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ACCESSION NBR: 8407170439 DOC. DATE: 84/07/12 NOTARIZED: NO DOCKET #  
 FACIL: 50-250 Turkey Point Plant, Unit 3, Florida Power and Light C 05000250  
 50-251 Turkey Point Plant, Unit 4, Florida Power and Light C 05000251  
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 DENTON, H.R. Office of Nuclear Reactor Regulation, Director  
 MILLER, J.R. Operating Reactors Branch 3

SUBJECT: Forwards documentation of resolution of deficiencies noted in 820930 SER re environ qualification of safety-related electrical equipment, as discussed w/NRC during 840508 meeting. Requests SSERs be issued.

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 Department of the Interior, Bureau of Land Management, at  
 Washington, D. C., on the subject of the land owned by the  
 United States in the State of California, and the same is  
 being furnished to you for your information.

The following is a list of the land owned by the United States in the State of California, and the same is being furnished to you for your information.

The following is a list of the land owned by the United States in the State of California, and the same is being furnished to you for your information.

Section	Township	Range	County	Acres	Value	Remarks
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L-84-163  
July 12, 1984

Mr. H.R. Denton, Director  
Office of Nuclear Reactor Regulation  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555  
Attention: Mr. J.R. Miller, Chief  
Operating Reactors Branch 3

Gentlemen:

Re: Turkey Point Units 3 & 4  
Docket No. 50-250 and 50-251  
Environmental Qualification of  
Safety-Related Electrical Equipment

On May 8, 1984, Florida Power and Light met with NRC personnel to discuss the resolution of deficiencies documented in the Safety Evaluation Report (SER) dated September 30, 1982 regarding the Environmental Qualification of safety-related electrical equipment at Turkey Point (PTP) Units 3 & 4. The SER contained a Technical Evaluation Report (TER), written by Franklin Research Center under contract to the NRC, which identified environmental qualification deficiencies for safety-related electrical equipment at Turkey Point. The purpose of this letter is to provide documentation of the resolution of these deficiencies as discussed with the staff at the May meeting.

Discussions also took place at the meeting regarding Florida Power and Light's general methodology for compliance with 10 CFR 50.49, "Environmental Qualification of Electric Equipment Important to Safety for Nuclear Power Plants," paragraph's (b)(1), (b)(2), and (b)(3).

A synopsis of the methodology for developing the list of equipment within the scope of paragraph (b)(1) is as follows.

In developing the list of equipment within the scope of Paragraph (b)(1), all design basis events which could result in a potentially harsh environment, including flooding outside the containment, were considered in identifying safety-related electrical equipment which was to be environmentally qualified. A systems approach was used to ensure that all equipment exposed to the accident environment was considered for evaluation, even if such equipment had not been previously identified as safety-related (Class IE) or defined as an engineered safety feature. In addition, equipment required to function in support of emergency operating procedures (EOPs) was also considered for evaluation. A review of worst case design basis accidents was made and a list of Class IE safety-related electric equipment within the scope of Paragraph (b)(1), 10 CFR 50.49 has been developed.

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Electrical equipment within the scope of paragraph (b)(2) includes non safety-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.

A list was generated of safety-related electric equipment, as defined in paragraph (b)(1) of 10 CFR 50.49, which is 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 Turkey Point Final Safety Analysis Report (FSAR), Technical Specifications, Emergency Operating Procedures, Piping and Instrumentation Diagrams (P&IDs), and electrical distribution diagrams. The elementary wiring diagrams of the safety-related electrical equipment identified per paragraph (b)(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. 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&ID's component technical manuals, and/or systems descriptions in the FSAR. Non safety-related electrical circuits indirectly associated with the electrical equipment identified per paragraph (b)(1) by common power supply or physical proximity were considered by a review of the original Turkey Point electrical design including the use of applicable industry standards (e.g., IEEE, NEMA, ANSI, UL, and NECO and the use of properly coordinated protective relays, circuit breakers, and fuses for electrical circuit fault protection.

FPL does not differentiate between equipment which is safety-related and non safety-related equipment whose failure could prevent the proper operation of safety-related equipment. If failure of a device can effect the function of safety-related equipment, that device is included in the 10 CFR 50.49(b)(1) scope. In some cases non-class IE equipment may be powered from a class IE source, however, that equipment is designed to become isolated from the Class IE source should failure occur. As a result, there were no items identified falling into the 10 CFR 50.49 (b)(2) scope.

To identify electrical equipment within the scope of paragraph (b)(3), FPL evaluated existing system arrangements and identified equipment for the five types of variables defined in R.G. 1.97, Rev. 3. A report outlining the results of the review, schedules for modifications where necessary, and justification of deviations not requiring modification has been submitted to the NRC for approval. Since the report is still under review by the NRC, some of the equipment identified in the report has not been added to the 10 CFR 50.49 scope. However, some of the equipment items jointly within the scope of NUREG 0737 and R.G. 1.97 have been included in the 10 CFR 50.49 scope. When the R.G. 1.97 report and equipment lists contained therein have been finalized and accepted by the NRC, appropriate equipment not already in the 10 CFR 50.49 scope will be added in accordance with the R.G. 1.97 implementation schedule.



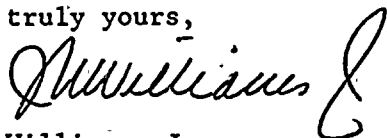
During the meeting, there was a discussion regarding maintenance and surveillance of qualified equipment. FPL is pursuing a program to ensure that safety-related electrical equipment is maintained in its qualified condition.

In conclusion, we believe that Attachment 1 "Resolution for Specific Equipment Qualification Deficiencies" documents resolution of the deficiencies in the Safety Evaluation Report (SER) dated September 30, 1982. We also believe that Turkey Point Units 3 & 4 can continue to operate without undue risk to the public health and safety based on the JCOs provided in Attachment 2. Per your request, the current "10 CFR 50.49 List" is included as Attachment 3.

