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 FACIL: 50-305 Kewaunee Nuclear Power Plant, Wisconsin Public Service 05000305
 AUTH. NAME: MATHEWS, E.R. AUTHOR AFFILIATION: Wisconsin Public Service Corp.
 RECIP. NAME: VARGA, S.A. RECIPIENT AFFILIATION: Operating Reactors Branch 1

SUBJECT: Forwards list of documents transmitted to Franklin Research Ctr per request for addl info re environ qualification of safety-related electric equipment.

DISTRIBUTION CODE: A0489 COPIES RECEIVED: LTR 1 ENCL 1 SIZE: 2
 TITLE: Equipment Qualification (OR & PRE-OL)

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WISCONSIN PUBLIC SERVICE CORPORATION



P.O. Box 1200, Green Bay, Wisconsin 54305

March 18, 1982

Mr. Steven A. Varga, Chief
 Operating Reactors Branch #1
 Division of Licensing
 U. S. Nuclear Regulatory Commission
 Washington, D. C. 20555



Dear Mr. Varga:

Docket 50-305
 Operating License DPR-43
 Kewaunee Nuclear Power Plant
 Environmental Qualification of Safety-Related
Electric Equipment: Request for Additional Information

Reference: Letter from S. A. Varga of the NRC to E. R. Mathews of WPSC,
 dated February 22, 1982

Enclosed please find a list of documents transmitted, by copy of this letter, to Franklin Research Center. This information is in response to Section A of the above referenced letter.

The information requested in Section B of the referenced letter will not be available until August 1, 1982 and, therefore, will not be transmitted until that time. This schedule change has been previously discussed in telephone conversations with you and members of your staff.

Very truly yours,

E. R. Mathews for

E. R. Mathews, Senior Vice President
 Power Supply and Engineering

jac

Enc.

cc - Mr. Cyril C. Crane, Franklin Research Center,
 The Parkway at Twentieth Street, Philadelphia, PA 19103
 Mr. Robert Nelson, NRC Resident Inspector,
 RR #1, Box 999, Kewaunee, WI 54216

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Attachment: INFORMATION REQUESTED BY FRANKLIN RESEARCH CENTER

INFORMATION PROVIDED BY WPSC

- | | | |
|----------|--|---|
| A. 1. a. | Pioneer Service and Engineering Company,
Vendor Certification and Testing | WPSC Reference #10 |
| b. | The Okonite Company, Prototype Test,
November 12, 1970 | WPSC Reference #11 |
| c. | Qualification Test - Joy
Axivance/Reliance Electric Motor Company
April 29, 1969 - PO K-161, Section 6 | WPSC Reference #16 |
| d. | Chevron Oil Company Letter 3/14/73 | WPSC Reference #17 |
| e. | Limitorque Corp. Letter 2/6/74 | WPSC Reference #18 |
| f. | GE, H. C. Lauroesch Correspondence to J.
King; Power Systems, August 7, 1978 | WPSC Reference #21 |
| g. | GE, "Insulating Materials Product Data,
74010A Epoxy Resin plus 74010 Epoxy
Catalyst," March 24, 1964, and effect of
radiation on materials | WPSC Reference #22 |
| h. | Letter from GE to A. Smith of NSP, dated
11/21/78, plus attachment | WPSC Reference #23 |
| i. | D. G. O'Brien Report No. C19QA053 W/EA
letter dated 2/4/72 | WPSC Reference #24 |
| j. | PS&E Engineering Acceptance CRDP
Prototype S/N PR-7 | WPSC Reference #28 |
| k. | D. G. O'Brien Report No. C19QA057 | WPSC Reference #29 |
| l. | K268 Book 5 Letter dated 4/20/72 | WPSC Reference #30 |
| m. | D. G. O'Brien Report No. C19QA049 W/Engr.
Acceptance | WPSC Reference #31 |
| n. | NIS Prototype Letter dated 4/4/72 from
PS&E | WPSC Reference #32 |
| o. | D. G. O'Brien Report No. C19QA054 W/EA,
letter dated 1/28/72 | WPSC Reference #33 |
| p. | Letter dated May 1973, from Limitorque to
Pioneer Service Engineering Corp. | Received 2/8/82 for
Tasks 502/503 (Item F) (3) |
| q. | ACME-Cleveland Development Company Test
Plan 8-31-77 | WPSC Reference #50 |
| r. | Pratt Co. letter 8-20-79 | WPSC Reference #60 |
| s. | Limitorque Qualification Type Test Report
12/9/75 | WPSC Reference #64 |

