite 600 Volt Power d. Motor Bearing Lubricant - American Oil Co. Amolith #2 Grease or Equivalent e. Pump Bearing Lubricant - American Oil Co. Rykon Industrial No. 32 Oil | Original Equipment | 6/30/83 ⁽²⁾ |
| 2. | 1&2SI860 A,B,C,& D | 64 43 39 None 54 56 | a. Limitorque Valve Motor Operators - Containment Spray Pump Discharge Line Isolation Valves b. Power Cables - Kerite 600 Volt Power c. Control Cables - Rome 600 Volt Control d. Motor-to-Lead Splices - Scotch #70 Silicon Rubber Tape Insulation with Vinyl Tape Overall or Equivalent e. Main Gear Case Lubricant - American Oil Co. Amolith #1 EP or Amdex #2 EP Greases f. Geared Limit Switch Assembly Lubricant - Mobil Oil Co. No. 28 Grease | Original Equipment | 6/30/83 ⁽²⁾ |
| 3. | 1&2SI871 A&B | 64 43 39 None 54 56 | a. Limitorque Valve Motor Operators - Containment Spray Pump Suction from RHR Heat Exchange Outlet Isolation Valves b. Power Cables (see Item 2.b) c. Control Cables (see Item 2.c) d. Motor-to-Lead Splices (see Item 2.d) e. Main Gear Case Lubricant (see Item 2.f) f. Geared Limit Switch Assembly Lubricant (see Item 2.f) | Original Equipment | 6/30/83 ⁽²⁾ |

MASTER LIST OF ELECTRICAL EQUIPMENT IMPORTANT
TO SAFETY TO BE ENVIRONMENTALLY QUALIFIED
POINT BEACH NUCLEAR PLANT, UNITS 1 AND 2

System: II. Containment Spray

Page: II-2
Date: May 20, 1983

| <u>Item No.</u> | <u>PBNP Tag No.</u> | <u>NRC TER No.</u> | <u>Description</u> | <u>Expected or Actual Installation/ Operation Date</u> | <u>Expected Environmental Qualification Documentation Date</u> |
|-----------------|---------------------|--------------------|--|--|--|
| 4. | 1&2-SI836 A&B | 33 | a. Fisher Electro-Pneumatic (I/P) Transducers - Containment Spray Additive Tank Outlet Isolation Valve Air Operators | 6/30/83 (Unit 2) 3/30/84 (Unit 1) | 6/30/83 (Unit 2) 3/30/84 (Unit 1) |
| | | 57 | b. NAMCO Limit Switches - Valve Position Indication | | |
| | | None | c. Conax Electrical Conductor Seal Assemblies (ECSAs) for NAMCO Limit Switches | | |
| | | None | d. ECSA-to-Cable Splices - Raychem Type WCSF-N | | |
| | | 39 | e. Control Cable - Rome 600 Volt Control | | |
| | | None | f. I/P Instrumentation Cable - Okonite PVC-Insulated and Jacketed Twisted, Shielded Pair | | |
| 5. | 1&2-LT931 | 2 | a. Foxboro Differential Pressure Transmitter - Containment Spray Additive Tank Water Level | 6/30/83 (Unit 2) 3/30/84 (Unit 1) | 3/30/84 ⁽¹⁾ |
| | | None | b. Instrumentation Cable - Anaconda, Rockbestos, or Brand Rex Twisted, Shielded Pair | | |
| 6. | 1&2-FI962 & 963 | None | a. Foxboro Differential Pressure Transmitter - Containment Spray Pump Discharge Line Flow | 3/30/84 (Unit 1) 11/1/84 (Unit 2) | 11/1/84 ⁽³⁾ |
| | | None | b. Instrumentation Cable - Anaconda, Rockbestos, or Brand Rex Twisted Shielded Pair | | |

MASTER LIST OF ELECTRICAL EQUIPMENT IMPORTANT
TO SAFETY TO BE ENVIRONMENTALLY QUALIFIED
POINT BEACH NUCLEAR PLANT, UNITS 1 AND 2

System: III. Auxiliary Coolant

Page: III-1
Date: May 20, 1983

| Item No. | PBNP Tag No. | NRC TER No. | Description | Expected or Actual Installation/ Operation Date | Expected Environmental Qualification Documentation Date |
|----------|----------------------|--|--|---|---|
| 1. | 1-P10A&B 2-P10A&B | 27 None 43 55 52 | a. Westinghouse Motors - Residual Heat Removal (Low-Head Safety Injection) Pumps b. Motor-to-Lead Splices - Scotch #70 Silicon Rubber Tape Insulation with Vinyl Tape Overall or Equivalent c. Power Cables - Kerite 600 Volt Power d. Motor Bearing Lubricant - American Oil Co. Amolith # 2 Grease or Equivalent e. Pump Bearing Lubricant - American Oil Co. Rykon Industrial No. 32 Oil | Original Equipment | 6/30/83 ⁽²⁾ |
| 2. | 1-P11A&B 2-P11A&B | 26 None 43 55 51 | a. Westinghouse Motors - Component Cooling Water Pumps b. Motor-to-Lead Splices - Scotch #70 Silicon Rubber Tape Insulation with Vinyl Tape Overall or Equivalent c. Power Cables - Kerite 600 Volt Power d. Motor Bearing Lubricant - American Oil Co. Amolith #2 Grease or Equivalent e. Pump Bearing Lubricant - American Oil Co. Industrial No. 46 Oil | Original Equipment | 6/30/83 ⁽²⁾ |
| 3. | 1&2-AC738 A&B | 66 43 39 None 54 56 | a. Limitorque Valve Motor Operators - Component Cooling Water to RHR Heat Exchanger Isolation Valves b. Power Cable - Kerite 600 Volt Power c. Control Cable - Rome 600 Volt Control d. Motor-to-Lead Splices - Scotch #70 Silicon Rubber Tape Insulation with Vinyl Tape Overall or Equivalent e. Main Gear Case Lubricant - American Oil Co. Amolith #1 EP or AMDEX #2 EP Greases f. Geared Limit Switch Assembly Lubricant - Mobil Oil Co. No. 28 Grease | Original Equipment | 6/30/83 ⁽²⁾ |