As discussed in the May 8 meeting, it is requested that supplemental SERs be issued to indicate that Florida Power and Light's Equipment Qualification Program, as described in this letter, meets the requirements of 10 CFR 50.49 and that the deficiencies noted in the SERs dated September 30, 1982 are considered resolved.

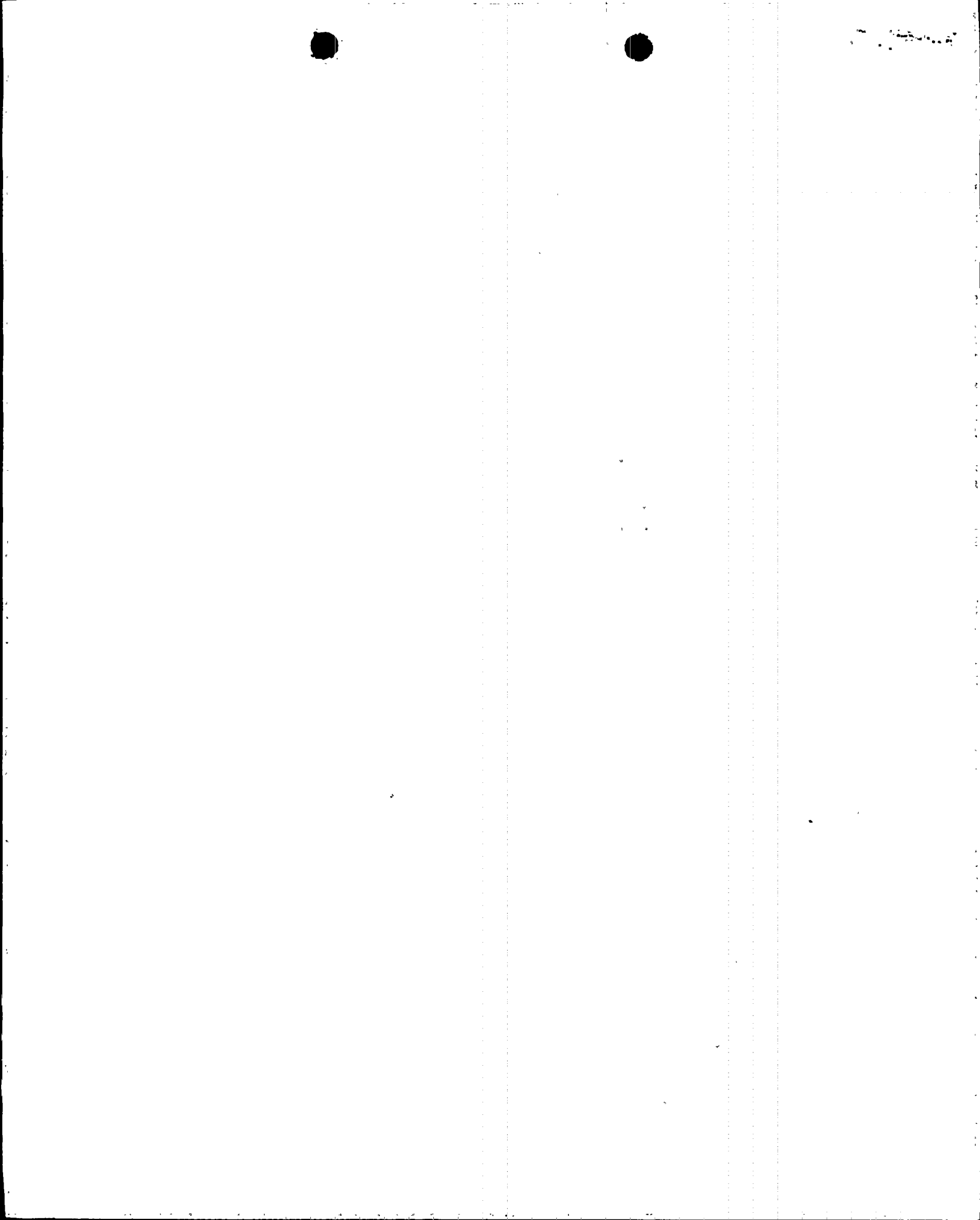
Please contact us if you have any questions.

Very truly yours,



J.W. Williams, Jr.  
Group Vice President  
Nuclear Energy

DLDM/mp





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ATTACHMENT 1  
RESOLUTION FOR SPECIFIC EQUIPMENT  
QUALIFICATION DEFICIENCIES  
TURKEY POINT UNIT NOS. 3 & 4



TER ITEM	NRC CATEGORY	TAG #	COMPONENT DESCRIPTION AND FUNCTION	NRC DEFICIENCY	RESOLUTION	STATUS
1	11.a	A) MOV-3-535 MOV-3-536 MOV-4-535 MOV-4-536 B) MOV-3-866B MOV-4-866B	Limitorque motorized valve operator. A) Pressurizer relief isolation valve  B) SI to RCS hotleg isolation valve	-Evidence of Qualification -Adequate Similarity -Aging Degradation -Qualified Life or Replacement -Peak Temperature -Peak Pressure -Duration -Profile Enveloped -Spray	Have been replaced with fully qualified Limitorque actuators, Models SMB-000 and SMB-00. Limitorque Report 600456 applies.	Qualified
2	11.c	MOV-3-744A MOV-3-744B MOV-4-744A MOV-4-744B	Limitorque motorized valve operator. RCS inlet isolation valve	-Aging Degradation -Qualified Life or Replacement	Arrhenius Methodology used to address aging degradation. A qualified life of 40 years has been demonstrated.	Qualified
3	11.a	MOV-3-750 MOV-3-751 MOV-4-750 MOV-4-751	Limitorque motorized valve operator. RCS to RHR inlet isolation valve	-Evidence of Qualification -Adequate Similarity -Aging Degradation -Qualified Life or Replacement -Peak Temperature -Peak Pressure -Duration -Profile Enveloped -Spray	Have been replaced with fully qualified Limitorque actuators, Models SMB-000 and SMB-00. Limitorque Report 600456 applies.	Qualified
4	11.c	MOV-3-350 MOV-4-350	Limitorque motorized valve operator. Emergency boration valve	-Aging Degradation -Qualified Life or Replacement	Arrhenius Methodology used to address aging degradation. A qualified life of 40 years has been demonstrated.	Qualified
5	11.c	A) MOV-3-869 MOV-4-869 B) MOV-8780	Limitorque motorized valve operator. A) Loop A & B hotleg SI valve B) HHSI pump transfer valve.	-Aging Degradation -Qualified Life or Replacement	Arrhenius Methodology used to address aging degradation. A qualified life of 40 years has been demonstrated.	Qualified



