TOLEDO EDISON

RICHARD P. CROUSE
Vice President
Nuclear
(419) 259-5221

Docket No. 50-346
License No. NPF-3
Serial No. 951
May 20, 1983

Director of Nuclear Reactor Regulation
Attention: Mr. John F Stolz
Operating Reactor Branch No. 4
Division of Operating Reactors
United States Nuclear Regulatory Commission
Washington, D. C. 20555

Dear Mr. Stolz:

On January 17, 1983 the Nuclear Regulatory Commission issued 10CFR Part 50.49 "Environmental Qualification of Electrical Equipment Important to Safety for Nuclear Power Plants". Paragraph (g), of 10CFR50.49 required that by May 20, 1983 licensees identify electrical equipment important to safety, within the scope of the rule, that is already qualified, and submit a schedule for qualification or replacement of the remaining electrical equipment within the scope of the rule in accordance with the qualification deadline specified in Paragraph (g).

A list of the equipment required to be qualified by 10CFR50.49 for Davis-Besse Nuclear Power Station Unit 1 is contained in our "Environmental Qualification of Safety Related Electrical Equipment Manual" submitted to the NRC October 12, 1981, Serial No. 750. The process of developing the manual assured that if any equipment could affect Class 1E equipment, then it was considered to be safety related, and qualification established. This precludes that we do not have any equipment in category 2.b.2 of 10CFR50.49.

The Tables 1, 2, & 3 and their supplements delineate the planned activities to resolve each open item contained in the Technical Evaluation Report (TER-C5257-505) transmitted to us February 8, 1983 (Log No. 1211) and provide a schedule for qualification. Those items, in the attached Tables, containing a "Yes" in the column headed "Discussion Requested" indicate that it is our view that qualification has been established or is imminent and we wish to present this view to the NRC staff. See also Toledo Edison letter, dated March 10, 1983 Serial No. 918, for resolution of these items. TER Table 4-1 contains a listing of all equipment reviewed and included the list of qualified equipment.

A048

Additional analysis will be performed to resolve the generic comments on aging and radiation. This analysis on aging will be comprehensive and utilize the Arrhenius methodology. The tolerance of the equipment for radiation will be reviewed utilizing several sources to address the items of concern.

8305240423 830520
PDR ADOCK 05000346
P PDR

We view the equipment in Category IIC of our TER to be qualified. Qualification life will be maintained for certain items by periodic replacement of components known to age. The replacement schedule will be determined by our surveillance and maintenance program and will be consistent with the requirements to maintain qualified life.

TER items 75, 76, 82, 83, and 87 are to be replaced when qualified equipment becomes available. Some testing is ongoing to qualify potential replacements, however, this is not expected to be complete in time to meet the deadline required by 10CFR50.49. For these items, we request an extension to November, 1985.

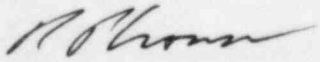
Buchanan Penetration Terminal Block Box PBL4EX TER item No. 98 (index No. 221H-319) previously scheduled for replacement has been reviewed and found to contain no safety related circuits. Therefore, the terminal block will not be replaced.

Additionally, flow transmitters for the High Pressure Injection System, FTHP3A, FTHP3B, FTHP3C, FTHP3D have been replaced with qualified Rosemont 1152 transmitters. The corresponding index numbers for these transmitters are 301H-010, 011, 012, and 013 respectively.

Eighteen Namco Limit Switches are currently scheduled for replacement with qualified Namco Limit switches. They are ZS100-1, ZS101-1, ZS375, ZS394, ZS598, ZS607, ZSMU03, ZSMU33, ZSMU38, ZSMU66A,B,C,D, ZS235B, ZS229B, ZS1773A, ZS1719A, and ZS6831A. The corresponding index numbers for these switches are 301H-020, 021, 041, 042, 050, 051, 062 through 068, 039, 036, 033, 031, and 052 respectively.

In our continuing review, we have discovered that certain relays were not included in our submittals. We are in the process of defining the relays and the information will be included in Rev. 3 of our Environmental Qualification manual. Revision 3 is scheduled to be submitted to us by our consultant before October, 1983, and we will provide this information to you by November, 1983.

Very truly yours,



RPC:LCS

cc:
DB1 Resident Inspector

Enclosure
Table 1
Table 2
Table 3
Table 4-1 (from TER)

bt b/1

TABLE 1 - TER CATEGORY I.B

TER Number	SCEW Number	Equipment Description	Resolution*	Scheduled Completion Date	Discussion Requested
1	221H-259	Rees Push Button Switch	Analysis (23)	(A) 7/30/83	Yes (exempt)
6	221H-246	Rees Push Button Switch	Analysis (23)	(A) 7/30/83	Yes (exempt)
21	221H-258	Rees Push Button Switch	Analysis (23)	(A) 7/30/83	Yes (exempt)
35	302H-012 302H-013 302H-014 302H-015 302H-016 302H-017	Charge Converter	Replacement	Completed	-- -- -- -- -- --
36	302H-006 302H-007 302H-008 302H-009 302H-010 302H-011	Accelero-meter	Replacement	Completed	-- -- -- -- -- --
48	218H-008 218H-009 218H-010 218H-011 218H-004 218H-005 218H-006 218H-007	Flow Transmitter	Replacement (1)	11/30/84	-- -- -- -- -- -- -- --

Numbers in parenthesis refer to description in Table 1, supplement.
(A) Change will be incorporated into Rev. 2 E.Q. manual update.
(B) Change will be incorporated into Rev. 3 E.Q. manual update.