MASTER LIST OF ELECTRICAL EQUIPMENT IMPORTANT
TO SAFETY TO BE ENVIRONMENTALLY QUALIFIED
POINT BEACH NUCLEAR PLANT, UNITS 1 AND 2

System: III. Auxiliary Coolant

Page: III-2
Date: May 20, 1983

| Item No. | PBNP Tag No. | NRC TER No. | Description | Expected or Actual Installation/ Operation Date | Expected Environmental Qualification Documentation Date |
|----------|-----------------------|--|---|---|---|
| 4. | 1&2-AC624, 625, & 626 | 33 57 None None 39 None | a. Fisher Electro-Pneumatic (I/P) Transducers - Residual Heat Removal Heat Exchanger Discharge (624 & 625) and Bypass (626) Line Throttle Valves b. NAMCO Limit Switches - Valve Position Indication c. Conax Electrical Conductor Seal Assemblies (ECSAs) for NAMCO Limit Switches d. ECSA-to-Cable Splices - Raychem Type WCSF-N e. Control Cable - Rome 600 Volt Control f. I/P Instrumentation Cable - Okonite PVC-Insulated and Jacketed Twisted, Shielded Pair | 6/30/83 (Unit 2) 3/30/84 (Unit 1) | 6/30/83 (Unit 2) 3/30/84 (Unit 1) |
| 5. | 1&2-FT626 | 7 None 40 | a. Foxboro Differential Pressure Transmitters - Residual Heat Removal (Low-Head Safety - Injection-Train A) Discharge Line Flow g. Cable Splices - Raychem Type WCSF-N c. Instrumentation Cable - Boston Insulated Wire & Cable Co. Bostrad 7 Twisted, Shielded Pair | 6/30/83 (Unit 2) 3/30/84 (Unit 1) | 3/30/84 ⁽¹⁾ |
| 6. | 1&2-PT628 & 629 | 8 None 40 | a. Foxboro Pressure Transmitters - Residual Heat Removal (Low-Head Safety Injection) Pump Discharge Pressure b. Cable Splices - Raychem Type WCSF-N c. Instrumentation Cable - Boston Insulated Wire & Cable Co. Bostrad 7 Twisted, Shielded Pair (Unit 1) or Okonite PVC-Insulated and Jacketed Twisted, Shielded Pair (Unit 2) | 6/30/83 (Unit 2) 3/30/84 (Unit 1) | 3/30/84 ⁽¹⁾ |
| 7. | 1&2-FT619 | 6 None | a. Foxboro Differential Pressure Transmitters - Component Cooling Water Discharge Line Flow b. Cable Splices - Raychem Type WCSF-N c. Instrumentation Cable - Boston Insulated Wire & Cable Co. Bostrad 7 Twisted, Shielded Pair | 6/30/83 (Unit 2) 3/30/84 (Unit 1) | 3/30/84 ⁽¹⁾ |

MASTER LIST OF ELECTRICAL EQUIPMENT IMPORTANT
TO SAFETY TO BE ENVIRONMENTALLY QUALIFIED
POINT BEACH NUCLEAR PLANT, UNITS 1 AND 2

System: III. Auxiliary Coolant

Page: III-3
Date: May 20, 1983

| <u>Item No.</u> | <u>PBNP Tag No.</u> | <u>NRC TER No.</u> | <u>Description</u> | <u>Expected or Actual Installation/ Operation Date</u> | <u>Expected Environmental Qualification Documentation Date</u> |
|-----------------|---------------------|--------------------|--|--|--|
| 8. | 1&2-TE621 | 30 | a. Conax Resistance Temperature Detectors - Component Cooling Heat Exchange Outlet Line Temperature | 6/30/83 (Unit 2) 3/30/84 (Unit 1) | 3/30/84 ⁽¹⁾ |
| | | None 40 | b. Cable Splices - Raychem Type WCSF-N c. Instrumentation Cable - Boston Insulated Wire & Cable Co. Bostrad 7 Double Twisted, Shielded Pair | | |
| 9. | 1&2-TE622 & 623 | 30 | a. Conax Resistance Temperature Detectors - Residual Heat Removal Heat Exchanger Outlet Line Temperature | 6/30/83 (Unit 2) 3/30/84 (Unit 1) | 3/30/84 ⁽¹⁾ |
| | | None None | b. Cable Splices - Raychem Type WCSF-N c. Instrumentation Cable - Anaconda, Rockbestos, or Brand Rex Twisted, Shielded Triple | | |

MASTER LIST OF ELECTRICAL EQUIPMENT IMPORTANT
TO SAFETY TO BE ENVIRONMENTALLY QUALIFIED
POINT BEACH NUCLEAR PLANT, UNITS 1 AND 2

System: IV. Auxiliary Feedwater

Page: IV-1
Date: May 20, 1983

| <u>Item No.</u> | <u>PBNP Tag No.</u> | <u>NRC TER No.</u> | <u>Description</u> | <u>Expected or Actual Installation/ Operation Date</u> | <u>Expected Environmental Qualification Documentation Date</u> |
|-----------------|----------------------------|--------------------|---|--|--|
| 1. | 1&2-FT4036 & 4037 | None | a. Foxboro Differential Pressure Transmitters - Auxiliary Feedwater to Steam Generator Line Flow b. Instrumentation Cable - Boston Insulated Wire & Cable Co. Bostrad 7 Twisted, Shielded Pair | 7/5/81 | 3/30/84 ⁽³⁾ |
| 2. | LT4038, 4039, 4040, & 4041 | 17 | a. Foxboro Differential Pressure Transmitters - Condensate Storage Tank Water Level b. Instrumentation Cable - Anaconda, Rockbestos, or Brand Rex Twisted, Shielded Pair | 6/30/83 (Unit 2) 3/30/84 (Unit 1) | 3/30/84 ⁽¹⁾ |

