

J. Phillip Jayne
Executive Vice President
Nuclear Generation

June 15, 1984
JPN-84-36

Director of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Attention: Mr. Domenic B. Vassallo, Chief
Operating Reactors Branch No.2
Division of Licensing

Subject: James A. FitzPatrick Nuclear Power Plant
Docket No. 50-333
Resolution of Safety Evaluation Report for
Environmental Qualification of Safety-Related
Electrical Equipment

References: (a) NRC letter, D.B. Vassallo to J.P. Bayne dated
April 19, 1983.
(b) PASNY letter, J.P. Bayne to D.B. Vassallo dated
May 20, 1983 (JPN-83-45).
(c) NYPA letter, J.P. Bayne to D.B. Vassallo dated
June 6, 1983 (JPN-83-52).
(d) NRC letter, T.A. Ippolito to G.T. Berry dated
June 8, 1981.

Enclosures: (1) Resolution of Specific TER Qualification
Deficiencies for the James A. FitzPatrick Plant
(2) Resolution of Additional Qualification
Deficiencies for the James A. FitzPatrick Plant
(3) Summary of Methodology for Identifying Electrical
Equipment Within the Scope of 10 CFR 50.49

Dear Sir:

Reference (a) contained a Safety Evaluation Report (SER) regarding environmental qualification of safety-related electrical equipment for the James A. FitzPatrick Nuclear Power Plant. The SER included a Technical Evaluation Report (TER), prepared by Franklin Research Center, which noted a number of deficiencies in the qualification documentation for safety-related electrical equipment with a potential for exposure to harsh environments in the FitzPatrick Plant.

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The proposed resolution for each of the identified TER deficiencies (which are summarized in Enclosure 1) and the present status of qualification were discussed with members of your staff at a meeting held in Bethesda, Maryland on March 30, 1984. Additional qualification deficiencies were identified by the Authority, and their resolution was also discussed with your staff. These items are summarized in Enclosure (2) to this letter.

Further discussions during the meeting addressed the Authority's program for complying with the requirements of 10 CFR 50.49, "Environmental Qualification of Electric Equipment Important to Safety for Nuclear Power Plants." Specifically, the Authority's methodology for identifying JAF equipment within the scope of 10 CFR 50.49 and qualification methodology were discussed. Enclosure (3) summarizes the methodology used for the identification of equipment within the scope of 10CFR50.49. The equipment listing contained in the Authority's response to 10 CFR 50.49 (Reference b) resulted from the application of this methodology.

At the same meeting, your staff requested confirmation of the following items:

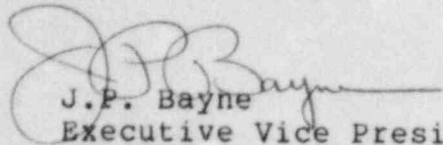
1. that all design-basis events which could result in a potentially harsh environment, including flooding outside containment have been identified;
2. that the harsh environment assumed for purposes of qualification includes the worst case conditions.

The Authority has identified all design-basis events which could result in a potentially harsh environment, including flooding due to a high-energy line break (HELB) outside containment. The Authority has also previously identified primary containment LOCA and Reactor Building HELB profiles for pressure and temperature. The bases and assumptions for these profiles were submitted to the NRC in previous environmental qualification transmittals and approved by the NRC (Reference (d)). The Reactor Building HELB pressure and temperature profiles were recently updated by Stone & Webster Engineering Corporation to reflect the installation of modifications intended to reduce the effects of postulated line breaks and to account for recent building structural changes resulting from fire protection modifications. The assumptions used in this updated analysis are conservative and consistent with Standard Review Plan, Section 3.6.1 (NUREG-75/087).

As discussed at the March 30 meeting, the NRC will prepare and issue a supplemental Safety Evaluation Report to indicate that the Authority's electrical equipment qualification program, as described in this and previous submittals, meets the requirements of 10 CFR 50.49 and that the deficiencies identified in the SER (Reference (a)) are resolved as documented in this letter.

If you have any questions, please do not hesitate to call
Mr. J. A. Gray, Jr. of my staff.