TABLE 1 - TER CATEGORY I.B

TER Number	SCEW Number	Equipment Description	Resolution*	Scheduled Completion Date	Discussion Requested
49	204H-005	Level Transmitter	Replacement (2)	11/30/84	--
	204H-006				--
	204H-007				--
	204H-008				--
50	224H-004 301H-015	Level Transmitter	Replacement (3)	11/30/84	--
51	220H-007 220H-011	Level Transmitter	Analysis (24)	(A) 7/30/83	Yes Yes
54	223H-017 223H-018	Radiation Monitor	Replacement	Completed	-- --
55	223H-021 223H-022	Radiation Monitor	Replacement	Completed	-- --
56	223H-019 223H-020	Radiation Monitor	Replacement	Completed	-- --
73	211H-007	Lube-Oil Pump Motor	Replacement (4)	11/30/84	--
74	211H-006	Lube-Oil Pump Motor	Replacement (4)	11/30/84	--
75	211H-013	Lube-Oil Pump Motor	Replacement (4)	Note 1	--
76	211H-012	Lube-Oil Pump Motor	Replacement (4)	Note 1	--
77	222H-017	Differential Pressure Controller	Relocation (5)	11/30/84	--

Numbers in parenthesis refer to description in Table 1, supplement
(A) Change will be incorporated into Rev. 2 E.Q. manual update.
(B) Change will be incorporated into Rev. 3 E.Q. manual update.

TABLE 1 - TER CATEGORY I.B

TER Number	SCEW Number	Equipment Description	Resolution*	Scheduled Completion Date	Discussion Requested
82	211H-014	Pressure Differential Indicating Switch	Replacement (6)	Note 1	--
83	211H-015	Pressure Differential Indicating Switch	Replacement (7)	Note 1	--
87	210H-020	Pressure Switch	Replacement (8)	Note 1	--
96	221H-317	Terminal Block	Replacement (9)	11/30/84	--
97	221H-315	Terminal Block	Replacement (10)	11/30/84	--
98	221H-316 221H-319	Terminal Block	Replacement (11)	11/30/84	-- --
168	224H-013	Deleted - Not nuclear safety-related			
169	225H-005	Solenoid Valve	Replacement (12)	11/30/84	--
177	210H-021 210H-022	Solenoid Valve	Replacement (13)	11/30/84	-- --
183	210H-023 210H-024 210H-025 210H-026	Solenoid Valve	Replacement (14)	11/30/84	-- -- -- --
187	216H-054	Solenoid Valve	Replacement (15)	11/30/84	--
189	216H-039 216H-045	Solenoid Valve	Replacement	Completed	-- --

Numbers in parenthesis refer to description in Table 1, supplement.
(A) Change will be incorporated into Rev. 2 E.Q. manual update.
(B) Change will be incorporated into Rev. 3 E.Q. manual update.

TABLE 1 - TER CATEGORY I.B

TER Number	SCEW Number	Equipment Description	Resolution*	Scheduled Completion Date	Discussion Requested
191	208H-029 208H-030	Solenoid Valve	Replacement (16)	11/30/84	-- --
193	208H-031 208H-032	Solenoid Valve	Replacement (17)	11/30/84	-- --
198	205H-022 205H-023	Temperature Switch	Analysis (18)	(A) 7/30/83	-- --
199	205H-021	Temperature Switch	Analysis (19)	(A) 7/30/83	--
200	205H-019 205H-020	Temperature Switch	Analysis (20)	(A) 7/30/83	-- --
202	222H-022	Current Repeater	Relocation (21)	11/30/84	--
203	223H-024	Gas Analyzer	Analysis (25)	(A) 7/30/83	--
204	223H-023	Re-Adout Module	Replacement	Completed	--
205	221H-027	Motor Control Center	Test (22)	Ongoing (B) 12/31/83	--
206	221H-022 221H-025 221H-028	Motor Control Center	Test (22)	Ongoing (B) 12/31/83	-- -- --
207	221H-023 221H-024 221H-035	Motor Control Center	Test (22)	Ongoing (B) 12/31/83	-- -- --
208	221H-026 221H-036	Motor Control Center	Test (22)	Ongoing (B) 12/31/83	-- --

Numbers in parenthesis refer to description in Table 1, supplement.
(A) Change will be incorporated into Rev. 2 E.Q. manual update.
(B) Change will be incorporated into Rev. 3 E.Q. manual update.

NOTES

1. Replacement equipment is presently being qualified, and upon qualification a schedule will be provided.

TABLE I SUPPLEMENT

TER CATEGORY I. B.

1. Bailey Transmitters - Hot Leg Flow for RPS (TER Item #48)

These 8 transmitters are scheduled for replacement with qualified Rosemount Transmitters in accordance with FCR 78-525. Modification scheduled to be completed by Nobember 30, 1984.

2. Bailey Transmitters - OTSG Start-up Level for Auxiliary Feedwater Control & Indication (TER Item #49)

These 4 transmitters are scheduled for replacement with qualified Rosemount Transmitters in accordance with FCR 78-525. Modification scheduled to be completed by Nobember 30, 1984.

3. Bailey Transmitter - Reactor Coolant Pressurizer Level (TER Item #50 LTRC14-2).
Reactor Coolant Pressurizer Level LTRC14-3 (not in TER)

These transmitters are scheduled for replacement with a qualified Rosemount transmitter in accordance with FCR 78-525. Modification scheduled to be completed by Nobember 30, 1984.

4. Prestolite - Leland Motors - HPI Lube Oil Pump Motors (TER Item #s 73 through 76).

These are fractional horsepower motors driving lube oil pumps providing lubrication to the High Pressure Injection Pump bearings. Two motors are AC motors, and two are the backup pumps which are DC motors. The AC motors will be replaced with qualified Reliance motors. The DC motors are not scheduled for replacement until a fully qualified DC motor becomes available. Some testing is currently underway and until it is determined that a fractional horsepower qualified replacement DC motor exists the DC motors will not be scheduled for replacement. AC motors to be replaced are plant ID # MP1971 & MP1981 (Index Nos. 211H-006, 211H-007). DC motors are plant ID# MP1972 and MP1982 (Index Nos. 211H-012, 211H-013). FCR 83-063 will replace the 2 AC motors. Modification scheduled to be completed by November 30, 1984.

5. Bailey Controller - Emergency Ventilation System Damper Control Element (TER Item #77) and associated control loop elements, PDY5000 A, B, and C.

