

*The*

**POWER AUTHORITY OF THE STATE OF NEW YORK**  
**JAMES A. FITZPATRICK NUCLEAR POWER PLANT**



JOHN D. LEONARD, JR.  
Resident Manager

November 2, 1979  
JAFP-79-608

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Lycoming, New York 13093  
—  
315-342-3840

Boyce H. Grier, Director  
United States Nuclear Regulatory Commission  
Region 1  
631 Park Avenue  
King of Prussia, PA. 19406

SUBJECT: DOCKET NO. 50-333  
NRC I & E BULLETIN NO. 79-01

Dear Mr. Grier:

The attached table (Revision 1) is submitted in response to the recent request by your staff for additional information dated October 2, 1979. The table summarizes and supplements our previous responses concerning environmental qualification of Class 1E electrical equipment (I&E Bulletin 79-01)

Very truly yours,

  
JOHN D. LEONARD, JR.

JDL:DAH:cmh  
Attachment

cc: George T. Berry, PASNY, NYO  
G. A. Wilverding, PASNY, NYO  
P. W. Lyon, PASNY, NYO  
J. F. Davis, PASNY, NYO  
R. J. Pasternak, PASNY, JAF  
M. C. Cosgrove, PASNY, JAF  
J. R. Hoddy, PASNY, JAF  
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ENVIRONMENTAL QUALIFICATION OF CLASS 1E ELECTRICAL EQUIPMENT  
 BULLETIN 79-01 SUMMARY OF RESPONSES

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 Revision 1

BULLETIN/ CIRCULAR NO.	COMPONENT DESCRIPTION (SEE NOTE 1)	MANUFACTURER & SUPPLIER	MODEL	TEST METHOD	TEST DATA	TEST DOCUMENTATION
77-05: Connector Assemblies	No connectors are used on equipment required to operate during a LOCA and located in the drywell.					
77-05A: Connector Assemblies	No connectors are used on equipment required to operate during a LOCA and located in the drywell.					
77-06: Electrical Penetration Assemblies	Electrical Penetration Assemblies	G.E./ G.E.	Type NS-02 Type NS-03 Type NS-04	Specimen - Sequential Test	AGING - Epoxy compound given accelerated life tests to simulate 40 yrs normal reactor environment. ENVIR. TEST - Saturated Steam: 340°F, 63 PSIG, 15 min. 340°F, 35 PSIG, 3 hrs. 320°F, 35 PSIG, 6 hrs. 250°F, 25 PSIG, 24 hrs. 200°F, 20 PSIG, 36 hrs.	G.E. - "Qual. Test for F01 Electrical Penet. Assembly" by R. M. Schuster, dated 4-30-71.

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BULLETIN/ CIRCULAR NO.	COMPONENT DESCRIPTION (SEE NOTE 1)	MANUFACTURER & SUPPLIER	MODEL	TEST METHOD	TEST DATA	TEST DOCUMENTATION
78-02: Terminal Block Environmen- tal Qualifica- tion	MSIV Terminal Blocks (New)	G.E./Rockwell	EB-5	Specimen-Sequential	Aging-None ENVIR. TEST - Superheated Steam; 340°F, 45 PSI, 5 hr. 320°F, 45 PSI, 3 hr. 250°F, 45 PSI, 16 hr. 200°F, 45 PSI, 9 days	Rockwell- RAL-7030
	MISC. Terminal Blocks (inside steel boxes with 1/4" drain hole)	G.E./G.E. (Hoffman Boxes)	CR-151 (NEMA 4)	Specimen-Sequential	Aging-260°F, 21 PSIG, 1.5 days. ENVIR. TEST - Steam, 100% RH: 320°F, 75 PSIG, 1.5 hr. 340°F, 103 PSIG, 3 hr. 320°F, 75 PSIG, 4.5 hr. 260°F, 21 PSIG, 8 days.	Letter - G.E. at Syr. to PASNY at JAF:G-EPI- 8-16 (1-31-78)
78-04: Stem Mounted Limit Switch Qualifica- tion	MSIV Limit Switches (for RPS Indication) (New)	NAMCO/Rockwell	EA-740	Sequential	Followed IEEE-323 (74) IEEE-344 (75) & IEEE- 382 (72) Specifications	ACME-Cleveland (NAMCO) Test Plan 8-31-77-11Qual of Series EA-180 & EA-740 Switches...
	RWCU Sample Isol. Vlv. 02-2A0V-39	Honeywell/G.E.	Microswitch DTF2-2RN	Unknown	NEMA 4	Microswitch Cat. 100