INFORMATION PROVIDED BY WPSC

- t. Johnson Service Co. letter to Mr. Bill Morini of WPS, Aug. 30, 1973
WPSC Reference #68
- u. Square D Company, Environmental Qualification Report No. 108-1.02-LIA
WPSC Reference #72
- v. EQF-8, GE Terminal Boards Qualification Report dated 12/24/80
WPSC Reference #75
- w. Environmental Testing Corp. Test Report 9306 and supplement
WPSC Reference #79
- x. Letter dated 7/24/72 from Magnetrol
WPSC Reference #80
- y. ACME-Cleveland Test Report of Namco Limit Switch, Model EA-170, dated March 17, 1978
WPSC Reference #88
- z. Barton Test Report RI-289A-8, Rev. 2, 9/13/81
WPSC Reference #90
- aa. EDS Qualification of Electrical Cable, Calculation File No. 0910-205-Okonite-01
WPSC Reference #92
- bb. EDS Calculation File No. 0910-205-BIW-01
WPSC Reference #94
- cc. EDS Calculation File No. 0910-205-Kerite
WPSC Reference #95
- dd. Kerite Company Report KPT-LVC-1 of April 13, 1977 (confidential and proprietary to the Kerite Company)
Received 2/8/82 for
Tasks 502/503 (Item b) (3)
- ee. Okonite Company Test Procedure sent to Mr. Albrecht (NSP) on April 20, 1978
WPSC Reference #98
- ff. Okonite Company letter to NSP (A. Smith) 8-31-78
WPSC Reference #99

Attachment: INFORMATION REQUESTED BY FRANKLIN RESEARCH CENTER

A. 2. a. A listing of plant areas (zones where safety-related equipment is located) the Licensee has determined as harsh.

b. Normal and accident environmental service conditions: temperature, pressure, humidity, spray, radiation, and temperature and pressure versus time profiles for the limiting accident conditions (presented either graphically or in tabular form).

INFORMATION PROVIDED BY WPSC

1. See Reference 41 for harsh areas for radiation (specifically Table V and Map Figures C-1 through C-4). Areas which show $>1 \times 10^5$ Rad TID are harsh ($>1 \times 10^4$ Rad TID if teflon or semi-conductor devices are used)
2. Harsh conditions other than radiation have been developed by individual location only. General areas have not been designated. The references specified in the SCEW sheets for the parameters have been enclosed for review.
1. Service conditions are listed in the environment specification and documentation references delineated on each SCEW sheet. These sheets represent a tabulation of the environmental conditions used in the preparation of each submittal.
2. The Design Basis Event (LOCA, HELB or both) and Harsh (Yes or No) conditions resulting from the event(s) that affect electrical equipment is shown on each individual SCEW sheet (located at the lower left section of the sheet).
3. References are enclosed for the SCEW sheet environmental specification as discussed A.2.a.2. above.