MASTER LIST OF ELECTRICAL EQUIPMENT IMPORTANT
TO SAFETY TO BE ENVIRONMENTALLY QUALIFIED
POINT BEACH NUCLEAR PLANT, UNITS 1 AND 2

System: V. Reactor Coolant

Page: V-1
Date: May 20, 1983

| Item No. | PBNP Tag No. | NRC TER No. | Description | Expected or Actual Installation/ Operation Date | Expected Environmental Qualification Documentation Date |
|----------|----------------------------|---|---|---|---|
| 1.* | 1&2-RC515 & 516 | 61 43 39 (43) None 36 35 54 56 | a. Limitorque Valve Motor Operators - Pressurizer Power Operated Relief Valve Blocking Valves b. Power Cables - Kerite 600 Volt Power c. Control Cables - Rome 600 Volt Control (Kerite for 1-RC515) d. Motor-to-Lead Splices - Scotch #70 Silicon Rubber Tape Insulation with Vinyl Tape Overall or Equivalent e. Electrical Penetration Splices - Bechtel Dwg. No. SK-E-165/Raychem Type SFR f. Electrical Penetration Assembly - Westinghouse/ Crouse Hinds Welded Canister Penetrations g. Main Gear Case Lubricant - American Oil Co. Amolith #1 EP or AMDEX #2 EP Greases h. Geared Limit Switch Assembly Lubricant- Mobil Oil Co. No. 28 Grease | Original Equipment | 6/30/83 ⁽²⁾ |
| 2.* | 1&2-RC430 & 431C | 19 58 None 43 36 35 | a. ASCO Solenoid Valves - Pressurizer Power Operated Relief Valve Air Operator b. NAMCO Limit Switches- Valve Position Indication c. Conax Electrical Conductor Seal Assemblies (ECSAs) for NAMCO Limit Switches d. ECSA-to-Cable Splices - Raychem Type WCSF-N e. Control Cable - Kerite 600 Volt Control f. Electrical Penetration Splices (see Item 1.e) g. Electrical Penetration Assembly (see Item 1.f) | 12/10/82 (Unit 1) 6/30/83 (Unit 2) | 6/30/83 |
| 3.* | 1&2-RC 570A&B 575A&B, & | None None | a. Target Rock Solenoid Valves - Reactor Coolant System Gas Vent Line Isolation Valves b. Conax Electrical Conductor Seal Assemblies (ECSAs) | 6/30/83 (Unit 2) 3/30/84 (Unit 1) | 3/30/84 |

* This equipment is not safety-related. Its failure or spurious operation can not prevent the achievement or maintenance of safe shutdown or mitigation of design-basis accidents. This equipment is not within the scope of 10 CFR 50.49(b) but is listed here for completeness.

MASTER LIST OF ELECTRICAL EQUIPMENT IMPORTANT
TO SAFETY TO BE ENVIRONMENTALLY QUALIFIED
POINT BEACH NUCLEAR PLANT, UNITS 1 AND 2

System: V. Reactor Coolant

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Date: May 20, 1983

| <u>Item No.</u> | <u>PBNP Tag No.</u> | <u>NRC TER No.</u> | <u>Description</u> | <u>Expected or Actual Installation/ Operation Date</u> | <u>Expected Environmental Qualification Documentation Date</u> |
|-----------------|-----------------------------|--|--|--|--|
| | 580A&B | None None None None | c. ECSA-to-Cable Splices - Raychem Type WCSF-N d. Control Cable - Anaconda, Rockbestos, or Brand Rex 600 Volt Control e. Electrical Penetration Splices - Raychem Type WCSF-N f. Electrical Penetration Assembly-Westinghouse Modular Penetrations | | |
| 4. | 1&2-PT420, 420A, & 420B | 13 None None None | a. Foxboro Pressure Transmitters - Reactor Coolant System Wide-Range Pressure b. Instrumentation Cable - Anaconda, Rockbestos, or Brand Rex Twisted Shielded Pair c. Electrical Penetration Splices - Raychem Type WCSF-N d. Electrical Penetration Assembly - Westinghouse Modular Penetration | 6/30/83 (Unit 2) 3/30/84 (Unit 1) | 3/30/84 ⁽¹⁾ |
| 5. | 1&2-LT 426, 427, 428, & 433 | 11 42 36 35 | a. Foxboro Differential Pressure Transmitters - Pressurizer Water Level b. Instrumentation Cable - Okonite Okotherm - Insulated and Okoseal-Jacketed Twisted, Shielded Pair c. Electrical Penetration Splices (see Item 1.e) d. Electrical Penetration Assembly (see Item 1.f) | 6/30/83 (Unit 2) 3/30/84 (Unit 1) | 3/30/84 ⁽¹⁾ |
| 6. | 1&2-PT 429, 430, 431, & 449 | 10 42 36 35 | a. Foxboro Pressure Transmitters - Pressurizer Narrow-Range Pressure b. Instrumentation Cable (see Item 5.b) c. Electrical Penetration Splices (see Item 1.e) d. Electrical Penetration Assembly (see Item 1.f) | 12/10/82 (Unit 1) 6/30/83 (Unit 2) | 3/30/84 ⁽¹⁾ |
| 7. | 1&2-LT 494 & 495 | None None None None | a. Foxboro Differential Pressure Transmitters - Reactor Vessel Wide-Range Water Level b. Instrumentation Cable (see Item 4.b) c. Electrical Penetration Splices (see Item 4.c) d. Electrical Penetration Assembly (see Item 4.d) | 6/30/83 (Unit 2) 3/30/84 (Unit 1) | 3/30/84 ⁽³⁾ |

MASTER LIST OF ELECTRICAL EQUIPMENT IMPORTANT
TO SAFETY TO BE ENVIRONMENTALLY QUALIFIED
POINT BEACH NUCLEAR PLANT, UNITS 1 AND 2