These items are scheduled to be relocated to an area where the total integrated radiation dose (accident plus background) is less than 1×10^3 rads in accordance with FCR No. 83-062. Modification scheduled to be completed by November 30, 1984.

6. United Electric Pressure Switch - HPI Lube Oil (TER Item #82).

This pressure switch is scheduled to be replaced with a qualified ITT Barton DPS which is currently undergoing equipment qualification testing. When it is determined that this replacement component is qualified, the pressure switch will be scheduled for replacement.

7. United Electric Pressure Switch (TER item #83) - see #6.

8. Static-O-Ring Pressure Switch - RCS/DH pressure (TER Item #87)

This switch is scheduled to be replaced with a qualified S-O-R pressure switch. When it is determined that this replacement component is qualified, this pressure switch will be scheduled for replacement.

9. Buchanan Terminal Block - Electrical Penetration Terminal Boxes (TER item #96)

These terminal boxes contain Buchanan terminal blocks model 0721 which are scheduled to be replaced with qualified model 0211 terminal blocks in accordance with FCR 82-132A. Modification scheduled to be completed by November 30, 1984.

10. Buchanan Terminal Block (TER Item #97) - see #9.

11. Buchanan Terminal Block TER Item #98 Index No. 221H-316 see #9. Index 221H-319 Penetration Box PBL4EX has been reviewed and has no required circuits and will not have its terminal blocks replaced.

12. ASCO Solenoid Valve - RCS Normal Makeup Isolation Valve (TER Item #169)

This solenoid valve is scheduled to be replaced with a qualified ASCO NP-series solenoid valve in accordance with FCR 82-125. Modification scheduled to be completed by November 30, 1984.

13. ASCO Solenoid Valve - DH Removal Cooler Component Cooling Outlet Valves (TER Item #177) - see #12

14. ASCO Solenoid Valves - DH Removal Cooler Outlet and Bypass Valves (TER Item #183) - see #12

15. ASCO Solenoid Valves - RC Pump Seal Return Isolation Valve (TER Item #187) - see #12

16. ASCO Solenoid Valve - OTSG 2 Atmospheric Steam Vent Valve (TER Item #191) - see #12

17. ASCO Solenoid Valve - OTSG 1 Atmospheric Steam Vent Valve (TER Item #193) - see #12

18. Barksdale Temperature Switch - ECCS Room Cooler Fan (TER Item #198)

These switches measure ambient temperature and start/stop the ECCS Room Unit Cooler Fan Motors. They are being qualified by additional analysis which will be incorporated into the updated SCEW sheets and become part of the Revision 2 general EQ manual revision scheduled to be completed by July 30, 1983.

19. Barksdale Temperature Switch - ECCS Room Cooler Fan (TER Item #199) - see #18

20. Barksdale Temperature Switch - ECCS Room Cooler Fan (TER Item #200) - see #18

21. Foxboro Current Repeater - Emergency Ventilation Fan Damper Control Element (TER Item #202) - see #5

22. Westinghouse Motor Control Centers - (TER Item #s 205, 206, 207, & 208)

These motor control centers are presently undergoing testing to document qualification. The testing process is scheduled to be completed by December 31, 1983. The results will then be incorporated into the EQ manual.

23. Mackworth Rees Push Button Switches - (TER Item #s 1, 6, & 21)

These push button switches are felt to be exempt from qualification in that failure modes and effects analyses will show that there is no potential failure which could produce an adverse outcome. These switches are one topic for discussion at the future NRC TER review meeting. The analysis will be incorporated into Revision 2 of the EQ Manual scheduled for July 30, 1983.

TABLE 2 - TER CATEGORY II.A

TER Number	SCEW Number	Equipment Description	Resolution*	Scheduled Completion	Discussion Requested
2	221H-179	Push Button Switch	Analysis (16)	(B) 10/31/83	Yes (G-1)
4	221H-180 221H-181	Push Button Switch	Analysis (16)	(B) 10/31/83	Yes (G-1) Yes (G-1)
5	221H-241 221H-242	Push Button Switch	Analysis (16)	(B) 10/31/83	Yes (G-1) Yes (G-1)
7	221H-244 221H-245 221H-256	Push Button Switch	Analysis (16)	(B) 10/31/83	Yes (G-1) Yes (G-1) Yes (G-1)
8	221H-177 221H-178 221H-191	Push Button Switch	Analysis (16)	(B) 10/31/83	Yes (G-1) Yes (G-1) Yes (G-1)
9	221H-216 221H-222 221H-224	Push Button Switch	Analysis (16)	(B) 10/31/83	Yes (G-1) Yes (G-1) Yes (G-1)
10	221H-250 221H-261 221H-237 221H-236 221H-208 221H-211 221H-212	Push Button Switch	Analysis (16)	(B) 10/31/83	Yes Yes Yes Yes Yes Yes Yes
14	221H-214	Push Button Switch	Analysis (16)	(B) 10/31/83	Yes (G-1)

*Numbers in parenthesis refer to description in Table 2, supplement
(A) Change will be incorporated into Rev. 2 E.Q. manual update.
(B) Change will be incorporated into Rev. 3 E.Q. manual update.

TABLE 2 - TER CATEGORY II.A

TER Number	SCEW Number	Equipment Description	Resolution*	Scheduled Completion	Discussion Requested
15	221H-188	Deleted - Replaced by other Monitoring System Kaman Sciences.			--
16	221H-235	Deleted - Replaced by other Monitoring System Kaman Sciences.			--
17	221H-200 221H-227	Push Button Switch	Analysis (16)	(B) 10/31/83	Yes Yes
18	221H-194 221H-195	Push Button Switch	Analysis (16)	(B) 10/31/83	Yes Yes
19	221H-192 221H-193	Push Button Switch	Analysis (16)	(B) 10/31/83	Yes Yes
20	221H-199 221H-226	Push Button Switch	Analysis (16)	(B) 10/31/83	Yes Yes
23	221H-189	Deleted - Replaced by other Monitoring System Kaman Sciences.			--
24	221H-201 221H-202 221H-203	Push Button Switch	Analysis (16)	(B) 10/31/83	Yes (G-1) Yes (G-1) Yes (G-1)
25	221H-183	Push Button Switch	Analysis (16)	(B) 10/31/83	Yes
26	221H-234 221H-182	Deleted - Replaced by other Monitoring System Kaman Sciences. Push Button Switch	Analysis (16)	(B) 10/31/83	-- Yes
27	221H-238 221H-251	Push Button Switch	Analysis (16)	(B) 10/31/83	Yes Yes

*Numbers in parenthesis refer to description in Table 2, supplement

(A) Change will be incorporated into Rev. 2 E.Q. manual update.