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Circular 78-08: Elect. Equip. Qualifica- tion	Safety Relief Valve Solenoids (New)	AVCO/Target Rock	1-88	Method not known at this time.	Data Not Available At This Time	Target Rock Corp. - Report No. 2199A "Qual. Test Report, Pneumatic Assembly; Air Operator Assembly, P/N 7576F-000-19 and Solenoid Assembly, P/N 1/2 SMS-A-01-2" dated 1-9-79.
	Motor Operated Isolation Valves  02MOV-43A, B 02MOV-53A, B 02MOV-54A, B	Limitorque/G. E. Limitorque/G. E. Limitorque/G. E.	Variou. Models	Specimen - Sequential	ENVIR. TEST-Steam, 100% RH: 212°F, 7" Water Press, 6 hrs. 155°F, 7" Water Press, 6 hrs. Actuator Cycled During Test.	Limitorque - Qual. Report F-C3271

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BULLETIN/ CIRCULAR NO.	COMPONENT DESCRIPTION (SEE NOTE 1)	MANUFACTURER & SUPPLIER	MODEL	TEST METHOD	TEST DATA	TEST DOCUMENTATION
Circular 78-08 (Continued)	12MOV-18, 32 12MOV-15 23MOV-15 29MOV-74	Limatorque/Powell Limatorque/Velan Limatorque/Velan Limatorque/Velan	Various Models	Specimen - Sequential	AGING - Thermal (Motor 180°F, 100 hrs.) (Actuator 325°F, 12 hrs.) Seismic (@ ambient) Mechanical (@ ambient) ENVIR. TEST - Saturated Steam: (with Borated Spray After 40 min. for 3 hrs.): 329°F, 90 PSIG, 1 hr. 312°F, 70 PSIG, 2 hrs. 300°F, 40 PSIG, 2 hrs. 272°F, 20 PSIG, 19 hrs. , 15 PSIG, 6 days Actuator Cycled During Test	Limatorque Qual. Report 600198 (F-C2232-01)

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Circular 78-08 (Continued)	12MOV-31 13MOV-15 20MOV-82, 94 29MOV-102	Limitorque/Velan Limitorque/Velan Limitorque/Velan Limitorque/Velan	Various Models	Specimen - Sequential	AGING - Thermal (165°F, 0 PSIG), Mechanical (@ ambient), Radiation (Motor 2X10 <sup>8</sup> RADS) Seismic (@ ambient) ENVIR. TEST - Steam: 250°F, 25 PSIG, 30 min., then cool to 120°F. 250°F, 25 PSIG, 24 hrs. 200°F, 10 PSIG, 16 days. Actuator Cycled During Test	Limitorque - Qual. Report B0003
	Splices on Electrical Penetrations Only	G. E.	N/A	N/A	Qualified Along With Electrical Penetration.	Installation Procedure by G.E. (GEK-34666)
	Power & Control Cable	Cerro/Cerro  Okonite/Okonite	1000 Volt & 600 volt  1000 volt & 600 volt	Specimen - Sequential  Sequential	AGING- 2X10 <sup>8</sup> Dose. ENVIR. TEST - >90% RH: 130°C Emergency rating 230°C Short ckt. rating.  AGING - IEEE 383. ENVIR. TEST - IEEE 323 (74)	Cerro - Design Data  Okonite - Engr. Report No. 307 "LOCA Qualification Test 0177-4"

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BULLETIN/ CIRCULAR NO.	COMPONENT DESCRIPTION (SEE NOTE 1)	MANUFACTURER SUPPLIER	MODEL	TEST METHOD	TEST DATA	TEST DOCUMENTATION
79-01A: Solenoid Valve Material	MSIV Solenoids	ASCO/Rockwell	HTX 8320 HTX 8320 - A20	Sequential	Followed IEEE-323, IEEE 382 Specifications	Letter - ASCO to PASNY (6-22-79) & ASCO Cat. NP-1
	RWCU Sample Isolation Valve 02-02A0V-39	ASCO/G.E.	HBX8320-A26	N/A	Unqualified material - will be replaced with qualified material.	N/A

NOTE: 1 ONLY SAFETY-RELATED COMPONENTS REQUIRED TO OPERATE DURING A LOCA AND LOCATED IN DRYWELL ARE LISTED.

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