Very truly yours,



J.P. Bayne
Executive Vice President
Nuclear Generation

cc: M.L. Doerflein,
JAF Resident Inspector
U. S. Nuclear Regulatory Commission
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ENCLOSURE 1

REVIEW OF SPECIFIC TER QUALIFICATION DEFICIENCIES

FOR THE JAMES A. FITZPATRICK PLAN

RESOLUTION OF SPECIFIC TER QUALIFICATION DEFICIENCIESComponent Type: CABLING, TERMINAL BLOCKS, SPLICES

<u>TER NO.</u>	<u>JAF COMPONENT ID</u>	<u>TER DEFICIENCIES</u>	<u>RESOLUTION</u>	<u>QUALIFICATION STATUS</u>
111	Terminal Block (G.E. EB-5)	Documented evidence of qualification.	Additional test documentation has been obtained and supplemented by analysis. The existing installation of these terminal blocks in junction boxes in the JAFNPP Reactor Building is presently being modified to reflect the tested configuration. This work will be completed by March, 1985.	IN PROGRESS
			To increase the level of qualification of electrical junctions located inside primary containment, the Authority is replacing all terminal blocks with splices qualified to NUREG 0588, Cat. I requirements. This work will be completed by March, 1985.	
	<u>Cables</u>			
142	Rockbestos RSS-6-104	Adequate similarity between installed	Additional test documentation has been	QUALIFIED
143,144	Eaton Dekoran	equipment and test specimens.	obtained and supplemented by analysis.	
145	Anaconda FR-EP		Also, cable traceability and similarity	
147	BIW No. 14538-H-006		documentation has been established.	
			Plant specific qualification reports	
			to NUREG 0588, Cat. I requirements are	
			on file.	

RESOLUTION OF SPECIFIC TER QUALIFICATION DEFICIENCIESComponent Type: CABLING, TERMINAL BLOCKS, SPLICES (Cont.)

<u>TER NO.</u>	<u>JAF COMPONENT ID</u>	<u>TER DEFICIENCIES</u>	<u>RESOLUTION</u>	<u>QUALIFICATION STATUS</u>
161	Insulated Wire connector (I&B Iefzel)	Functional test criteria (dielectric strength)	<p>The Authority takes no credit for the insulating capabilities provided by the insulated sections of these connectors. The required dielectric strength is provided by properly installed and configured terminal boards and insulated splices.</p> <p>Loss of dielectric strength of the Iefzel insulation on the wire connector will therefore, not prevent the safety-related function of the electrical circuitry. Therefore, no functional testing for dielectric strength is required by the test program.</p>	QUALIFIED
148	Vulkene Cable (GE Co.)	Adequate similarity between installed equipment and test specimen.	<p>Additional test documentation has been obtained and supplemented by analysis. Also, component traceability and similarity documentation has been established. A plant specific qualification report to DOR Guideline requirements is on file.</p>	QUALIFIED

RESOLUTION OF SPECIFIC IER QUALIFICATION DEFICIENCIESComponent Type: ELECTRICAL DISTRIBUTION EQUIPMENT

<u>IER NO.</u>	<u>JAF COMPONENT ID</u>	<u>IER DEFICIENCIES</u>	<u>RESOLUTION</u>	<u>QUALIFICATION STATUS</u>
38 39 197 198	71ACA3 71PT-71ACA3 71PT-71ACB3 71ACB3	Documented evidence of qualification.	An analysis has shown that a potential failure of this equipment (transformers and 120VAC distribution panels) during or subsequent to isolated accidents will not prevent the functioning of any safety-related equipment. This equipment is, therefore, not within the scope of 10CFR50.49.	NOT APPLICABLE
104 105,106 107 190	BMCC-2 MCC-165,-153 155,-163 MCC-164 BMCC-1,3	Documented evidence of qualification.	The New York Power Authority, as a member of a joint utility group of BWR owners, has contracted with General Electric Co. to qualify the GE Series IC7700 motor control centers (MCC). Phase I of this program demonstrated successful qualification to an enveloping utility environment for 15 major MCC components. Phase II of the program addresses plant-specific qualification. A final qualification report for the James A. FitzPatrick equipment is scheduled to be completed by August, 1984.	IN PROGRESS

RESOLUTION OF SPECIFIC TER QUALIFICATION DEFICIENCIESComponent Type: ELECTRICAL DISTRIBUTION EQUIPMENT (Cont.)

<u>TER NO.</u>	<u>JAF COMPONENT ID</u>	<u>TER DEFICIENCIES</u>	<u>RESOLUTION</u>	<u>QUALIFICATION STATUS</u>
108 109	L-16 L-15	Documented evidence of qualification.	The New York Power Authority is presently engineering enclosures around the entire switchgear units. Ventilation equipment powered from the emergency buses will maintain the enclosure temperature, pressure and relative humidity at normal levels during all postulated accident conditions. An analysis will be made of aging due to normal environment and to radiation during postulated accident conditions. Enclosures and associated qualification reports are scheduled to be complete by March, 1985.	IN PROGRESS
150	Circuit breaker (G.E THQB1120)	Documented evidence of qualification. Temperature/pressure profile envelope.	This equipment item has been relocated to a mild environment and is, therefore, <u>not</u> within the scope of 10CFR50.49.	NOT APPLICABLE