(B) Change will be incorporated into Rev. 3 E.Q. manual update.

TABLE 2 - TER CATEGORY II.A

TER Number	SCEW Number	Equipment Description	Resolution*	Scheduled Completion	Discussion Requested
30	221H-217	Push Button	Analysis	(B)	Yes (G-1)
	221H-232	Switch	(16)	10/31/83	Yes (G-1)
32	221H-219	Push Button	Analysis	(B)	Yes (G-1)
		Switch	(16)	10/31/83	
33	221H-217	Push Button	Analysis	(B)	Yes (G-1)
		Switch	(16)	10/31/83	
34	221H-219	Push Button	Analysis	(B)	Yes (G-1)
	221H-240	Switch	(16)	10/31/83	Yes (G-1)
	221H-239				Yes (G-1)
	221H-204				Yes (G-1)
	221H-205				Yes (G-1)
	221H-206				Yes (G-1)
	221H-207				Yes (G-1)
	221H-233				Yes (G-1)
	221H-231				Yes (G-1)
	221H-230				Yes (G-1)
	221H-229				Yes (G-1)
	221H-225				Yes (G-1)
37	221H-171				Yes
	221H-172				Yes
	221H-173	Cable	Analysis	(A)	Yes
	221H-174		(1)	7/30/83	Yes
	221H-175				Yes
38	221H-012				Yes
	221H-013	Cable	Analysis	(A)	Yes
	221H-020		(1)	7/30/83	Yes
39	221H-037	Cable	Analysis		Yes
	221H-038		(1)	(A)	Yes
	221H-039			7/30/83	Yes
	221H-040				Yes
	221H-041				Yes
	221H-042				Yes
	221H-043				Yes

*Numbers in parenthesis refer to description in Table 2, supplement

(A) Change will be incorporated into Rev. 2 E.Q. manual update.

(B) Change will be incorporated into Rev. 3 E.Q. manual update.

TABLE 2 - TER CATEGORY II.A

TER Number	SCEW Number	Equipment Description	Resolution*	Scheduled Completion	Discussion Requested
39	221H-044	Cable	Analysis	(A)	Yes
(cont.)	221H-045		(1)	7/30/83	Yes
	221H-046				Yes
	221H-047				Yes
	221H-048				Yes
	221H-049				Yes
	221H-050				Yes
	221H-065				Yes
	221H-066				Yes
	221H-067				Yes
	221H-068				Yes
	221H-069				Yes
40	221H-014	Cable	Analysis	(A)	Yes
	221H-015		(1)	7/30/83	Yes
	221H-016				Yes
	221H-017				Yes
	221H-018				Yes
	221H-021				Yes
	221H-029				Yes
	221H-030				Yes
	221H-031				Yes
	221H-032				Yes
	221H-033				Yes
	221H-034				Yes
41	219H-007				Yes (G-1)
	219H-008	Pressure	Analysis	(A)	Yes (G-1)
	219H-009	Transmitter	(2)	7/30/83	Yes (G-1)
	219H-010				Yes (G-1)
43	219H-006	Pressure Transmitter	Analysis (2)	(A) 7/30/83	Yes (G-1)
44	219H-005	Pressure Transmitter	Analysis (2)	(A) 7/30/83	Yes (G-1)
45	219H-004	Pressure Transmitter	Analysis (2)	(A) 7/30/83	Yes (G-1)
59	205H-005	Fan Motor	Analysis (3)	(A) 7/30/83	Yes (G-1)

*Numbers in parenthesis refer to description in Table 2, supplement.

(A) Change will be incorporated into Rev. 2 E.Q. manual update.

(B) Change will be incorporated into Rev. 3 E.Q. manual update.

TABLE 2 - TER CATEGORY II.A

TER Number	SCEW Number	Equipment Description	Resolution*	Scheduled Completion	Discussion Requested
60	205H-006 205H-007	Fan Motor	Analysis (3)	(A) 7/30/83	Yes (G-1) Yes (G-1)
61	205H-008 205H-009	Fan Motor	Analysis (3)	(A) 7/30/83	Yes (G-1) Yes (G-1)
62	206H-004	Fan Motor	Analysis (4)	(A) 7/30/83	Yes (G-1)
63	214H-005	Pump Motor	Analysis (5)	(B) 10/31/83	Yes (G-1)
64	214H-004	Pump Motor	Analysis (5)	(B) 10/31/83	Yes (G-1)
65	210H-007	Pump Motor	Analysis (6)	(A) 7/30/83	Yes (G-1)
66	210H-006	Pump Motor	Analysis (6)	(A) 7/30/83	Yes (G-1)
67	211H-005	Pump Motor	Analysis (6)	(A) 7/30/83	Yes (G-1)
68	211H-004	Pump Motor	Analysis (6)	(A) 7/30/83	Yes (G-1)
69	215H-008	Fan Motor	Analysis (5)	(B) 10/31/83	Yes (G-1)
70	215H-007	Fan Motor	Analysis (5)	(B) 10/31/83	Yes (G-1)
71	217H-004 217H-005 217H-006	Fan Motor	Analysis (7)	(B) 10/31/83	Yes (G-1) Yes (G-1) Yes (G-1)
72	215H-005 215H-006	Fan Motor	Analysis (7)	(B) 10/31/83	Yes (G-1) Yes (G-1)

*Numbers in parenthesis refer to description in Table 2, supplement.