System: V. Reactor Coolant

Page: V-3
Date: May 20, 1983

| Item No. | PBNP Tag No. | NRC TER No. | Description | Expected or Actual Installation/ Operation Date | Expected Environmental Qualification Documentation Date |
|----------|---|--|---|---|---|
| 8. | 1&2-LT 496 & 497 | None None None None | a. Foxboro Differential Pressure Transmitters - Reactor Vessel Narrow-Range Water Level b. Instrumentation Cable (see Item 4.b) c. Electrical Penetration Splices (see Item 4.c) d. Electrical Penetration Assembly (see Item 4.d) | 6/30/83 (Unit 2) 3/30/84 (Unit 1) | 3/30/84 ⁽³⁾ |
| 9. | 1&2-PT498 | None None None None | a. Foxboro Pressure Transmitters - Reactor Coolant System Gas Vent Discharge Line Pressure b. Instrumentation Cable (see Item 4.b) c. Electrical Penetration Splices (see Item 4.c) d. Electrical Penetration Assembly (see item 4.d) | 6/30/83 (Unit 2) 3/30/84 (Unit 1) | 3/30/84 ⁽³⁾ |
| 10. | 1&2-TE 499 thru 502, 506 thru 509 and 1-TE 503 & 510 | None None None None None | a. Conax Thermocouples (T/C) - Reactor Vessel Level Indicating System Reference Leg Temperature b. T/C-to-Cable Splices (see Item 4.c) c. T/C Extension Cable - Anaconda Type K T/C Extension Twisted, Shielded Pair d. Electrical Penetration Splices (see Item 4.c) e. Electrical Penetration Assembly (see Item 4.d) | 3/30/84 (Unit 1) 11/1/84 (Unit 2) | 11/1/84 ⁽³⁾ |
| 11. | 1&2-TE1 thru 39 | 31 47 37 None None | a. Control Products Corp. Thermocouples (T/Cs) Incore (Core Exit) Thermocouples b. Veam Division of Litton T/C Connectors c. Instrumentation Cable (see Item 10.c) d. Electrical Penetration Splices (see Item 4.c) e. Electrical Penetration Assembly (see Item 4.d) | 11/1/84 (Unit 2) 3/30/84 (Unit 1) | 11/1/84 ⁽³⁾ |
| 12. | 1&2-TE 450A-D & 451A-D | 32 (Unit 1) 32 and 69 (Unit 2) | a. Conax Resistance Temperature Detectors (RTDs)- Reactor Coolant System Hot & Cold Leg Loop Temp. b. RTD-to-Cable Splices (see Item 4.c) c. Instrumentation Cable - Anaconda, Rockbestos, or Brand Rex Twisted, Shielded Triple d. Electrical Penetration Splices (see Item 4.c) e. Electrical Penetration Assembly (see Item 4.d) | 3/30/84 (Unit 1)* 11/1/84 (Unit 2)* | 11/1/84 ⁽¹⁾⁽³⁾ |

* One element of each dual element RTD will be operational through existing cables and instrumentation racks by 12/10/82 (Unit 1) and 6/30/83 (Unit 2).

MASTER LIST OF ELECTRICAL EQUIPMENT IMPORTANT
TO SAFETY TO BE ENVIRONMENTALLY QUALIFIED
POINT BEACH NUCLEAR PLANT, UNITS 1 AND 2

System: VI. Chemical & Volume Control

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Date: May 20, 1983

| <u>Item No.</u> | <u>PBNP Tag No.</u> | <u>NRC TER No.</u> | <u>Description</u> | <u>Expected or Actual Installation/ Operation Date</u> | <u>Expected Environmental Qualification Documentation Date</u> |
|-----------------|---------------------|--|---|--|--|
| 1. | 1&2-CV1296 | 22 60 None None 43 36 35 | a. ASCO Solenoid Valves - Auxiliary Charging Line Isolation Valve Air Operators b. NAMCO Limit Switches - Valve Position Indication c. Conax Electrical Conductor Seal Assemblies (ECSA's) for NAMCO Limit Switches d. ECSA-to-Cable Splices - Raychem Type WCSF-N e. Control Cable - Kerite 600 Volt Control f. Electrical Penetration Splices - Bechtel Dwg. No. SK-E-165/Raychem Type SFR g. Electrical Penetration Assembly - Westinghouse/Crouse Hinds Welded Canister Penetration | 12/10/82 (Unit 1) 6/30/83 (Unit 2) | 6/30/83 |
| 2. | 1&2CV313A | None None None None None None | a. ASCO Solenoid Valves - Reactor Coolant Pump Seal Water Return Line Isolation Valve Air Operators b. NAMCO Limit Switches (see Item 1.b) c. Conax ECSA (see Item 1.c) d. ECSA-to-Cable Splices (see Item 1.d) e. Control Cables - Anaconda, Rockbestos, or Brand Rex 600 Volt Control f. Electrical Penetration Splices (see Item 1.d) g. Electrical Penetration Assembly - Westinghouse Modular Penetration | 6/30/83 (Unit 2) 3/30/84 (Unit 1) | 6/30/83 (Unit 2) 3/30/84 (Unit 1) |
| 3. | 1&2-CV371A | None None None None None None | a. ASCO Solenoid Valves - Reactor Coolant Letdown Line Isolation Valve Air Operators b. NAMCO Limit Switches (see Item 1.b) c. Conax ECSA (see Item 1.c) d. ECSA-to-Cable Splices (see Item 1.d) e. Control Cables - (see Item 2.e) f. Electrical Penetration Splices (see Item 1.d) g. Electrical Penetration Assembly - Westinghouse Modular Penetration | 6/30/83 (Unit 2) 3/30/84 (Unit 1) | 6/30/83 (Unit 2) 3/30/84 (Unit 1) |

MASTER LIST OF ELECTRICAL EQUIPMENT IMPORTANT
TO SAFETY TO BE ENVIRONMENTALLY QUALIFIED
POINT BEACH NUCLEAR PLANT, UNITS 1 AND 2