RESOLUTION OF SPECIFIC TER QUALIFICATION DEFICIENCIESComponent Type: ELECTRICAL PENETRATIONS

<u>TER NO.</u>	<u>JAF COMPONENT ID</u>	<u>TER DEFICIENCIES</u>	<u>RESOLUTION</u>	<u>QUALIFICATION STATUS</u>
47	X-101B X-103A,B X-104D X-109 X-110D	Similarity between equipment and test item. Aging degradation. Qualified life. Spray criteria. Radiation criteria.	Additional test documentation has been obtained, which has been supplemented by analysis. Also component traceability and similarity documentation has been established. A plant specific qualification report to DOR Guideline requirements is on file.	QUALIFIED

RESOLUTION OF SPECIFIC TER QUALIFICATION DEFICIENCIESComponent Type: MOTORS

<u>TER NO.</u>	<u>JAF COMPONENT ID</u>	<u>TER DEFICIENCIES</u>	<u>RESOLUTION</u>	<u>QUALIFICATION STATUS</u>
42 199	27P-11A,B	Documented evidence of qualification.	<p>These are sample pumps associated with the original gas analyzer equipment for containment hydrogen and oxygen. Refer to TER items 44, 45, 155, 166, and 167 in the Gas Analyzers Section for the resolution of qualification deficiencies for these items.</p> <p>A fully qualified replacement hydrogen analyzer meeting NUREG 0588, Cat. I requirements was installed in August, 1983.</p> <p>A fully qualified replacement oxygen analyzer meeting NUREG 0588, Cat. I requirements is scheduled to be installed by March, 1985.</p>	IN PROGRESS
48 49	10P-3(A-D) 14P-1A,B	Documented evidence of qualification.	<p>Additional test documentation has been obtained which has been supplemented by analysis. Also component similarity documentation has been established. A plant specific qualification report to DOR guideline requirements is on file.</p>	QUALIFIED

RESOLUTION OF SPECIFIC TER QUALIFICATION DEFICIENCIESComponent Type: MOTORS (Cont.)

<u>TER NO.</u>	<u>JAF COMPONENT ID</u>	<u>TER DEFICIENCIES</u>	<u>RESOLUTION</u>	<u>QUALIFICATION STATUS</u>
53	66UC-22(A-K)	Documented evidence of qualification.	Fully qualified replacement motors have been ordered and will be installed by March, 1985. Other control panel components for these motors were removed from plant areas, which could experience harsh environments due to postulated accidents.	IN PROGRESS

RESOLUTION OF SPECIFIC IER QUALIFICATION DEFICIENCIESComponent type: POSITION SWITCHES/POSITION INDICATORS

<u>IER NO.</u>	<u>JAF COMPONENT ID</u>	<u>IER DEFICIENCIES</u>	<u>RESOLUTION</u>	<u>QUALIFICATION STATUS</u>
25	27PNS-101A,B	Documented evidence of qualification.	These position switches have been replaced with position switches fully qualified to NUREG 0588, Cat. I requirements. Plant specific qualification reports are on file.	QUALIFIED
27	27PNS-132A,B			
28	29PNS-86A-D			
29	66PNS-100A1,A2, B1,B2			
	66FNS-101A1,A2, B1,B2			
33,168	27PNS-147,146			
37	27PNS-103A,B			
169,170	27PNS-145			
171,172	27PNS-144			
173,174	27PNS-143			
175,176	27PNS-142			
177,178	27PNS-141			
180	27PNS-111,112, -115,116			
181	27PNS-117,118			
182	27PNS-113,114			
30	23PNS-18	Documented evidence of qualification.	Based on an evaluation of system and component functions during postulated accidents, it has been determined that these components are <u>not</u> within the scope of 10CFR50.49.	NOT APPLICABLE
32	23PNS-LS3			
35	02-2PNS-40			
36	02-2PNS-39			

RESOLUTION OF SPECIFIC TER QUALIFICATION DEFICIENCIESComponent Type: POSITION SWITCHES/POSITION INDICATORS (Cont.)