TER ITEM	NRC CATEGORY	TAG #	COMPONENT DESCRIPTION AND FUNCTION	NRC DEFICIENCY	RESOLUTION	STATUS
6	II.c	MOV-3-1411 MOV-3-1412 MOV-4-1410 MOV-4-1411 MOV-4-1412	Limatorque motorized valve operator. Steam generator blowdown valves	-Aging Degradation -Qualified Life or Replacement	The Limatorque valve actuators have been re-placed with Ralph Hiller air actuators using fully qualified ASCO NP Series solenoid valves (Test Report AQS 21678/TR, Rev. A) and NAMCO EA 180 limit switches (Test Report QTR 185, Rev. 3)	Qualified
7	II.c	MOV-3-880A, MOV-4-880A MOV-3-880B, MOV-4-880B	Limatorque motorized valve operator. Containment spray pump discharge isolation valve	-Aging Degradation -Qualified Life or Replacement	Arrhenius Methodology used to address aging degradation. A qualified life of 40 years has been demonstrated	Qualified
8	II.c	A) MOV-4-1403 MOV-4-1405  B) MOV-3-1410	Limatorque motorized valve operator. A) Steam stop valve to AFW pump  B) Steam generator blow-down valve	-Aging Degradation -Qualified Life or Replacement	A) Replaced by fully qualified Limatorque DC actuator. Limatorque Test Report B-0809 applies. B) The Limatorque valve actuators have been re-placed with Ralph Hiller air actuators using fully qualified ASCO NP Series solenoid valves (Test Report AQS 21678/TR, Rev. A) and NAMCO EA 180 limit switches (Test Report QTR 185, Rev. 3)	Qualified
9	II.c	A) MOV-3-1403 MOV-3-1405 B) MOV-3-1404 MOV-4-1404	Limatorque motorized valve operator. Steam stop valves to AFW pumps	-Aging Degradation -Qualified Life or Replacement	A) Replaced by fully qualified Limatorque DC actuator. Limatorque Test Report B-0809 applies. B) Arrhenius Methodology used to address aging degradation. A qualified life of 40 years has been demonstrated.	Qualified
10	II.c	MOV-3-863A MOV-3-863B MOV-4-863A MOV-4-863B	Limatorque motorized valve operator. RHR heat exchanger outlet replacement	-Aging Degradation -Qualified Life or Replacement	Arrhenius Methodology used to address aging degradation. A qualified life of 40 years has been demonstrated	Qualified
11	II.c	MOV-3-860A MOV-3-860B MOV-4-860A MOV-4-860B	Limatorque motorized valve operator. Containment sump isolation valve	-Aging Degradation -Qualified Life or Replacement	Arrhenius Methodology used to address aging degradation. A qualified life of 40 years has been demonstrated.	Qualified

23-Jun-84

TURKEY POINT UNITS 3&amp;4

RESOLUTION FOR SPECIFIC EQUIPMENT QUALIFICATION DEFICIENCIES

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Page 3

TER ITEM	NRC CATEGORY	TAG #	COMPONENT DESCRIPTION AND FUNCTION	NRC DEFICIENCY	RESOLUTION	STATUS
12	11.a	MOV-3-866A MOV-3-866B MOV-4-866A MOV-4-866B	Limitorque motorized valve operator. SI to RCS hotleg isolation valve	-Evidence of Qualification -Adequate Similarity -Aging Degradation -Peak Temperature -Peak Pressure -Duration -Profile Enveloped -Spray	Have been replaced with fully qualified Limitorque actuators, Models SM8-888 and SM8-88. Limitorque Report 688456 applies.	Qualified
13	11.a	Replacement (Inside CINT)	NAMCO Limit switch. Valve position indication and control	-Aging Degradation -Qualified Life or Replacement -Steam Exposure	Never installed.	Deleted
14	1.b	Position indication for CV-3-288A CV-3-288B CV-3-288C CV-3-2819 CV-4-288A CV-4-288B CV-4-288C	NAMCO Limit switch. Provide CVCS valve position indication and control	-Evidence of Qualification	Limit switches have been replaced by fully qualified NAMCO limit switches, Model EA-188. Test Report QTR-105, Rev. 3 applies. These limit switches have been fitted with qualified "Conax" connectors.	Qualified
15	1.b	Position indication for CV-3-318A CV-3-318B CV-4-318A CV-4-318B	NAMCO Limit switch. Provide CVCS valve position indication and control	-Evidence of Qualification	Limit switches have been replaced by fully qualified NAMCO limit switches, Model EA-188. Test Report QTR-105, Rev. 3 applies. These limit switches have been fitted with qualified "Conax" connectors.	Qualified