System: VI. Chemical & Volume Control

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Date: May 20, 1983

| <u>Item No.</u> | <u>PBNP Tag No.</u> | <u>NRC TER No.</u> | <u>Description</u> | <u>Expected or Actual Installation/ Operation Date</u> | <u>Expected Environmental Qualification Documentation Date</u> |
|---------------------|--|------------------------|---|--|--|
| 4. | 1&2-LT106, 172, & 190 LT102, 171, & 189 | 12 None 40 | a. Foxboro Differential Pressure Transmitters - Boric Acid Storage Tank Water Level b. Cable Splices - Raychem Type WCSF-N c. Instrumentation Cable - Boston Insulated Wire & Cable Co. Bostrad 7 Twisted, Shielded Pair or Okonite PVC-Insulated and Jacketed Twisted, Shielded Pair (2-LT106 & 190) | 6/30/83 (Unit 2) 3/30/84 (Unit 1) | 3/30/84 ⁽¹⁾ |

MASTER LIST OF ELECTRICAL EQUIPMENT IMPORTANT
TO SAFETY TO BE ENVIRONMENTALLY QUALIFIED
POINT BEACH NUCLEAR PLANT, UNITS 1 AND 2

System: VII. Heating & Ventilation

Page: VII-1
Date: May 20, 1983

| <u>Item No.</u> | <u>PBNP Tag No.</u> | <u>NRC TER No.</u> | <u>Description</u> | <u>Expected or Actual Installation/ Operation Date</u> | <u>Expected Environmental Qualification Documentation Date</u> |
|-----------------|-----------------------------|--|--|--|--|
| 1. | 1&2-W1A1 B1, C1, & D1 | 28 29 43 53 None 36 35 | a. Westinghouse Motors - Containment Air Recirculation Emergency Cooling Fans b. Motor-to-Lead Splices - Westinghouse Drawing No. 206C391 c. Power Cable - Kerite 600 Volt Power d. Motor and Fan Bearing Lubricant - Chevron Style SRI Grease e. Fan Bearing Housing Labyrinth Seal Lubricant - Westinghouse Style No. M-53701TT (E. I. Dupont de Nemours & Co., Inc. Krytox 240 AC Fluorinated Grease f. Electrical Penetration Splices - Raychem Type WCSF-N g. Electrical Penetration Assembly - Westinghouse/Crouse Hinds Welded Canister or Westinghouse Modular Penetration | Original Equipment | 6/30/83 ⁽²⁾ |
| 2. | 1&2-HV 3213 & 3245 | 20 60 None None 43 36 35 | a. ASCO Solenoid Valves - Containment Purge Supply and Exhaust Line Isolation Valve Air Operators b. NAMCO Limit Switches - Valve Position Indication c. Conax Electrical Conductor Seal Assembly (ECSA) for NAMCO Limit Switches d. ECSA-to-Cable Splices - Raychem Type WCSF-N e. Control Cables - Kerite 600 Volt Control f. Electrical Penetration Splices - Bechtel Dwg. No. SK-E-165/Raychem Type SFR g. Electrical Penetration Assembly - Westinghouse/Crouse Hinds Welded Canister Penetration | 12/10/82 (Unit 1) 6/30/83 (Unit 2) | 6/30/83 |
| 3. | 1&2-HV 3200C | 21 60 None | a. ASCO Solenoid Valves - Containment Atmosphere Sampling Line Isolation Valve Operators b. NAMCO Limit Switches - Valve Position Indication c. Conax Electrical Conductor Seal Assembly (ECSA) for NAMCO Limit Switches | 12/10/82 (Unit 1) 6/30/83 (Unit 2) | 6/30/83 ⁽²⁾ |

MASTER LIST OF ELECTRICAL EQUIPMENT IMPORTANT
TO SAFETY TO BE ENVIRONMENTALLY QUALIFIED
POINT BEACH NUCLEAR PLANT, UNITS 1 AND 2

System: VII. Heating & Ventilation

Page: VII-2
Date: May 20, 1983

| <u>Item No.</u> | <u>PBNP Tag No.</u> | <u>NRC TER No.</u> | <u>Description</u> | <u>Expected or Actual Installation/ Operation Date</u> | <u>Expected Environmental Qualification Documentation Date</u> |
|---------------------|-------------------------|------------------------|---|--|--|
| | | None | d. ECSA-to-Cable Splices (see Item 2.d) | | |
| | | 39 | e. Control Cables - Rome 600 Volt Control | | |
| | | 36 | f. Electrical Penetration Splices (see Item 2.f) | | |
| | | 35 | g. Electrical Penetration Assembly (see Item 2.g) | | |

MASTER LIST OF ELECTRICAL EQUIPMENT IMPORTANT
TO SAFETY TO BE ENVIRONMENTALLY QUALIFIED
POINT BEACH NUCLEAR PLANT, UNITS 1 AND 2