(A) Change will be incorporated into Rev. 2 E.Q. manual update.

(B) Change will be incorporated into Rev. 3 E.Q. manual update.

TABLE 2 - TER CATEGORY II.A

TER Number	SCEW Number	Equipment Description	Resolution*	Scheduled Completion	Discussion Requested
85	218H-013	Pressure Switch	Analysis (8)	(A) 7/30/83	Yes (G-1)
88	220H-023 220H-030	Pressure Switch	Analysis (9)	(B) 10/31/83	Yes (G-2) Yes (G-2)
89	223H-016	Pressure Switch	Analysis (10)	(A) 7/30/83	Yes (G-2)
90	223H-015	Pressure Switch	Analysis (10)	(A) 7/30/83	Yes (G-2)
91	220H-033 220H-034 220H-037 220H-038 220H-039 220H-040 220H-019 220H-020 220H-024 220H-029	Pressure Switch	Analysis (9)	(B) 10/31/83	Yes (G-2) Yes (G-2) Yes (G-2) Yes (G-2) Yes (G-2) Yes (G-2) Yes (G-2) Yes (G-2) Yes (G-2) Yes (G-2)
92	220H-031 220H-032 220H-035 220H-036 220H-017 220H-018 220H-021 220H-022 220H-025 220H-026 220H-027 220H-028	Pressure Switch	Analysis (9)	(B) 10/31/83	Yes (G-2) Yes (G-2) Yes (G-2) Yes (G-2) Yes (G-2) Yes (G-2) Yes (G-2) Yes (G-2) Yes (G-2) Yes (G-2) Yes (G-2) Yes (G-2)
101	221H-061	Terminal Block	-- (11)	(B) 10/31/83	--
102	221H-321	Terminal Block	-- (11)	(B) 10/31/83	--

*Numbers in parenthesis refer to description in Table 2, supplement.

(A) Change will be incorporated into Rev. 2 E.Q. manual update.

(B) Change will be incorporated into Rev. 3 E.Q. manual update.

TABLE 2 - TER CATEGORY II.A

TER Number	SCEW Number	Equipment Description	Resolution*	Scheduled Completion	Discussion Requested
103	221H-329	Terminal Block	-- (11)	(B) 10/31/83	--
104	221H-328				--
	221H-054	Terminal	--	(B)	--
	221H-053	Block	(11)	10/31/83	--
	221H-052				--
	221H-055				--
	221H-056				--
	221H-057				--
	221H-063				--
105	221H-323				--
	221H-324	Terminal	--	(B)	--
	221H-325	Block	(11)	10/31/83	--
	221H-326				--
	221H-327				--
106	221H-086				--
	221H-087	Terminal	--	(A)	--
	221H-164	Block	(12)	7/30/83	--
	221H-165				--
	221H-166				--
107	221H-158	Terminal	--	(A)	--
	221H-159	Block	(12)	7/30/83	--
108	221H-115				--
	221H-088				--
	221H-089	Terminal	--	(A)	--
	221H-167	Block	(12)	7/30/83	--
	221H-168				--
	221H-169				--
109	221H-081				--
	221H-082				--
	221H-101	Terminal	--	(A)	--
	221H-103	Block	(12)	7/30/83	--

*Numbers in parenthesis refer to description in Table 2, supplement.

(A) Change will be incorporated into Rev. 2 E.Q. manual update.

(B) Change will be incorporated into Rev. 3 E.Q. manual update.

TABLE 2 - TER CATEGORY II.A

TER Number	SCEW Number	Equipment Description	Resolution*	Scheduled Completion	Discussion Requested
109 (cont.)	221H-107	Terminal	--	(A)	--
	221H-156	Block	(12)	7/30/83	--
110	221H-070				--
	221H-071	Terminal	--	(A)	--
	221H-072	Block	(12)	7/30/83	--
	221H-173				--
	221H-119				--
	221H-120				--
	221H-154				--
	221H-157				--
111	221H-123	Terminal	--	(A)	--
	221H-140	Block	(12)	7/30/83	--
	221H-145				--
	221H-146				--
	221H-147				--
	221H-149				--
	221H-150				--
112	221H-094	Terminal	--	(A)	--
	221H-099	Block	(12)	7/30/83	--
	221H-100				--
	221H-106				--
	221H-111				--
	221H-121				--
	221H-122				--
	221H-139				--
	221H-143				--
	221H-144				--
	221H-148				--
113	221H-125				--
	221H-126	Terminal	--	(A)	--
	221H-162	Block	(12)	7/30/83	--
	221H-163				--
114	221H-078	Terminal	--	(A)	--
	221H-079	Block	(12)	7/30/83	--

*Numbers in parenthesis refer to description in Table 2, supplement.

(A) Change will be incorporated into Rev. 2 E.Q. manual update.

(B) Change will be incorporated into Rev. 3 E.Q. manual update.

TABLE 2 - TER CATEGORY II.A

TER Number	SCEW Number	Equipment Description	Resolution*	Scheduled Completion	Discussion Requested
114 (cont.)	221H-080				--
	221H-090				--
	221H-091				--
	221H-092				--
	221H-093				--
	221H-095				--
	221H-096				--
	221H-102				--
	221H-104				--
	221H-105	Terminal	--	(A)	--
	221H-109	Block	(12)	7/30/83	--
	221H-110				--
	221H-114				--
	221H-117				--
	221H-118				--
	221H-124				--
	221H-129				--
	221H-138				--
	221H-153				--
	221H-155				--
115	221H-152	Splice	-- (17)	(A) 7/30/83	Yes
116	221H-133				--
	221H-134	Terminal	--	(A)	--
	221H-137	Block	(12)	7/30/83	--
	221H-141				--
	221H-151				--
117	221H-084	Terminal	--	(A)	--
	221H-085	Block	(12)	7/30/83	--
	221H-097				--
	221H-098				--
	221H-113				--
	221H-132				--
118	221H-112	Terminal	--	(A)	--
	221H-130	Block	(12)	7/30/83	--
	221H-131				--
	221H-135				--
	221H-136				--
	221H-142				--

*Numbers in parenthesis refer to description in Table 2, supplement.