TER ITEM	NRC CATEGORY	TAG #	COMPONENT DESCRIPTION AND FUNCTION	NRC DEFICIENCY	RESOLUTION	STATUS
16	II.a	POV-3-2604 POV-3-2605 POV-3-2606 POV-4-2605 POV-4-2606	NAMCO Limit switch for position indication for POV valves in main steam system	-Adequate Similarity	Limit switches have been replaced by fully qualified NAMCO limit switches, Model EA-180 series. Test Report QTR-105, Rev. 3 applies. These limit switches have been fitted with qualified "Conax" connectors.	Qualified
17	II.a	HCV-3-121 HCV-4-121	NAMCO Limit switch for letdown charging valve position indication	-Adequate Similarity	Limit switches have been replaced by fully qualified NAMCO limit switches, Model EA-180 series. Test Report QTR-105, Rev. 3 applies. These limit switches have been fitted with qualified "Conax" connectors.	Qualified
18	I.b	PCV-3-455C PCV-3-456 PCV-4-455C PCV-4-456	NAMCO Limit switch for pressurizer PORV position indication and control	-Evidence of Qualification	Limit switches have been replaced by fully qualified NAMCO limit switches, Model EA-180 series. Test Report QTR-105, Rev. 3 applies. These limit switches have been fitted with qualified "Conax" connectors.	Qualified
19	I.b	Position indication for POV-3-2601 POV-3-2603 POV-4-2601 POV-4-2603 SV-4-2819	NAMCO Limit switch. Provide CVCS valve position indication and control	-Evidence of Qualification	Limit switches have been replaced by fully qualified NAMCO limit switches, Model EA-180 series. Test Report QTR-105, Rev. 3 applies. These limit switches have been fitted with qualified "Conax" connectors.	Qualified





TER ITEM	NRC CATEGORY	TAG #	COMPONENT DESCRIPTION AND FUNCTION	NRC DEFICIENCY	RESOLUTION	STATUS
20	11.a	CV-3-2810, CV-3-2812 CV-3-2814 CV-4-2810, CV-4-2812 CV-4-2814	NAMCO Limit switch for emergency cooling bypass valve position indication	-Adequate Similarity	Limit switches have been replaced by fully qualified NAMCO limit switches, Model EA-180 series for Unit 4.  Replacement with fully qualified NAMCO limit switches, Model EA-180 series will be completed for Unit 3.  Test Report QTR-105, Rev. 3 applies.  These limit switches have been fitted with qualified "Conax" connectors.	Qualified  Note 1
21	11.a	Associated with: HCV-3-121 HCV-4-121	Fischer electrical/pneumatic transducer provides pneumatic control signal for HCV-121 in chemical volume control system	-Evidence of Qualification	Located in an area where the only harsh parameter is radiation. Radiation resistance exceeding specified requirements demonstrated by material analysis.	Qualified
22	11.a	3P211A 3P211B 3P211C 4P211A 4P211B 4P211C	Westinghouse component cooling pump motor	-Aging Degradation -Qualified Life or Replacement -Radiation	Arrhenius methodology used to address aging degradation. A qualified life of 40 years has been demonstrated. Radiation resistance exceeding specified requirements demonstrated by material analysis.	Qualified
23	11.a	A) 3V30A, 3V30B, 3V30C, 4V30A 4V30B, 4V30C B) 3V3A, 3V3B 3V3C, 4V3A 4V3B, 4V3C	Joy Mfg. Co. A) Emergency CMI cooling fan motor B) Emergency containment filter fan motor	-Adequate Similarity -Aging Degradation -Qualified Life or Replacement -Spray -Radiation	New qualification report X-604 obtained from Joy Mfg. Co. establishes similarity, addresses aging by testing using Arrhenius methodology to establish 40 year qualified life. Resistance to spray and radiation demonstrated.	Qualified

TER ITEM	NRC CATEGORY	TAG #	COMPONENT DESCRIPTION AND FUNCTION	NRC DEFICIENCY	RESOLUTION	STATUS
24	11.a	T206	Dayton Boric acid batch mixer motor	-Evidence of Qualification	Not in 10CFR 50.49 scope. Equipment located in mild environment.	Deleted
25	11.a	3-P203A 3-P203B 4-P203A 4-P203B	Chem Pump boric acid transfer pump motor	-Evidence of Qualification	Not in 10CFR 50.49 scope. Equipment located in mild environment.	Deleted
26	11.a	3P215A, 3P215B 4P215A, 4P215B	Westinghouse Safety injection pump motor	-Aging Degradation -Qualified Life or Replacement -Radiation	Arrhenius methodology used to address aging degradation. A qualified life of 40 years has been demonstrated. Radiation resistance exceeding specified requirements demonstrated by material analysis	Qualified
27	11.a	3P210A, 3P210B 4P210A, 4P210B	Westinghouse RHR pump motor	-Aging Degradation -Qualified Life or Replacement -Radiation	Arrhenius methodology used to address aging degradation. A qualified life of 40 years has been demonstrated. Radiation resistance exceeding specified requirements demonstrated by material analysis.	Qualified
28	11.a	3P201A, 3P201B, 3P201C 4P201A, 4P201B 4P201C	Westinghouse charging pump motor	-Aging Degradation -Qualified Life or Replacement -Radiation	Arrhenius methodology used to address aging degradation. A qualified life of 40 years has been demonstrated. Radiation resistance exceeding specified requirements demonstrated by material analysis.	Qualified
29	11.a	3P214A, 3P214B, 4P214A, 4P214B	Westinghouse containment spray pump motor	-Aging Degradation -Qualified Life or Replacement -Radiation	Arrhenius methodology used to address aging degradation. A qualified life of 40 years has been demonstrated. Radiation resistance exceeding specified requirements also demonstrated by engineering analysis.	Qualified