System: VIII. Main & Reheat Steam

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Date: May 20, 1983

| <u>Item No.</u> | <u>PBNP Tag No.</u> | <u>NRC TER No.</u> | <u>Description</u> | <u>Expected or Actual Installation/ Operation Date</u> | <u>Expected Environmental Qualification Documentation Date</u> |
|-----------------|---|--|---|--|--|
| 1. | 1&2-MS 2019 & 2020 | 65 43 39 None 54 56 | a. Limitorque Valve Motor Operator - Steam Supply to Turbine - Driven Auxiliary Feedwater Pump Isolation Valves b. Power Cables - Kerite 600 Volt Power c. Control Cables - Rome 600 Volt Control c. Motor-to-Lead Splices - Scotch #70 Silicon Rubber Tape Insulation with Vinyl Tape Overall or Equivalent e. Main Gear Case Lubricant - American Oil Co. Amolith #1 EP or AMDEX #2 EP Greases f. Geared Limit Switch Assembly Lubricant-Mobil Oil Co. No. 28 Grease | Original Equipment | 6/30/83 ⁽²⁾ |
| 2. | 1&2-FT 464, 465, 474, & 475 | 15 42 36 35 | a. Foxboro Differential Pressure Transmitters - Main Steam Line Flow b. Instrumentation Cable - Okonite, Okotherm-Insulated, Okoseal-Jacketed Twisted, Shielded Pair c. Electrical Penetration Splices - Bechtel Dwg. No. SK-E-165/Raychem Type SFR d. Electrical Penetration Assembly - Westinghouse/Crouse Hinds Welded Canister Penetration | 12/10/82 (Unit 1) 6/30/83 (Unit 2) | 6/30/83 ⁽¹⁾ |
| 4. | 1&2PT 468, 469, 482, 478, 479, & 483 | 16 42 None None | a. Foxboro Pressure Transmitter - Main Steam Line (Steam Generator) Pressure b. Instrumentation Cable - Same as Item 2.b or Okonite PVC-Insulated and Jacketed Twisted, Shielded Pair (2-PT478, 479, & 483) c. Additional Instrumentation Cable - Anaconda, Rockbestos, or Brand Rex Twisted, Shielded Pair d. Cable-to-Cable Splices - Raychem Type WCSF-N | 12/10/82 (Unit 1) 6/30/83 (Unit 2) | 3/30/84 ⁽¹⁾ |

MASTER LIST OF ELECTRICAL EQUIPMENT IMPORTANT
TO SAFETY TO BE ENVIRONMENTALLY QUALIFIED
POINT BEACH NUCLEAR PLANT, UNITS 1 AND 2

System: IX. Main Feedwater

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Date: May 20, 1983

| <u>Item No.</u> | <u>PBNP Tag No.</u> | <u>NRC TER No.</u> | <u>Description</u> | <u>Expected or Actual Installation/ Operation Date</u> | <u>Expected Environmental Qualification Documentation Date</u> |
|-----------------|--|--|--|---|--|
| 1. | 1&2-CV 466 & 476 | None None None None 39 | a. ASCO Solenoid Valves - Main Feedwater Regulating Valve Air Operator Trip on Safety Injection b. NAMCO Limit Switches - Valve Position Indication c. Conax Electrical Conductor Seal Assemblies (ECSAS) for NAMCO Limit Switches d. ECSA-to-Cable Splices - Raychem Type WCSF-N e. Control Cable -Rome 600 Volt Control | 3/30/84 (Unit 1) 11/1/84 (Unit 2) | 11/1/84 ⁽⁴⁾ |
| 2. | 1&2-CV 480 & 481 | None None None None 39 | a. ASCO Solenoid Valves - Main Feedwater Regulating Bypass Valve Air Operator Trip on Safety Injection b. NAMCO Limit Switches (see Item 1.b) c. Conax ECSA (see Item 1.c) d. ECSA-to-Cable Splices (see Item 1.d) e. Control Cable (see Item 1.e) | 3/30/84 (Unit 1) 11/1/84 (Unit 2) | 11/1/84 ⁽⁴⁾ |
| 3. | 1&2-LT461, 462, 463, 471, 472, & 473 | 14 36 35 | a. Foxboro Differential Pressure Transmitters - Steam Generator Narrow-Range Water Level b. Instrumentation Cable - Okonite Okotherm-Insulated, Okoseal-Jacketed Twisted, Shielded Pair c. Electrical Penetration Splices - Bechtel Dwg. No. SK-E-165/Raychem Type SFR d. Electrical Penetration Assembly - Westinghouse/Crouse Hinds Welded Canister Penetration | 12/10/82 (Unit 1) 6/30/83 (Unit 2) | 3/30/84 ⁽¹⁾ |
| 4. | 1&2-LT 460A&B, 470A&B | 14 None None None | a. Foxboro Differential Pressure Transmitter - Steam Generator Wide-Range Water Level b. Instrumentation Cable - Anaconda, Rockbestos, or Brand Rex Twisted, Shielded Pair c. Electrical Penetration Splices - Raychem Type WCSF-N d. Electrical Penetration Assembly - Westinghouse Modular Penetration | 12/10/82 (Unit 1 - one temporary channel) 3/30/84 (Unit 1 - final configuration) 6/30/83 (Unit 2 - one temporary channel) 11/1/84 (Unit 2 - final configuration) | 3/30/84 ⁽¹⁾⁽³⁾ |

MASTER LIST OF ELECTRICAL EQUIPMENT IMPORTANT
TO SAFETY TO BE ENVIRONMENTALLY QUALIFIED
POINT BEACH NUCLEAR PLANT, UNITS 1 AND 2

System: X. Electrical

Page: X-1
Date: May 20, 1983

| <u>Item No.</u> | <u>PBNP Tag No.</u> | <u>NRC TER No.</u> | <u>Description</u> | <u>Expected or Actual Installation/ Operation Date</u> | <u>Expected Environmental Qualification Documentation Date</u> |
|---------------------|-------------------------|------------------------|---|--|--|
| 1. | 1&2-B32 & 42 | 43 39 | a. Power Cables to Safeguards Motor Control Center - Kerite 600 Volt Power b. Control Cables to Safeguards Motor Control Centers - Rome 600 Volt Control | Original Equipment | 6/30/83 |

MASTER LIST OF ELECTRICAL EQUIPMENT IMPORTANT
TO SAFETY TO BE ENVIRONMENTALLY QUALIFIED
POINT BEACH NUCLEAR PLANT, UNITS 1 AND 2