(A) Change will be incorporated into Rev. 2 E.Q. manual update.
(B) Change will be incorporated into Rev. 3 E.Q. manual update.

TABLE 2 - TER CATEGORY II.A

TER Number	SCEW Number	Equipment Description	Resolution*	Scheduled Completion	Discussion Requested
119	221H-074 221H-075 221H-076 221H-160 221H-161	Terminal Block	-- (12)	(A) 7/30/83	-- -- -- -- --
124	204H-010	Valve Motor Operator	Modification (13)	11/30/84	--
128	204H-012	Valve Motor Operator	Modification (13)	11/30/84	--
134	210H-015	Valve Motor Operator	Analysis (13)	(A) 7/30/83	--
136	210H-014	Valve Motor Operator	Analysis (13)	(A) 7/30/83	--
133	210H-011 210H-010	Valve Motor Operator	Modification (13)	11/30/84	-- --
151	204H-011	Valve Motor Operator	Modification (13)	11/30/84	--
165	204H-009	Valve Motor Operator	Modification (13)	11/30/84	--
181	208H-026	Solenoid Valve	Replacement (14)	11/30/84	--
182	208H-025	Solenoid Valve	Replacement (14)	11/30/84	--
184	208H-020 208H-021 208H-022 208H-023 208H-024	Solenoid Valve	Replacement (14)	11/30/84	-- -- -- -- --

*Numbers in parenthesis refer to description in Table 2, supplement.

(A) Change will be incorporated into Rev. 2 E.Q. manual update.

(B) Change will be incorporated into Rev. 3 E.Q. manual update.

TABLE 2 - TER CATEGORY II.A

TER Number	SCEW Number	Equipment Description	Resolution*	Scheduled Completion	Discussion Requested
185	208H-014	Solenoid Valve	Replacement (14)	11/30/84	--
	208H-015				--
	208H-016				--
	208H-017				--
	208H-018				--
210	221H-267	Electrical Penetration Assembly	Analysis (15)	(A) 7/30/83	Yes (G-1)
	221H-268				Yes (G-1)
	221H-269				Yes (G-1)
	221H-270				Yes (G-1)
	221H-271				Yes (G-1)
	221H-272				Yes (G-1)
	221H-273				Yes (G-1)
	221H-274				Yes (G-1)
	221H-275				Yes (G-1)
	221H-276				Yes (G-1)
	221H-277				Yes (G-1)
	221H-278				Yes (G-1)
	221H-279				Yes (G-1)
	221H-280				Yes (G-1)
	221H-281				Yes (G-1)
	221H-282				Yes (G-1)
	221H-283				Yes (G-1)
	221H-284				Yes (G-1)
212	221H-243	Push Buttor Switch	Analysis (16)	(A) 7/30/83	Yes (G-1)
213	221H-190	Push Button Switch	Analysis (16)	(A) 7/30/83	Yes (G-1)
214	221H-257	Push Button Switch	Analysis (16)	(A) 7/30/83	Yes (G-1)

*Numbers in parenthesis refer to description in Table 2, supplement.

(A) Change will be incorporated into Rev. 2 E.Q. manual update.

(B) Change will be incorporated into Rev. 3 E.Q. manual update.

TABLE 2 SUPPLEMENT

TER CATEGORY II.A.

1. A. Boston Insulated Wire Cable Cabling (TER item #37)

The TER raised questions about the equivalency of the preaging testing to the 40 year qualified life as well as the submergence qualification. Analysis is being performed to justify the qualified life. Analysis is also being performed to demonstrate the affect of potential submergence related failures of the cabling on its associated equipment. Also the affect of the chemical constitutents of the sump water on the cable jacket materials will be investigated. These analyses will be incorporated into the appropriate SCEW sheets in E.Q. Manual Revision 2 scheduled to be completed by July 30, 1983.

B. Okonite Cabling (TER item #38)

TER raises the question of similarity between the tested and the installed cables. Documentation reference of test report applicability as well as submergence analysis (as described in No. 1) will be incorporated into the appropriate SCEW sheets in E.Q. Manual Revision 2 scheduled to be completed by July 30, 1983.

C. Kerite Cable (TER item #39) - see 1.B.

D. Kerite Cable (TER item #40) - see 1.B.

2. A. Foxboro Pressure Transmitter - Hot Leg Wide Range for SFAS (TER item #41)

TER raised concerns of test report applicability as well as whether the instruments are of the MCA series. TER also raises a concern about aging qualification. Test report applicability references as well as additional aging analysis will be performed to ensure qualification. This will be incorporated into the appropriate SCEW sheets in Revision 2 of the E.Q. Manual scheduled for completion by July 30, 1983.

B. Foxboro Pressure Transmitter - Containment Pressure for SFAS (TER item #43) - see 2.A.

C. Foxboro Pressure Transmitter - Containment Pressure for SFAS (TER item #44) - see 2.A.

D. Foxboro Pressure Transmitter - Containment Pressure for SFAS (TER item #45) - see 2.A.

3. A. GE Motor - ECCS Room Unit Cooler Fan (TER item #59)

Additional analysis will be performed to demonstrate qualification for this component. This analysis will incorporate the actual materials of construction substantiated by the manufacturer. Additionally, the motor lead splices and lubrication are not discussed specifically with each motor but are addressed generically. The results of this analysis will be incorporated into the appropriate SCEW sheets in EQ Manual Revision 2 scheduled to be completed by July 30, 1983.