<u>TER NO.</u>	<u>JAF COMPONENT ID</u>	<u>TER DEFICIENCIES</u>	<u>RESOLUTION</u>	<u>QUALIFICATION STATUS</u>
31	23PNS-LS4	Documented evidence of qualification.	This position switch is scheduled to be replaced with a fully qualified position switch by March, 1985.	IN PROGRESS
157 164 200	02VME-71(A-L) 02VMY-71(A-L) Hardline Signal Cable (SRV Acoustical Monitors System Components)	Documented evidence of qualification.	A joint group of utility owners has contracted with Babcock & Wilcox to test a complete system to NUREG 0588, Cat. I requirements. The test program has been completed and the Authority has reviewed the preliminary test data. A final report is presently being prepared. The Authority will modify the system to the tested configuration by March, 1985.	IN PROGRESS

RESOLUTION OF SPECIFIC TER QUALIFICATION DEFICIENCIESComponent Type: PRESSURE, DIFFERENTIAL PRESSURE, & LEVEL INSTRUMENTATION

<u>TER NO.</u>	<u>JAF COMPONENT ID</u>	<u>TER DEFICIENCIES</u>	<u>RESOLUTION</u>	<u>QUALIFICATION STATUS</u>
54,55	10-PS-120(A-H)	Documented evidence of qualification.	Additional test documentation has been obtained, which has been supplemented by analysis. Also component traceability and similarity documentation has been established. A plant-specific qualification report to DOR Guideline requirements is on file.	QUALIFIED
60,61	02PS-128A,B	Adequate similarity.		
62,63	02-3PS-52(A-D)	Aging degradation.		
64,183		Qualified life.		
83	10PS-100(A-D)	Peak temperature/pressure & duration.		
84	10PS-101(A-D)	Radiation criteria.		
85	10PS-119(A-D)			
86,87	02-3LIS-72(A-D)			
88,89	02-3LIS-83A,B			
91,92	02-3LIS-101(A-D)			
93	23LS-91A,B			
113	23FS-7B			
114,115	14FIS-45A,B			
128	14PS-44A,B			
129	14PS-41A,B			
132	13DPIS-83,84			
133	02-DPIS-116(A-D)			
	02-DPIS-117(A-D)			
	02-DPIS-118(A-D)			
	02-DPIS-119(A-D)			
134	05PS-12(A-D)			
135	23PS-86(A-D)			
137	23PS-68(A-D)			
188,189	23DPIS-76,77			
191	02-3LIS-57A,B			
192	02-3LIS-58A,B			

RESOLUTION OF SPECIFIC IER QUALIFICATION DEFICIENCIESComponent Type: PRESSURE, DIFFERENTIAL PRESSURE, & LEVEL INSTRUMENTATION (Cont.)

<u>IER NO.</u>	<u>JAF COMPONENT ID</u>	<u>IER DEFICIENCIES</u>	<u>RESOLUTION</u>	<u>QUALIFICATION STATUS</u>
56,57	02-3PT-178(A-D)	Aging degradation. Qualified life. Radiation criteria.	These pressure transmitters are scheduled to be replaced with fully qualified components by March, 1985.	IN PROGRESS
58,59 94 96 140	06PI-53A,B,C 23LI-201B 23FI-82 13TS-1	Documented evidence of qualification. Aging degradation. Qualified life. Temp./pressure envelope and duration. Radiation criteria.	Based on an evaluation of system and component functions during postulated accidents, it has been determined that these components are <u>not</u> within the scope of 10CFR50.49.	NOT APPLICABLE
65 68 95 97,100 98,101 102,103 99	14PT-38A,B 27PT-114 03LS-231(A-D) 10FI-40A,B 10FI-109A,B 10FI-97A,B 27FI-103A,B	Documented evidence of qualification.	This equipment has been replaced with fully qualified components. Plant specific qualification reports to NUREG 0588, Cat. I requirements are on file for all units.	QUALIFIED
90	02-3LITS-73	Documented evidence of qualification. Aging degradation. Qualified life. Temp./pressure envelope and duration. Test sequence and functional testing.	These instruments are scheduled to be replaced with fully qualified components by March, 1985.	IN PROGRESS

RESOLUTION OF SPECIFIC TER QUALIFICATION DEFICIENCIESComponent Type: PRESSURE, DIFFERENTIAL PRESSURE, & LEVEL INSTRUMENTATION (Cont.)