System: XI. Containment

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Date: May 20, 1983

| <u>Item No.</u> | <u>PBNP Tag No.</u> | <u>NRC TER No.</u> | <u>Description</u> | <u>Expected or Actual Installation/ Operation Date</u> | <u>Expected Environmental Qualification Documentation Date</u> |
|-----------------|---------------------------|--|---|--|--|
| 1. | 1&2-PT 945 thru 950 | 9 40 | a. Foxboro Pressure Transmitters - Containment Narrow-Range Pressure b. Instrumentation Cable - Boston Insulated Wire & Cable Co. Bostrad 7 Twisted, Shielded Pair | 12/10/82 (Unit 1) 6/30/83 (Unit 2) | 3/30/84 ⁽¹⁾ |
| 2. | 1&2-PT968 & 969 | None None | a. Foxboro Pressure Transmitters - Containment Wide- Range Pressure b. Instrumentation Cable - Anaconda, Rockbestos, or Brand Rex Twisted, Shielded Pair | 6/30/83 (Unit 2) 3/30/84 (Unit 1) | 3/30/84 ⁽³⁾ |
| 3. | 1&2-HA969 thru 967 | None None None None | a. Exo-Sensor Hydrogen Analyzers - Containment Hydrogen Concentration b. Instrumentation Cable (see Item 2.b or Equivalent) c. Electrical Penetration Splices - Raychem Type WCSF-N d. Electrical Penetration Assembly - Westinghouse Modular Penetrations | 6/30/83 (Unit 2) 3/30/84 (Unit 1) | 11/1/84 ⁽³⁾ |
| 4. | 1&2-TE3292 & 3293 | None None None None None | a. Conax Resistance Temperature Detectors (RTDs) - Containment Atmosphere Temperature b. RTD-to-Cable Splices - Raychem Type WCSF-N c. Instrumentation Cable - Anaconda, Rockbestos, or Brand Rex Twisted, Shielded Triple d. Electrical Penetration Splices - Raychem Type WCSF-N e. Electrical Penetration Assembly - Westinghouse Modular Penetrations | 3/30/84 (Unit 1) 11/1/84 (Unit 2) | 11/1/84 ⁽³⁾ |
| 5. | 1&2-TE3294 & 3295 | None None None None None | a. Conax Resistance Temperature Detectors (RTDs) - Containment Sump B Water Temperature b. RTD-to-Cable Splices (see Item 4.b) c. Instrumentation Cable (see Item 4.c) d. Electrical Penetration Splices (see Item 4.d) e. Electrical Penetration Assembly (see Item 4.e) | 3/30/84 (Unit 1) 11/1/84 (Unit 2) | 11/1/84 ⁽³⁾ |

MASTER LIST OF ELECTRICAL EQUIPMENT IMPORTANT
TO SAFETY TO BE ENVIRONMENTALLY QUALIFIED
POINT BEACH NUCLEAR PLANT, UNITS 1 AND 2

System: XI. Containment

Page: XI-2
Date: May 20, 1983

| <u>Item No.</u> | <u>PBNP Tag No.</u> | <u>NRC TER No.</u> | <u>Description</u> | <u>Expected or Actual Installation/Operation Date</u> | <u>Expected Environmental Qualification Documentation Date</u> |
|-----------------|-----------------------|--------------------------------------|--|---|--|
| 6. | 1&2-RE126, 127, & 128 | None None None None None | a. General Atomic Radiation Monitor - Containment High-Range Gamma Radiation b. Monitor-to-Cable Splices - Amphenol Coaxial Connectors/Raychem Type WCSF-N c. Instrumentation Cable - Rockbestos Coaxial d. Electrical Penetration Splices - Amphenol Coaxial Connectors/Raychem Type WCSF-N e. Electrical Penetration Assembly - Westinghouse Modular Penetration | 3/30/84 (Unit 1) 11/1/84 (Unit 2) | 11/1/84 ⁽³⁾ |
| 7. | 1&2-LT958 & 959 | None None None None None | a. Gems Delaval Level Transmitters - Containment Sump A Water Level b. Conax Electrical Conductor Seal Assemblies (ECSAs) for Transmitter c. ECSA-to-Cable Splices - Raychem Type WCSF-N d. Instrumentation Cable (see Item 4.c) e. Electrical Penetration Splices - Raychem Type WCSF-N f. Electrical Penetration Assembly - Westinghouse Modular Penetrations | 6/30/83 (Unit 2) 3/30/84 (Unit 1) | 3/30/84 ⁽³⁾ |

MASTER LIST OF ELECTRICAL EQUIPMENT IMPORTANT
TO SAFETY TO BE ENVIRONMENTALLY QUALIFIED
POINT BEACH NUCLEAR PLANT, UNITS 1 AND 2

System: XII. Sampling

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Date: May 20, 1983

| <u>Item No.</u> | <u>PBNP Tag No.</u> | <u>NRC TER No.</u> | <u>Description</u> | <u>Expected or Actual Installation/ Operation Date</u> | <u>Expected Environmental Qualification Documentation Date</u> |
|-----------------|-----------------------|--|---|--|--|
| 1. | 1&2-SV951, 953, & 955 | 23 59 None None 43 36 35 | a. ASCO Solenoid Valves - Pressurizer Steam Space, Pressurizer Liquid Space, and Reactor Coolant Hot Leg Sample Line Isolation Valve Air Operators b. NAMCO Limit Switches - Valve Position Indication c. Conax Electrical Conductor Seal Assemblies (ECSAs) for NAMCO Limit Switches d. ECSA-to-Cable Splices - Raychem Type WCSF-N e. Control Cable - Kerite 600 Volt Control f. Electrical Penetration Splices - Bechtel Dwg. No. SK-E-165/Raychem Type SFR g. Electrical Penetration Assembly - Westinghouse/Crouse Hinds Welded Canister Penetration | 12/10/82 (Unit 1) 6/30/83 (Unit 2) | 6/30/83 |
| 2. | 1&2-SV966C | 18 57 None None 39 | a. ASCO Solenoid Valves - Reactor Coolant Hot Leg Sample Line Isolation Valve Air Operators b. NAMCO Limit Switches - Valve Position Indication c. Conax Electrical Conductor Seal Assemblies (ECSAs) for NAMCO Limit Switches d. ECSA-to-Cable Splices - Raychem Typw WCSF-N e. Control Cable - Rome 600 Volt Control | 12/10/82 (Unit 1) 6/30/83 (Unit 2) | 6/30/83 |
| 3. | 1&2-SV959 | None None None None 39 | a. ASCO Solenoid Valves - Residual Heat Removal Heat Exchanger Outlet Sample Line Isolation Valve Air Operators b. NAMCO Limit Switches - Valve Position INDication c. Conax ECSAs (see Item 2.b) d. ECSA-to-Cable Splices - Raychem Type WCSF-N e. Control Cable - Rome 600 Volt Control | 3/30/84 (Unit 1) 11/1/84 (Unit 2) | 11/1/84 ⁽¹⁾ |