B. GE Motor - ECCS Room Unit Cooler Fan (TER item #60) - see 3.A.

C. GE Motor - ECCS Room Unt Cooler Fan (TER item #61) - see 3.A.

4. GE Motor - Ventilation Fan (TER item #62)

Additional analysis will be performed to demonstrate qualification for this motor. This analysis will be incorporated into the appropriate SCEW sheet in Revision 2 of the E.Q. Manual scheduled for completion by July 30, 1983.

5. A. General Dynamics Motor - Containment Spray Pump Motor (TER item #63)

Additional thermal aging/radiation analysis will be performed to demonstrate qualification and resolve TER concerns. Splices and lubrication are not discussed with each specific motor but are addressed generically. The analysis will be incorporated into Revision 2 of the E.Q. Manual scheduled for completion by July 30, 1983.

B. General Dynamics Motor - Containment Spray Pump Motor (TER item #64) - see 5.A.

6. A. Westinghouse Motor - Decay Heat Pump (TER item #65)

Appropriate references will be added to the SCEW sheet to document test report applicability. Additional radiation and thermal aging analysis utilizing the referenced report will be performed for determination of the qualified life. The splices and lubrication are discussed generically. This analysis is scheduled to be incorporated into the EQ Manual in Revision 2 by July 30, 1983.

B. Westinghouse Motor - Decay Heat Pump (TER #66)

C. Westinghouse Motor - High Pressure Injection Pump (TER item #67)

Additional analysis will be performed to document the qualification of this motor. The lubrication and splices are discussed generically. This analysis will be incorporated into the appropriate SCEW sheet in E.Q. Manual Revision 2 scheduled to be completed by July 30, 1983.

D. Westinghouse Motor - High Pressure Injection Pump (TER item #68) - see 6.C.

E. Westinghouse Motor - H2 Dilution System Blower (TER item #69) - see 6.C.

F. Westinghouse Motor - H2 Dilution System Blower (TER item #70) - see 6.C above.

7. A. Joy Fan/Motors - Containment Air Cooler Fans (TER item #71)

Additional references will be added to the SCEW sheets to document test report applicability. Additional thermal aging and radiation analyses will be performed to resolve TER concerns. Lubrication and lead splices are discussed generically and do not appear with each motor. The appropriate SCEW sheets will be updated in EQ Manual Revision 2 scheduled to be completed on July 30, 1983.

B. Joy Fan Motors - Containment Recirculation Fan Motors (TER item #72) - see 7.A.

8. Mercoid Pressure Switch - Containment Pressure for RPS (TER item #85)

Additional analysis and clarification will be added to the SCEW sheets to resolve the TER concerns. This will be incorporated into the SCEW sheets in E.Q. Manual Revision 2 scheduled to be completed by July 30, 1983.

9. A. Static-O-Ring Pressure Switch - Main Steam Line Pressure for SFRCS (TER item #88)

Additional analysis will be performed to resolve TER concerns. This analysis will be incorporated into Revision 2 of the E.Q. Manual scheduled for completion by July 30, 1983.

B. Static-O-Ring Pressure Switches - Main Steam Line Pressure for SFRCS (TER item #91) - see 9.A.

C. Static-O-Ring Pressure Switches - Main Steam Line Pressure for SFRCS (TER item #92) - see 9.A.

10. A. Static-O-Ring Pressure Switch - Containment Post Accident Radiation Monitor Line Pressure (TER item #89)

Additional Analysis/Clarification will be incorporated into the SCEW sheet to demonstrate qualification. This will be in the E.Q. Manual Revision 2 scheduled for completion by July 30, 1983.

B. Static-O-Ring Pressure Switch - Containment Post Accident Radiation Monitor Line Pressure (TER item #90) - see 10.A.

11. States Terminal Blocks - (TER item #s 101, 102, 103, 104, & 105)

The test report has been obtained and the applicable reference numbers will be incorporated into the appropriate SCEW sheets in EQ Manual Revision 2 scheduled for completion by July 30, 1983.

12. Stanwick Terminal Blocks (TER item #s 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, and 119)

The referenced test report is being obtained. When it becomes available it will be included in the E.Q. Central File and the appropriate SCEW sheets updated accordingly. This will be incorporated into E.Q. Manual Revision 2 scheduled for completion by July 30, 1983.

13. A. Limitorque Actuator - OTSG Main Feedwater Isolation Valve (TER item #124)

This actuator is slated for modification of its brake assembly (by replacement of its brake coil) to ensure qualification in accordance with FCR No. 83-067. Modification scheduled to be completed by November 30, 1984.

B. Limitorque Actuator - OTSG Main Feedwater Isolation Valve (TER item #128) - see 13.A.

C. Limitorque Actuator - Low Pressure Injection Isolation Valve (TER item #134)

This valve is open with the control power to the actuator disconnected.

Addditional analysis will be performed to demonstrate satisfactory qualification for this device. This analysis will be incorporated into the approriate SCEW sheets in EQ Manual Revision 2 scheduled for completion by July 30, 1983.

D. Limitorque Actuator - Low Pressure Injection Isolation Valve (TER item #136) - see 13.C.

E. Limitorque Actuator - Normal Decay Heat Suction Line Isolation Valves (TER item #138) - see 13.A.

F. Limitorque Actuator - Auxiliary Feedwater Isolation Valve (TER item #151)

This actuator is slated for modification by replacement of its motor/brake assembly in accordance with FCR 83-067. Modification scheduled to be completed by November 30, 1984.

G. Limitorque Actuator - Auxiliary Feedwater Isolation Valve (TER item #165) - see 13.F.

14. A. ASCO Solenoid Valve - Main Steam Line Warmup Drain Isolation Valve (TER item #181)

This solenoid valve is scheduled for replacement with a qualified NP series solenoid valve in accordance with FCR No. 83-052. This is scheduled to be completed by November 30, 1984.