<u>TER NO.</u>	<u>JAF COMPONENT ID</u>	<u>TER DEFICIENCIES</u>	<u>RESOLUTION</u>	<u>QUALIFICATION STATUS</u>
158	27PS-110A,B	Similarity with tested specimen. Aging degradation. Qualified life. Temp./pressure duration. Radiation.	Additional test documentation has been obtained which has been supplemented by analysis. A plant specific qualification report to DDR Guideline requirements is on file.	QUALIFIED
151,152	23LI-203A1,B1, A2,B2 27PT-115A1,B1, A2,B2 06PT-61A,B 23LI-202A,B	Documented evidence of qualification.	The qualification test program has been completed. A plant specific qualification report to NUREG 0588, Cat. I requirements is on file.	QUALIFIED

RESOLUTION OF SPECIFIC TER QUALIFICATION DEFICIENCIESComponent Type: RADIATION MONITORS, GAS ANALYZERS

<u>TER NO.</u>	<u>JAF COMPONENT ID</u>	<u>TER DEFICIENCIES</u>	<u>RESOLUTION</u>	<u>QUALIFICATION STATUS</u>
43,165	27DWA-PA,PB	Documented evidence of qualification.	These items are the panels which contain the containment gas analyzers (27HAZ-101A,B and 27O ₂ AZ-101A,B). The H ₂ analyzer has previously been replaced and the O ₂ analyzer will be replaced by March, 1985. See TER Items 44, 45, 166 and 167.	IN PROGRESS
44,166	27HAZ-101A,B (H ₂ Analyzer)	Documented evidence of qualification.	The function of these items is now being performed by new fully-qualified Hydrogen Analyzers (27HAZ-102A,B). These items will be removed from the plant.	NOT APPLICABLE
45,167	27O ₂ AZ-101A,B (O ₂ Analyzer)	Documented evidence of qualification.	These analyzers are scheduled to be replaced by new fully-qualified oxygen analyzers by March, 1985.	IN PROGRESS
153	27RE-104A,B (containment radiation detector)	Documented evidence of qualification.	Test documentation has been obtained and supplemented by analysis. A plant specific qualification report to NUREG 0588, Cat. I requirements is on file.	QUALIFIED

RESOLUTION OF SPECIFIC IER QUALIFICATION DEFICIENCIESComponent Type: RADIATION MONITORS, GAS ANALYZERS (Cont.)

<u>IER NO.</u>	<u>JAF COMPONENT ID</u>	<u>IER DEFICIENCIES</u>	<u>RESOLUTION</u>	<u>QUALIFICATION STATUS</u>
46	17RE-430A,B	Documented evidence of qualification.	Based on an evaluation of system and component functions during postulated accidents, it has been determined that these components are <u>not</u> within the scope of 10CFR50.49.	NOT APPLICABLE
155	27HAZ-102A,B (Hydrogen Analyzer)	Documented evidence of qualification.	Test documentation has been obtained and supplemented by analysis. A plant-specific qualification report to NUREG 0588, Cat. I requirements is on file.	QUALIFIED

RESOLUTION OF SPECIFIC TER QUALIFICATION DEFICIENCIESComponent Type: SOLENOID VALVES

<u>TER NO.</u>	<u>JAF COMPONENT ID</u>	<u>TER DEFICIENCIES</u>	<u>RESOLUTION</u>	<u>QUALIFICATION STATUS</u>
71,75	02-250V-39,40	Documented evidence of qualification.	These solenoid valves have been replaced with valves fully qualified to NUREG 0588, Cat. I requirements. A plant specific qualification report is on file.	QUALIFIED
72	2950V-80(A-D)			
81	2950V-86(A-D)			
73	6650V-100A,B			
195	6650V-101A,B			
76	2750V-101A,B			
77,194	2750V-111,112,			
78	-113,114,			
	-115,116,			
	-117,118			
79	2750V-131A,B 2750V-132A,B			
80	2750V-125A,B	Documented evidence of qualification.	Additional test documentation has been obtained, which has been supplemented by analysis. Also component traceability and similarity documentation has been established. A plant specific qualification report to DOR Guideline requirements is on file.	QUALIFIED
	2750V-135A,B			
82	2750V-120A,B			
	2750V-121A,B			
	2750V-122A,B			
	2750V-123A,B			
193	2750V-124A,B			
	2750V-119A,B			

RESOLUTION OF SPECIFIC TER QUALIFICATION DEFICIENCIESComponent Type: TEMPERATURE INSTRUMENTATION

<u>TER NO.</u>	<u>JAF COMPONENT ID</u>	<u>TER DEFICIENCIES</u>	<u>RESOLUTION</u>	<u>QUALIFICATION STATUS</u>
116	68TE-102,103, 68TE-105,106	Documented evidence of qualification.	These temperature sensors are scheduled to be replaced with fully qualified units by March, 1985.	IN PROGRESS
117	27RTD-112			
118	27RTD-101A,B,C,D			
120	13TE-38A	Documented evidence of qualification.	Based on an evaluation of system and component functions during postulated accidents, it has been determined that these components are <u>not</u> within the scope of 10CFR50.49.	NOT APPLICABLE
122	13TE-117A,C,E			
123	13TE-100A,D	Documented evidence of qualification.	Additional test documentation has been obtained, which has been supplemented by analysis. Also component traceability and similarity documentation has been established. Plant specific qualification reports to DOR Guideline requirements are on file.	QUALIFIED
	13TE-106B			
121	13TE-100B,106A,C			
124	13TE-106D			
125	13TE-100C			
126	23TE-114A,B			

RESOLUTION OF SPECIFIC IER QUALIFICATION DEFICIENCIESComponent Type: TEMPERATURE INSTRUMENTATION (Cont.)