TER ITEM	NRC CATEGORY	TAG #	COMPONENT DESCRIPTION AND FUNCTION	NRC DEFICIENCY	RESOLUTION	STATUS
30	11.a	FS-3-1422 thru -1427 FS-4-1422 thru-1427	Ball Engineering flow switch air flow monitor	-Evidence of qualification -Aging degradation -Qualified life -Radiation	Switches have been replaced with fully qualified flow switches, Model FR 72-4 manufactured by Fluid Components, Inc. for Unit 4.  Replacement with fully qualified flow switches, Model FR 72-4 manufactured by Fluid Components, Inc. will be completed for Unit 3.  FCI Report 708503 applies.	Qualified      Note 1
31	11.a	RD-3-11, RD-3-12 RD-4-11, RD-4-12	Tracer Labs Radiation detector CINT air particle monitor	-Evidence of Qualification	Located in an area where the only harsh parameter is radiation. Radiation resistance exceeding specified requirements demonstrated by engineering analysis.	Qualified
32	11.a	TE-3-3440 through TE-3-3463 TE-4-3440 through TE-4-3463	CONAX temperature element (T/E). Provide temperature indication for containment ventilation charcoal filter	-Evidence of Qualification	Have been replaced with fully qualified Pyco RTDs. Model 122-4019-(01)-0-12-6S. Qualification Documentation: Pyco Qualification Report No. 770831. These RTDs are fitted with fully qualified "Conax" connectors	Qualified
33	11.a	TE-3-4128, TE-3-4120 TE-3-4228, TE-3-4220 TE-3-4328, TE-3-4320 TE-4-4128, TE-4-4120 TE-4-4228, TE-4-4220 TE-4-4328, TE-4-4320	Rosemount resistance temperature detector (RTD). Provide RCS hotleg over- temperature trip signal .	-Evidence of Qualification -Aging Degradation -Qualified Life or Replacement -Profile Enveloped -Spray -Functional Testing -Instrument Accuracy	Westinghouse WCAP-9157 is the qualification document providing evidence of qualification. Aging degradation addressed using regression analysis based on Arrhenius methodology, and a qualified life of 40 years demonstrated. Test profile including chemical spray exceeds postulated accident requirement. Functional testing and instrument accuracy satisfactorily addressed in test report.	Qualified



TER ITEM	NRC CATEGORY	TAG #	COMPONENT DESCRIPTION AND FUNCTION	NRC DEFICIENCY	RESOLUTION	STATUS
34	11.a	TE-3-41B TE-3-42B TE-3-43B TE-4-41B TE-4-42B TE-4-43B	Rosemount resistance temperature detector (RTD). RCS cold leg temperature to recorder	-Evidence of Qualification -Aging Degradation -Qualified Life or Replacement -Profile Enveloped -Spray -Functional Testing -Instrument Accuracy -Radiation	Have been replaced with PYCO Model 122-4030-04 (4.4)B-6S. PYCO Test Report 770831 dated 8-31-77 applies. Manufacturer has a new qualification program to address aging problems.	Qualified
35	11.a	TE-3-413A, TE-3-413B TE-3-423A, TE-3-423B TE-3-433A, TE-3-433B TE-4-413A, TE-4-413B TE-4-423A, TE-4-423B TE-4-433A, TE-4-433B	PYCO resistance temperature detector (RTD). Reactor coolant subcooling margin monitor	-Adequate Similarity -Aging Degradation -Test failures and anomalies	Have been replaced with PYCO Model 122-4030-04 (4.1)B-6S. PYCO Test Report 770831 dated 8-31-77 applies. Manufacturer has new qualification program to address aging problems.	Qualified
36	11.b	TB-3115, TB-4115	Hoffman Mfg. Co. Junction box. Provide reference junction for thermocouple temperature elements in CVCS	-Evidence of Qualification	Junction boxes have been removed because of system redesign to replace T/Cs with RTDs.	Deleted
37	11.a	TIC-100	Foxboro Temperature transmitter. Control for boric acid solenoid SV-100	-Evidence of Qualification	Not in 10CFR50.49 scope. Equipment located in mild environment.	Deleted
38	11.a	FT-3-613A, FT-3-613B FT-4-613A, FT-4-613B	Fischer & Porter Flow transmitter. Provide signal for component cooling water heat exchanger outlet flow indication	-Adequate Similarity -Aging Degradation -Qualified Life or Replacement	Have been replaced by fully qualified Rosemount Model 1153 Series B transmitter. Rosemount qualification report # 108025 applies.	Qualified



TER ITEM	NRC CATEGORY	TAG #	COMPONENT DESCRIPTION AND FUNCTION	NRC DEFICIENCY	RESOLUTION	STATUS
39	II.b	FT-3-932 FT-3-933 FT-4-932 FT-4-933	Fischer & Porter Flow transmitter. Provide signal for indication of safety injection (Hi head) flow to hot leg	-Adequate Similarity -Aging Degradation -Qualified Life or Replacement -Aging Simulation -Profile Enveloped -Spray -Submergence -Test Failures and Anomalies -Instrument Accuracy -Duration Margin	Have been replaced by fully qualified Rosemount Model 1153 Series D transmitter. Rosemount qualification report # 08308040 applies.	Qualified
40	II.b	FT-3-474,-475. FT-3-484,-485 FT-3-494,-495. FT-4-474,-475. FT-4-484,-485. FT-4-494,-495	Fischer & Porter Flow transmitter. Provide signal for indication of steam flow in main steam line	-Adequate Similarity -Aging Degradation -Qualified Life or Replacement -Aging Simulation -Radiation -Test Failures and Anomalies -Instrument Accuracy	Have been replaced by fully qualified Rosemount Model 1153 Series D transmitter. Rosemount qualification report # 08308040 applies.	Qualified
41	II.a	FT-3-122, FT-3-605, FT-3-943, FT-3-940, FT-4-122, FT-4-605, FT-4-943, FT-4-940	Fischer & Porter Flow transmitter. Provide signal for flow indication of charging pump, RHR and safety injection pump discharge flow	-Adequate Similarity -Aging Degradation -Qualified Life or Replacement	Have been replaced by fully qualified Rosemount Model 1153 Series B and D transmitters. Rosemount qualification Reports 08308040 and 108025 applies.	Qualified
42	II.b	LT-3-474,LT-4-474 LT-3-475,LT-4-475 LT-3-476,LT-4-476 LT-3-484,LT-4-484 LT-3-485,LT-4-485 LT-3-486,LT-4-486 LT-3-494,LT-4-494 LT-3-495,LT-4-495, LT-3-496,LT-4-496,	Fischer & Porter Level transmitter. Monitor steam generator water level	-Adequate Similarity -Aging Degradation -Qualified Life or Replacement -Aging Simulation -Profile Enveloped -Spray -Submergence -Test Failures and Anomalies -Instrument Accuracy	Have been replaced by fully qualified Rosemount Model 1153 Series D transmitters. Rosemount qualification report 08308040 applies.	Qualified