B. ASCO Solenoid Valve - Main Steam Line Warmup Drain Isolation Valve (TER item #182) - see 14.A.

C. ASCO Solenoid Valve - MSIVs (TER item #184) - see 14.A.

D. ASCO Solenoid Valves - MSIVs (TER item #185) - see 14.A.

15. Amphenol Electrical Penetration Assemblies (TER item #210)

The concerns of the TER will be resolved by additional analysis. The appropriate section of the chemical spray calculation will be revised. This additional analysis will be incorporated into the appropriate SCEW sheets in EQ Manual Revision 2 which is scheduled for completion by July 30, 1983.

16. Mackworth Rees and Cutler Hammer Push Button Switches (TER #s 2, 4, 5, 7, 8, 9, 10, 14, 15, 16, 17, 18, 19, 20, 24, 25, 26, 27, 30, 32, 33, 34, 212, 213, and 214)

TER comments are as follows:

A. While the switches may be exempt from qualification for the harsh HELB environment, the switch must be qualified for the increased radiation due to post LOCA recirculating fluids.

The radiaiton values utilized in the SCEW sheets include the post LOCA recirculating fluid dose and the normal background dose. (Applicable SCEW sheet notes will be updated to state that the HELB and post LOCA recirculating fluids are separate effects and that the additional dose is reflected in the SCEW sheet radiation value).

Applicable to TER items: 2, 4, 5, 7, 8, 9, 14, 15, 16, 30, 32, 33, 34, and 212.

B. The Licensee's SCEW table (Component Materials Evaluation Sheet) does not contain sufficient information to demonstrate the ability of the device to withstand the cumulative affects of radiation and thermal aging. In addition, the Licensee's reference for aging criteria is a guide for the selection of materials and is not applicable for demonstrating aging simulation or degradation resistance of these materials. The Licensee's reference for radiation qualification has been misapplied. The radiation levels reported have not been evaluated with respect to the physical property of interest (e.g. gasket compression set).

Additional aging and radiation analysis will be performed to provide evidence of thermal aging and radiation qualification of these devices. This analysis will utilize Arrhenius methodology and will utilize to the extent possible the properties of interest. This analysis will be incorporated into the appropriate SCEW sheets of the E.Q. Manual in Revision 3 which is scheduled for completion by October 31, 1983. These items are one topic for which discussion is requested at a future NRC meeting.

Applicable to all switches in No. 16.

C. TER states that an assertion of thermal capability is not evidence of qualification exposure. The intent of these statements was not to demonstrate qualification through a thermal endurance calculation. The statements show that the temperatures involved would not cause any significant degradation of the switch's materials or affect the sealing capability of the switch to the point that the potential failures examined in the failure analysis might occur. The switches are shown to be exempt from qualification because their failures will not degrade other safety related functions.

Applicable to TER items: 10, 25, 26, 27.

D. On several cases the TER raised questions about the exemption note provided. For these items discussion is requested to review the failure analyses as it is felt that the items are exempt from qualification for the harsh steam environment.

Applicable TER items: 17, 18, 19, 20, 24, 213, and 214.

17. Raychem splice (TER Item #115)

Additional analysis will be performed to resolve the TER concerns. This will be incorporated into the E.Q. Manual in Revision 2, scheduled for completion by July 30, 1983.

Docket No. 50-346
License No. NPF-3
Serial No. 951
May 20, 1983

TABLE 3 - TER CATEGORY IV

TER Number	SCEW Number	Equipment Description	Resolution*	Scheduled Completion	Discussion Requested
46	218H-019	N	Note 1	Completed	--
	218H-020	N			--
	218H-021	N			--
	219H-022	N			--

Note 1: This item is felt to be qualified. All qualification references applicable to this item have been previously submitted.

TABLE 4-1

NUMBER OF EQUIPMENT ITEMS IN EACH QUALIFICATION CATEGORY

NRC CATEGORY	CATEGORY DESCRIPTION	NUMBER OF EQUIPMENT ITEMS
I.A	EQUIPMENT QUALIFIED [EQUIPMENT ITEM NO(S).: 93, 94, 95, 99,100,120, 171,172,173,174,175,176,209]	13
I.B	EQUIPMENT QUALIFICATION PENDING MODIFICATION [EQUIPMENT ITEM NO(S).: 1, 6, 21, 35, 36, 48, 49, 50, 51, 54, 55, 56, 73, 74, 75, 76, 77, 82, 83, 87, 96, 97, 98,168,169,177,183,187,189,191, 193,198,199,200,202,203,204,205,206,207,208]	41
II.A	EQUIPMENT QUALIFICATION NOT ESTABLISHED [EQUIPMENT ITEM NO(S).: 2, 4, 5, 7, 8, 9, 10, 14, 15, 16, 17, 18, 19, 20, 23, 24, 25, 26, 27, 30, 32, 33, 34, 37, 38, 39, 40, 41, 43, 44, 45, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 85, 88, 89, 90, 91, 92,101,102,103, 104,105,106,107,108,109,110,111,112,113,114,116, 117,118,119,124,128,134,136,138,151,165,181,182, 184,185,210,212,213,214]	84
II.B	EQUIPMENT NOT QUALIFIED	0
II.C	EQUIPMENT SATISFIES ALL REQUIREMENTS EXCEPT QUALIFIED LIFE OR REPLACEMENT SCHEDULE JUSTIFIED [EQUIPMENT ITEM NO(S).: 13, 29, 31, 42, 47, 52, 80,115,121,122,123,125,126,127,129,130,131,132, 133,135,137,139,140,141,142,143,144,145,146,147, 148,149,150,152,153,154,155,156,157,158,159,160, 161,162,163,164,166,167,188,197]	50
III.A	EQUIPMENT EXEMPT FROM QUALIFICATION [EQUIPMENT ITEM NO(S).: 22, 28,156,211]	4
III.B	EQUIPMENT NOT IN THE SCOPE OF THE REVIEW [EQUIPMENT ITEM NO(S).: 3, 11, 12, 53, 57, 58, 78, 79, 81, 84, 86,170,178,179,180,186,190,192, 194,195,196,201]	22
IV	DOCUMENTATION NOT MADE AVAILABLE [EQUIPMENT ITEM NO(S).: 46, 84]	2
	TOTAL	216