<u>IER NO.</u>	<u>JAF COMPONENT ID</u>	<u>IER DEFICIENCIES</u>	<u>RESOLUTION</u>	<u>QUALIFICATION STATUS</u>
112	02IS-121 (A-D) 02IS-122 (A-D) 02IS-123 (A-D) 02IS-124 (A-D)	Aging degradation. Qualified life. Temp./pressure exposure and duration. Radiation.	Additional test documentation has been obtained, which has been supplemented by analysis. Component traceability and similarity documentation has been established. A plant specific qualification report to DQR Guideline requirements is on file.	QUALIFIED

RESOLUTION OF SPECIFIC TER QUALIFICATION DEFICIENCIESComponent Type: VALVE MOTOR ACTUATORS

<u>TER NO.</u>	<u>JAF COMPONENT ID</u>	<u>TER DEFICIENCIES</u>	<u>RESOLUTION</u>	<u>QUALIFICATION STATUS</u>
1 156 2,179 6,7 17	10MOV-25A,B 13MOV-15 10MOV-31A,B 14MOV-11A,B 14MOV-12B 02MOV-54A,B	Documented evidence of qualification. Aging degradation. Qualified life. Peak temperature and its duration. Qualified life. Radiation criteria.	Additional test documentation has been obtained, which has been supplemented by analysis. Also component traceability and similarity documentation has been established. A plant specific qualification report to DOR Guideline requirements is on file.	QUALIFIED
8,18	20MOV-94 20MOV-82	Aging degradation. Qualified life. Radiation criteria.	Motors, torque and limit switches have been replaced with fully qualified components. The original test documentation has been supplemented by analysis including documentation of component traceability and similarity. A plant specific qualification report to DOR Guideline requirements is on file.	QUALIFIED

RESOLUTION OF SPECIFIC TER QUALIFICATION DEFICIENCIESComponent Type: VALVE MOTOR ACTUATORS (Cont.)

<u>TER NO.</u>	<u>JAF COMPONENT ID</u>	<u>TER DEFICIENCIES</u>	<u>RESOLUTION</u>	<u>QUALIFICATION STATUS</u>
10,19 23	23MOV-58 02MOV-53A,B 23MOV-57	Documented evidence of qualification. Aging degradation. Qualified life. Radiation criteria.	Additional test documentation has been obtained, which has been supplemented by analysis. Also component traceability and similarity documentation has been established. A plant specific qualification report to DOR Guideline requirements is on file.	QUALIFIED
12,13	29MOV-77 10MOV-67	Documented evidence of qualification. Aging degradation. Qualified life.	Additional test documentation has been obtained, which has been supplemented by analysis. Also component traceability and similarity documentation has been established. A plant specific qualification report to DOR Guideline requirements is on file.	QUALIFIED
20	10MOV-18	Similarity between equipment and test specimen. Aging degradation. Qualified life.	Additional test documentation has been obtained, which has been supplemented by analysis. Also component traceability and similarity documentation has been established. A plant specific qualification report to DOR Guideline requirements is on file.	QUALIFIED

RESOLUTION OF SPECIFIC TER QUALIFICATION DEFICIENCIESComponent Type: VALVE MOTOR ACTUATORS (Cont.)

<u>TER NO.</u>	<u>JAF COMPONENT ID</u>	<u>TER DEFICIENCIES</u>	<u>RESOLUTION</u>	<u>QUALIFICATION STATUS</u>
5,15	23MOV-19 23MOV-17	Documented evidence of qualification. Aging degradation. Qualified life.	Based on an evaluation of system and component functions during postulated accidents, it has been determined that these components are <u>not</u> within the scope of 10CFR50.49.	NOT APPLICABLE