MASTER LIST OF ELECTRICAL EQUIPMENT IMPORTANT
TO SAFETY TO BE ENVIRONMENTALLY QUALIFIED
POINT BEACH NUCLEAR PLANT, UNITS 1 AND 2

System: XIII. Instrument Air

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Date: May 20, 1983

| <u>Item No.</u> | <u>PBNP Tag No.</u> | <u>NRC TER No.</u> | <u>Description</u> | <u>Expected or Actual Installation/ Operation Date</u> | <u>Expected Environmental Qualification Documentation Date</u> |
|-----------------|---------------------|--------------------|--|--|--|
| 1. | 1&2-IA3047 & 3047 | None | a. ASCO Solenoid Valves - Instrument Air to Containment Line Isolation Valve Air Operators | 3/30/84 (Unit 1) 11/1/84 (Unit 2) | 11/1/84 ⁽¹⁾ |
| | | None | b. NAMCO Limit Switches - Valve Position Indication | | |
| | | None | c. Conax Electrical Conductor Seal Assemblies (ECSAs) for NAMCO Limit Switches | | |
| | | None | d. ECSA-to-Cable Splices - Raychem Type WCSF-M | | |
| | | 39 | e. Control Cable - Rome 600 Volt Control | | |

MASTER LIST OF ELECTRICAL EQUIPMENT IMPORTANT
TO SAFETY TO BE ENVIRONMENTALLY QUALIFIED
POINT BEACH NUCLEAR PLANT, UNITS 1 AND 2

System: XIV. Steam Generator Blowdown

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Date: May 20, 1983

| <u>Item No.</u> | <u>PBNP Tag No.</u> | <u>NRC TER No.</u> | <u>Description</u> | <u>Expected or Actual Installation/ Operation Date</u> | <u>Expected Environmental Qualification Documentation Date</u> |
|-----------------|---------------------|--------------------|---|--|--|
| 1. | 1&2-CV5958 & 5958 | None | a. ASCO Solenoid Valves - Steam Generator Blowdown Line Isolation Valve Air Operators | 12/10/82 (Unit) | 6/30/83 |
| | | None | b. NAMCO Limit Switches - Valve Position Indication | 6/30/83 (Unit 2) | |
| | | None | c. Conax Electrical Conductor Seal Assemblies (ECSAs) for NAMCO Limit Switches | | |
| | | None | d. ECSA-to-Cable Splices - Raychem Type WCSF-N | | |
| | | None | e. Control Cable - Anaconda, Rockbestos, or Brand Rex 600 Volt Control | | |
| | | None | f. Electrical Penetration Splices - Raychem Type WCSF-N | | |
| | | None | g. Electrical Penetration Assembly - Westinghouse Modular Penetration | | |

ENCLOSURE 2

METHODOLOGY TO IDENTIFY EQUIPMENT WITHIN THE SCOPE OF 10 CFR 50.49(b)(2) POINT BEACH NUCLEAR PLANT, UNITS 1 AND 2

Paragraph (b)(2) of 10 CFR 50.49 requires that licenses identify "Nonsafety-related electric equipment whose failure under postulated environmental conditions could prevent satisfactory accomplishment of safety-functions..." The methodology that was used to identify such equipment is summarized below:

1. A list was generated of safety-related electric equipment as defined in paragraph(b)(1) of 10 CFR 50.49 required to remain functional during or following design-basis Loss of Coolant Accident (LOCA) or High Energy Line Break (HELB) Accidents. The LOCA/HELB accidents are the only design-basis accidents which result in significantly adverse environments to electrical equipment which is required for safe shutdown or accident mitigation. The list was based on reviews of the PBNP Final Safety Analysis Report (FSAR), Technical Specifications, Emergency Operating Procedures, Piping and Instrumentation Diagrams (P&IDs), and electrical distribution diagrams;
2. The elementary wiring diagrams of the safety-related electrical equipment identified in Step 1 were reviewed to identify any auxiliary devices electrically connected directly into the control or power circuitry of the safety-related equipment (e.g., automatic trips) whose failure due to postulated environmental conditions could prevent the required operation of the safety-related equipment; and
3. The operation of the safety-related systems and equipment were reviewed to identify any directly mechanically connected auxiliary systems with electrical components which are necessary for the required operation of the safety-related equipment (e.g., cooling water or lubricating systems). This involved the review of P&IDs, component technical manuals, or system descriptions in the FSAR.
4. Nonsafety-related electrical circuits indirectly associated with the electrical equipment identified in Step 1 by common power supply or physical proximity were considered by a review of the original PBNP electrical design.

The systems and equipment generated in Steps 2, 3, or 4 above were then compared to the "Master List of Electrical Equipment at Point Beach Nuclear Plant for IE Bulletin 79-01B" (i.e., Enclosure 1 to our October 8, 1981 letter to Mr. Harold R. Denton regarding "Supplemental Response to Safety Evaluation Report for Environmental Qualification of Safety-Related Equipment, Point Beach Nuclear Plants, Units 1 and 2"). The results of the above review indicated that no additional electrical equipment was identified which was not previously included in the October 8, 1981 "Master List." Therefore, the list of electrical equipment provided in Enclosure 1 to this letter includes all electrical equipment within the scope of paragraph(b)(2) of 10 CFR 50.49.