TER ITEM	NRC CATEGORY	TAG #	COMPONENT DESCRIPTION AND FUNCTION	NRC DEFICIENCY	RESOLUTION	STATUS
43	I.b	LT-3-459 LT-3-460 LT-3-461 LT-4-459 LT-4-460 LT-4-461	Barton Level transmitter. Safety Injection Initiation. CTMT isolation	-Adequate Similarity -Aging Degradation -Qualified Life -Aging Simulation -Spray	Have been replaced with Rosemount Model 1153 Series D transmitters. Rosemount qualification report DB300040 applies	Qualified
44	I.b	LS-3-1570 LS-3-1571 LS-4-1570 LS-4-1571	Magnetrol Level switch. Provide indication of CTMT sump level	-Evidence of Qualification	Have been replaced by fully qualified Gem Level Switches, Model XM54854. Wyle Laboratories Test Report 45700-1 applies. The level switches have been fitted with fully qualified "Conax" connectors.	Qualified
45	II.c	LC-101	United Electric Controls Level controller. Measures level of batching tank	-Aging Degradation -Qualified Life or Replacement	Not in 10CFR50.49 scope. Equipment located in mild environment	Deleted
46	II.b	PT-3-455 PT-3-456 PT-3-457 PT-4-455 PT-4-456 PT-4-457	Fischer & Porter Pressure transmitter. Provide pressurizer pressure indication	-Adequate Similarity -Aging Degradation -Qualified Life or Replacement -Aging Simulation -Profile Enveloped -Spray -Submergence -Test Failures and Anomalies -Instrument Accuracy -Duration Margin	Have been replaced by fully qualified Rosemount Model 1153 Series D transmitters. Rosemount Qualification Report No. DB300040 applies	Qualified



TER ITEM	NRC CATEGORY	TAG #	COMPONENT DESCRIPTION AND FUNCTION	NRC DEFICIENCY	RESOLUTION	STATUS
47	11.b	PT-3-483 PT-4-483	Fischer & Porter Pressure transmitter. Provide reactor coolant pressure indication	-Adequate Similarity -Aging Degradation -Qualified Life or Replacement -Aging Simulation -Profile Enveloped -Spray -Submergence -Test Failures and Anomalies -Instrument Accuracy -Duration Margin	Have been replaced by fully qualified Rosemount Model 1153 Series D transmitters. Rosemount Qualification Report No. 08300040 applies	Qualified
48	11.b	PT-3-485 PT-4-485	Fischer & Porter Pressure transmitter. Provide reactor coolant pressure indication	-Adequate Similarity -Aging Degradation -Qualified Life or Replacement	Have been replaced by fully qualified Rosemount Model 1153 Series D transmitters. Rosemount Qualification Report No. 08300040 applies	Qualified
49	11.a	PT-3-474, PT-3-475, PT-3-476, PT-3-464, PT-3-466, PT-3-468, PT-3-484, PT-3-485, PT-3-486, PT-3-494, PT-3-495, PT-3-496, PT-4-474, PT-4-475, PT-4-476, PT-4-464, PT-4-466, PT-4-468, PT-4-484, PT-4-485, PT-4-486, PT-4-494, PT-4-495, PT-4-496	Fischer & Porter Pressure transmitter. Provide main steam pressure indication	-Adequate Similarity -Aging Degradation -Qualified Life or Replacement	Have been replaced by fully qualified Rosemount Model 1153 Series D transmitters. Rosemount Qualification Report No. 08300040 applies	Qualified
50	11.b	PT-3-484 PT-3-486 PT-4-484 PT-4-486	Rosemount Pressure transmitter. Provide signal for reactor coolant subcooling margin monitor	-Qualified Life or Replacement -Test Failures or Anomalies	Have been replaced by fully qualified Rosemount Model 1153 Series D transmitters. Rosemount Qualification Report No. 08300040 applies	Qualified



TER ITEM	NRC CATEGORY	TAG #	COMPONENT DESCRIPTION AND FUNCTION	NRC DEFICIENCY	RESOLUTION	STATUS
51	II.c	PS-3-201A PS-3-201B PS-3-201C PS-4-201A PS-4-201B PS-4-201C	United Electric Controls Pressure switch. Provides interlock in the charging pump control	-Aging Degradation -Qualified Life or Replacement	Arrhenius methodology used to address aging degradation. A qualified life of 40 years has been demonstrated with periodic replacement of elastomers	Qualified
52	III.b	PS-3-2007, PS-3-2008 PS-3-2009, PS-3-2050 PS-4-2007, PS-4-2008 PS-4-2009, PS-4-2056 PS-4-2057, PS-4-2058	Static O Ring Pressure switch. Pressure switch for containment pressure	None	Not in 10CFR50.49 scope. Located in a mild environment	Deleted
53	II.a	PC-957A, PC-957B, PC-957C, PC-957D	Barton Pressure controller. Interlock for safety injection pump control	-Evidence of Qualification	Located in an area where the only harsh parameter is radiation. Radiation resistance exceeding specified requirements demonstrated by engineering analysis	Qualified
54	II.c	PC-3-611 PC-4-611	United Electric Controls Pressure controller. Provide interlock to component cooling water pump motor	-Aging Degradation -Qualified Life or Replacement	Arrhenius methodology used to address aging degradation. A qualified life of 40 years has been demonstrated with periodic replacement of elastomers	Qualified
55	II.c	PC-3-601 PC-4-600	United Electric Controls Pressure controller. RHR pump discharge pressure indication and interlock	-Aging Degradation -Qualified Life or Replacement	Arrhenius methodology used to address aging degradation. A qualified life of 40 years has been demonstrated with periodic replacement of elastomers	Qualified
56	II.c	PC-3-600 PC-4-601	United Electric Controls Pressure controller. RHR pump discharge pressure indication and interlock	-Aging Degradation -Qualified Life or Replacement	Arrhenius methodology used to address aging degradation. A qualified life of 40 years has been demonstrated with periodic replacement of elastomers	Qualified