ENCLOSURE 2

RESOLUTION OF ADDITIONAL QUALIFICATION DEFICIENCIES

FOR THE JAMES A. FITZPATRICK PLANT

RESOLUTION OF QUALIFICATION DEFICIENCIES NOT ADDRESSED BY TER

Component Type: ELECTRICAL DISTRIBUTION AND MISC. ELECTRICAL EQUIPMENT

<u>JAF COMPONENT ID</u>	<u>QUALIFICATION DEFICIENCY</u>	<u>RESOLUTION</u>	<u>QUALIFICATION STATUS</u>
01-125E-5A, B	Documented evidence of qualification	The plant-specific qualification report for this gas train heater and its associated controls was recently received by the Authority (March, 1984). This report is presently undergoing engineering review. This review is expected to confirm the report's conclusions which establish qualification based on the postulated environmental conditions to DOR Guideline requirements.	IN PROGRESS
02-3AU-178 (A-D)	Pressure Radiation	These components are scheduled to be relocated to a mild environment by March, 1985.	IN PROGRESS

RESOLUTION OF QUALIFICATION DEFICIENCIES NOT ADDRESSED BY TERComponent Type: ELECTRICAL DISTRIBUTION AND MISC. ELECTRICAL EQUIPMENT (Cont.)

<u>JAF COMPONENT ID</u>	<u>QUALIFICATION DEFICIENCY</u>	<u>RESOLUTION</u>	<u>QUALIFICATION STATUS</u>
71MCC-151,152 -161,162 71BMCC-4,6	Documented evidence of qualification.	The New York Power Authority, as a member of a joint utility group of BWR owners, has contracted with General Electric Co. to qualify the GE Series IC7700 motor control centers (MCC). Phase I of this program demonstrated successful qualification to an enveloping utility environment for 15 major MCC components. Phase II of the program addresses plant-specific qualification. A final qualification report for the James A. FitzPatrick equipment is scheduled to be completed by August, 1984.	IN PROGRESS
71ACAS 71ACBS 71PT-71ACAS 71PT-71ACBS	Documented evidence of qualification.	Two safety-related electrical circuits provided power from these power sources will be relocated to a mild environment. This work is scheduled to be performed by March, 1985.	IN PROGRESS

RESOLUTION OF QUALIFICATION DEFICIENCIES NOT ADDRESSED BY TERComponent Type: ELECTRICAL DISTRIBUTION AND MISC. ELECTRICAL EQUIPMENT (Cont.)

<u>JAF COMPONENT ID</u>	<u>QUALIFICATION DEFICIENCY</u>	<u>RESOLUTION</u>	<u>QUALIFICATION STATUS</u>
71INV-3A, -3B	Documented evidence of qualification.	The New York Power Authority is presently engineering enclosures around the entire charger-inverter units. Ventilation equipment powered from the emergency buses will maintain the enclosure temperature, pressure, and relative humidity at normal levels during all postulated accident environmental conditions. The effects of radiation are being addressed per the requirements of the DOR Guidelines. The enclosures and qualification report is scheduled for completion by March, 1985.	IN PROGRESS
27DWA-HTA,HTB 27RTD-102A1,B1 -102A2,B2 THROUGH -107A1,B1 -107A2,B2	Documented evidence of qualification.	These items are part of the old containment atmosphere analyzer system. The Hydrogen analyzer has already been replaced with a fully qualified Hydrogen Analyzer and sample line heat tracing system. The Oxygen Analyzer is scheduled to be replaced by March, 1985. With the new qualified system in operation, these items will not be within the scope of 10CFR50.49.	IN PROGRESS

RESOLUTION OF QUALIFICATION DEFICIENCIES NOT ADDRESSED BY IERComponent Type: POSITION SWITCHES/POSITION INDICATORS

<u>JAF COMPONENT ID</u>	<u>QUALIFICATION DEFICIENCY</u>	<u>RESOLUTION</u>	<u>QUALIFICATION STATUS</u>
20PNS-82 20PNS-95 20PNS-LS4	Documented evidence of qualification.	These items are scheduled to be replaced with fully qualified position switches by March, 1985.	IN PROGRESS

RESOLUTION OF QUALIFICATION DEFICIENCIES NOT ADDRESSED BY TERComponent Type: PRESSURE, DIFFERENTIAL PRESSURE, AND LEVEL INSTRUMENTATION

<u>JAF COMPONENT ID</u>	<u>QUALIFICATION DEFICIENCY</u>	<u>RESOLUTION</u>	<u>QUALIFICATION STATUS</u>
10PT-120A,B	Documented evidence of qualification.	These components are scheduled to be replaced by equipment qualified to NUREG 0588, Cat. 1 requirements by March, 1985.	IN PROGRESS

RESOLUTION OF QUALIFICATION DEFICIENCIES NOT ADDRESSED BY TER

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Component Type: SOLENOID VALVES