The following references are submitted, which were referred to in Sections A.2.a.2 and A.2.b.3:

- | | INFORMATION PROVIDED BY WPSC |
|---|------------------------------|
| a. Letter to E. R. Mathews (WPSC) from S. A. Varga (NRC) dated 6/18/82, Enc. 1 (SER) | WPSC Reference #1 |
| b. FSAR Section 7.5 | WPSC Reference #2 |
| c. FSAR Section 14.3.4 | WPSC Reference #3 |
| d. FSAR Questions & Answers Supplement Question 6.13.1 | WPSC Reference #4 |
| e. Letter to M. E. Stern (WPSC) from C. E. Agan (FPSI) dated 2/3/78, along with attached test reports. | WPSC Reference #5 |
| f. Letter to C. A. Schrock (WPSC) from C. E. Agan (FPSI) dated 3/13/81 and attached tables. | WPSC Reference #6 |
| g. Letter to C. A. Schrock (WPSC) from C. E. Agan (FPS) dated 7/17/81 | WPSC Reference #7 |
| h. Letter to E. R. Mathews (WPSC) from J. G. Keppler (NRC) dated 1/16/80, Enc. 4 (IE BULLETIN 79-01B) | WPSC Reference #8 |
| i. System Description No. 17 Auxiliary Building Ventilation (ACA) | WPSC Reference #37 |
| j. System Description No. 14 Auxiliary Building Special Ventilation (ASV) | WPSC Reference #38 |
| k. Letter to C. A. Schrock (WPSC) from C. E. Agan (FPS) dated 3/16/81 | WPSC Reference #39 |
| l. System Description No. 25 Control Room Air Conditioning (ACC) | WPSC Reference #40 |
| m. FSAR Section 2 | WPSC Reference #43 |
| n. System Description No. 16 Turbine Building and Screen House Ventilation (TAV) | WPSC Reference #44 |
| o. FSAR - Appendix H, Section 3 | WPSC Reference #53 |
| p. FPSI Letter FPS-5859, December 31, 1980 | WPSC Reference #59 |
| q. Purchase Order K-272 Specifications | WPSC Reference #78 |
| r. Letter to C. A. Schrock from C. E. Agan, Fluor Power, 10/30/81 | WPSC Reference #105 |
| s. Letter to C. A. Schrock of WPSC from C. E. Agan, of Fluor Power Service (KPS 6579) dated December 11, 1981 | WPSC Reference #111 |

INFORMATION PROVIDED BY WPSC

- t. Letter to C. A. Schrock (WPSC) from C. E. Agan of Fluor Power Service (KPS-6581) dated Dec. 11, 1981
WPSC Reference #112
- u. Containment Humidity Levels, based on one (1) year operating experience
WPSC Reference #113
- v. System Description No. 18 Reactor Building Ventilation System
WPSC Reference #114
- w. Maximum radiation level for 40 year normal plus LOCA Event
WPSC Reference #115
- x. Harsh Environment HELB Calculation by BA Tank Transmitters by E. Schmieman, dated 1/8/82
WPSC Reference #117
- y. Chemical Spray--Sodium Hydroxide Calculations
WPSC Reference #118
- z. Radiation Effects on Organic Materials in Nuclear Plants--EPRI NP-2129, November, 1981
WPSC Reference #119
- aa. "Design Review of Post-Accident Plant Shielding and Equipment Radiation Qualification" prepared by FPS, project 23-7127-053
WPSC Reference #41

- A.3.a. Beta Dose Study and SER deficiency response dated November 1, 1981
 - b. Letter C. A. Schrock of WPS from D. P. Wheeler of F.P.S. dated October 12, 1981⁽¹⁾
 - c. P.O. K268 Book 5 KP-5-4641 Letter dated 6/20/78⁽¹⁾
 - d. P.O. K268 Book 5 ER 192 dated 2/21/72⁽¹⁾
- A.4.a. Method of identifying SCEW sheet revision so that FRC can verify that latest revision is available⁽³⁾
 - b. Evaluation of Sostman ETDs EDS #0940-006-451⁽³⁾
 - c. Magnetrol Level Switches Chemical Spray Study⁽³⁾

INFORMATION PROVIDED BY WPSC
February 5, 1982 (Beta
Dose Study) (7)⁽²⁾

WPSC Reference #101

WPSC Reference #25

WPSC Reference #26

For the latest revision date on submittals after Sept. 1981, refer to lower of two dates which appear in upper right hand corner. For Sept. 1981 and previous submittals, refer to cover letter date.

WPSC Reference #120

WPSC Reference #123