TER ITEM	NRC CATEGORY	TAG #	COMPONENT DESCRIPTION AND FUNCTION	NRC DEFICIENCY	RESOLUTION	STATUS
57	11.a	PT-3-940, PT-3-943, PT-4-940, PT-4-943	Fischer & Porter Pressure transmitter. Monitor safety injection pressure	-Adequate Similarity -Aging Degradation -Qualified Life or Replacement	Have been replaced by fully qualified Rosemount Model 1153 Series B transmitters. Rosemount Qualification Report 188025 applies	Qualified
58	11.a	DPS-3-2900 DPS-3-2901 DPS-3-2902 DPS-4-2900 DPS-4-2901 DPS-4-2902	Barton Differential pressure switch. Provide signal for differential pressure across feedwater control valve	-Evidence of Qualification	Located in an area where the only harsh parameter is atmospheric saturated steam which is excluded from the switch internal by conduit connections that extends beyond the area affected by steam	Qualified
59	11.a	ZT/ZS-3-6303A ZT/ZS-3-6303B ZT/ZS-3-6303C ZT/ZS-4-6303A ZT/ZS-4-6303B ZT/ZS-4-6303C	Tech. for Energy Corp. Acoustic monitor. Safety valve acoustic monitoring system	-Aging Degradation -Peak Temperature -Test Failures and Anomalies	With the addition of new cable assemblies and a transient shield to protect the charge amplifiers, test failures and anomalies have been corrected, and operation at peak temperature demonstrated	Qualified
60	11.a	3N1410 3N1411 3N1412 4N1412	REES Control station. Local control for motor operated steam generator blowdown valves	-Evidence of Qualification -Aging Degradation -Qualified Life or Replacement -Steam Exposure	Not in 18CFR50.49 scope. This equipment has been deleted as a result of system redesign	Deleted
61	11.c	A) 3N215A 3N215B 4N215A 4N215B  B) MOV-4N1410 MOV-4N1411	REES Local control station. Provide local control of safety injection pump	-Aging Degradation -Qualified Life or Replacement	A) Arrhenius methodology used to address aging degradation. A qualified life of 40 years has been demonstrated with periodic replacement of elastomers  B) Not in 18CFR50.49 scope. This equipment has been deleted as a result of system redesign	Qualified  Deleted





TER ITEM	NRC CATEGORY	TAG #	COMPONENT DESCRIPTION AND FUNCTION	NRC DEFICIENCY	RESOLUTION	STATUS
62	II.c	3N210A 4N210A 4N210B	REES Local control station. Provide local control of RHR pumps	-Aging Degradation -Qualified Life or Replacement	Not in 10CFR50.49 scope. Equipment located in mild environment.	Deleted
63	II.c	3N211A 3N211B 3N211C 4N211A 4N211B 4N211C	REES Local control station. Provide local control of component cooling water pumps	-Aging Degradation -Qualified Life or Replacement	Not in 10CFR50.49 scope. Equipment located in mild environment.	Deleted
64	II.c	N206 3N203B 3N203A 4N203B 4N203A	REES Local control station. Provide local control of boric acid transfer pump	-Aging Degradation -Qualified Life or Replacement	Arrhenius methodology used to address aging degradation. A qualified life of 40 years has been demonstrated with periodic replacement of elastomers	Qualified
65	II.c	3N201A, 3N201B, 3N201C 4N201A, 4N201B, 4N201C	REES Local control station. Provide local control of charging pumps	-Aging Degradation -Qualified Life or Replacement	Arrhenius methodology used to address aging degradation. A qualified life of 40 years has been demonstrated with periodic replacement of elastomers	Qualified
66	III.b	TB3301, TB4372 TB4371, TB4368	Terminal box inside CTMT	None	Not in 10CFR50.49 scope. Not required to per- form a safety function or mitigate the con- sequences of a design basis accident. Boxes are vented to prevent collapse during pressure transients. Fully qualified Raychem protected wire splices are made inside the boxes to provide additional environmental protection	Deleted

TER ITEM	NRC CATEGORY	TAG #	COMPONENT DESCRIPTION AND FUNCTION	NRC DEFICIENCY	RESOLUTION	STATUS
67	III.b	TB3213, TB3135 TB3150, TB3067 TB4150, TB4135 TB4067	Terminal box inside CTMT spray pump room	None	Not in 10CFR50.49 scope. Not required to perform a safety function or mitigate the consequences of a design basis accident. Boxes are vented to prevent collapse during pressure transients. Fully qualified Raychem protected wire splices are made inside the boxes to provide additional environmental protection	Deleted
68	III.b	TB3145, TB3143 TB4145, TB4143	Terminal box inside CTMT	None	Not in 10CFR50.49 scope. Not required to perform a safety function or mitigate the consequences of a design basis accident. Boxes are vented to prevent collapse during pressure transients. Fully qualified Raychem protected wire splices are made inside the boxes to provide additional environmental protection	Deleted
69	III.b	TB3144 TB4144, TB4389	Terminal box inside CTMT	None	Not in 10CFR50.49 scope. Not required to perform a safety function or mitigate the consequences of a design basis accident. Boxes are vented to prevent collapse during pressure transients. Fully qualified Raychem protected wire splices are made inside the boxes to provide additional environmental protection	Deleted
70	III.b	TB3303 TB4379, TB4367 TB4369	Terminal box inside CTMT	None	Not in 10CFR50.49 scope. Not required to perform a safety function or mitigate the consequences of a design basis accident. Boxes are vented to prevent collapse during pressure transients. Fully qualified Raychem protected wire splices are made inside the boxes to provide additional environmental protection	Deleted