<u>JAF COMPONENT ID</u>	<u>QUALIFICATION DEFICIENCY</u>	<u>RESOLUTION</u>	<u>QUALIFICATION STATUS</u>
0350V-117 0350V-118	Documented evidence of qualification.	Test data shows that the valves are qualified to the J.A.fitzPatrick postulated accident environments. A plant-specific report to DOR Guideline requirements is being finalized and is scheduled for completion by July, 1984.	IN PROGRESS
2050V-83 2050V-95	Documented evidence of qualification.	These items are scheduled to be replaced with fully qualified solenoid valves by March, 1985.	IN PROGRESS

RESOLUTION OF QUALIFICATION DEFICIENCIES NOT ADDRESSED BY TERComponent Type: RADIATION MONITORS/GAS ANALYZERS

<u>JAF COMPONENT ID</u>	<u>QUALIFICATION DEFICIENCY</u>	<u>RESOLUTION</u>	<u>QUALIFICATION STATUS</u>
17RC-50A,B 17RE-53A,B 17RT-53A,B 17RE-431,-432 17RE-434A,B 17RT-434A,B 17RE-458A,B 17RE-463A,B 17RT-463A,B	Radiation criteria.	The existing shielding provided for these radiation monitors is presently being evaluated to determine if it is adequate to protect the subject equipment from sample stream radiation. This effort and any additional shielding which may be required will be completed by March, 1985.	IN PRGRESS

RESOLUTION OF QUALIFICATION DEFICIENCIES NOT ADDRESSED BY IER

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Component Type: TEMPERATURE INSTRUMENTATION

<u>JAF COMPONENT ID</u>	<u>QUALIFICATION DEFICIENCY</u>	<u>RESOLUTION</u>	<u>QUALIFICATION STATUS</u>
16-1RTD 107 16-1RTD 108 68TE-201 thru 212 (total of 12) 68TE-301 thru 310 (total of 10) 68TE-102, 103 68TE-105, 106	Documented evidence of qualification.	These items are scheduled to be replaced by fully qualified temperature sensors by March, 1985.	IN PROGRESS

RESOLUTION OF QUALIFICATION DEFICIENCIES NOT ADDRESSED BY IERComponent Type: VALVE ACTUATORS

<u>JAF COMPONENT ID</u>	<u>QUALIFICATION DEFICIENCY</u>	<u>RESOLUTION</u>	<u>QUALIFICATION STATUS</u>
13MOV-16	Documented evidence of qualification.	Additional test documentation has been obtained, which has been supplemented by analysis. Also component traceability and similarity documentation has been established. A plant specific qualification report to DOR Guideline requirements is on file.	QUALIFIED
23MOV-14	Documented evidence of qualification.	A new fully-qualified actuator meeting NUREG 0588, Cat. I. requirements is scheduled to be installed by October, 1984.	IN PROGRESS
27E/P-103A,B	Documented evidence of qualification.	These electro-pneumatic controllers for flow control valves will be relocated to an area which does not experience postulated harsh environment accident conditions by March, 1985.	IN PROGRESS

ENCLOSURE 3

SUMMARY OF METHODOLOGY FOR IDENTIFYING ELECTRICAL EQUIPMENT

WITHIN THE SCOPE OF 10CFR50.49

Enclosure (3) - Summary of Methodology for Identifying Electrical Equipment Within the Scope of 10CFR50.49

1. Paragraph (b) (1) - The safety design basis of safety systems as described in the FitzPatrick FSAR were reviewed along with existing plan emergency operating procedures. Based on this review systems and components required to remain functional in order to mitigate postulation design basis events were identified. The environmental conditions at the specific location of the safety-related equipment was then determined. Safety-related equipment determined to experience postulated harsh environments as a result of these events were included in the 10CFR50.49 equipment listing.
2. Paragraph (b) (2) - A review of the electrical elementary diagrams for the safety-related equipment identified under paragraph (b) (1) was performed. This review confirmed the application of the original plant design criteria for electrical separation of safety-related electrical equipment and circuit coordination/protection schemes. As a result, no non-safety related electrical equipment whose failure under postulated environmental conditions could prevent satisfactory accomplishment of safety functions were identified.
3. Paragraph (b) (3) - Regulatory Guide 1.97, Rev. 2 "Instrumentation... to Assess Plant and Environs During and Following an Accident" was reviewed as it applies to Boiling Water Reactors (BWR). Instruments were then identified which were presently installed in the FitzPatrick Plant and which meet the required design criteria. If these instruments required environmental qualification (categories 1 and 2), the associated components were included in the 10CFR50.49 component listing.