TER ITEM	NRC CATEGORY	TAG #	COMPONENT DESCRIPTION AND FUNCTION	NRC DEFICIENCY	RESOLUTION	STATUS
71	III.b	TB3044, TB3065 TB3134, TB3208 TB4208, TB4134 TB4044	Terminal box inside pipe and valve room	None	Not in 10CFR50.49 scope. Not required to perform a safety function or mitigate the consequences of a design basis accident. Boxes are vented to prevent collapse during pressure transients. Fully qualified Raychem protected wire splices are made inside the boxes to provide additional environmental protection	Deleted
72	III.b	TB3122, TB3123 TB3124, TB3125 TB3126, TB3127 TB4122, TB4123 TB4124, TB4125 TB4126, TB4127	Terminal box inside CMT	None	Not in 10CFR50.49 scope. Not required to perform a safety function or mitigate the consequences of a design basis accident. Boxes are vented to prevent collapse during pressure transients. Fully qualified Raychem protected wire splices are made inside the boxes to provide additional environmental protection	Deleted
73	II.a	Various	Terminal box. Provide local termination facility in various plant areas	-Evidence of Qualification	Not in 10CFR50.49 scope. Not required to perform a safety function or mitigate the consequences of a design basis accident. Boxes are vented to prevent collapse during pressure transients. Fully qualified Raychem protected wire splices are made inside the boxes to provide additional environmental protection	Deleted



TER ITEM	NRC CATEGORY	TAG #	COMPONENT DESCRIPTION AND FUNCTION	NRC DEFICIENCY	RESOLUTION	STATUS
74	II.a	T3P11, T3P12, T3P22, T3P41, T3P42, T3P43, T3P51, T3P53, T3C11, T3C12, T3C13, T3C21, T3C22, T3C23, T3I11, T3I12, T3I14, T3I15, T3I21, T3I22, T3I23, T3I24 T4P12, T4P21, T4P22, T4P41, T4P42, T4P43, T4P51, T4P52, T4C11, T4C12, T4C13, T4C21, T4C22, T4C23, T4I12, T4I14, T4I15, T4I21, T4I22, T4I23, T4I24	Crouse-Hinds Containment penetration assembly. 680 V power, control and instrumentation penetration	-Evidence of Documentation -Adequate Similarity -Aging Degradation -Qualified Life or Replacement -Temperature/Pressure Criteria	Westinghouse report dated 8-11-72 provides documented evidence of qualification, and establishes similarity. Arrhenius methodology used to address aging degradation and to establish a 40 year qualified life. Temperature/pressure test profile demonstrated to be more conservative than postulated accident parameters	Qualified
75	II.a	SV-3-2810, SV-4-2810 SV-3-2812, SV-4-2812 SV-3-2814, SV-4-2814	ASCO Solenoid valve. Emergency CTMT cooling bypass valve	-Evidence of Qualification -Aging Degradation -Qualified Life -Program for Aging Degradation -Aging Simulation	Valves have been replaced with fully qualified ASCO NP series solenoid valves. ASCO Test Report No. AQS 21678/TR, Rev. A applies	Qualified
76	II.a	SV-3-2928 Thru -2925 SV-4-2928 Thru -2925	ASCO Solenoid valve. Emergency containment cooling water valves	-Evidence of Qualification -Aging Degradation -Qualified Life -Program for Aging Degradation -Aging Simulation	Valves have been replaced with fully qualified ASCO NP series solenoid valves. ASCO Test Report No. AQS 21678/TR, Rev. A applies	Qualified
77	II.c	Various	ASCO Solenoid valve (replacement). CVCS and CTMT ventilation	-Qualified Life or Replacement	Equipment not used.	Deleted



TER ITEM	NRC CATEGORY	TAG #	COMPONENT DESCRIPTION AND FUNCTION	NRC DEFICIENCY	RESOLUTION	STATUS
78	II.c	SV-3-2911 SV-3-2913 SV-4-2911 SV-4-2912 SV-4-2913	ASCO Solenoid valve. CMT air monitoring	-Aging Degradation -Qualified Life or Replacement -Aging Degradation Program -Aging Simulation	Aging degradation, aging simulation and qualified life, based on periodic re- placement of elastomers established by an artificial (accelerated) aging program based on Arrhenius methodology	Qualified
79	II.a	A) SV-3-2684 SV-3-2685 SV-3-2689 SV-3-2610 SV-3-2615 SV-4-2684 SV-4-2685 SV-4-2689 SV-4-2610 SV-4-2614 SV-4-2615  B) SV-3-2988 SV-3-2982 SV-3-2984 SV-4-2988 SV-4-2982 SV-4-2984	ASCO Solenoid valve. A) Main steam isolation valve  B) Feedwater flow to steam generator	-Evidence of Qualification -Aging Degradation -Qualified Life -Aging Program -Aging Simulation	These valves have been replaced with fully qualified ASCO NP series valves. ASCO Test Report No. AQS 21678/TR, Rev. A applies	Qualified
80	II.b	SV-3-2681 SV-3-2683 SV-3-2884 SV-3-2886 SV-4-2681,2683 SV-4-2884,2886	ASCO Solenoid valve. Containment ventilation valves	-Evidence of Qualification	Valves have been replaced by fully qualified ASCO solenoid valves, Model NP series. Qualification Report AQS 21678/TR, Rev. A, applies	Qualified





TER ITEM	MRC CATEGORY	TAG #	COMPONENT DESCRIPTION AND FUNCTION	MRC DEFICIENCY	RESOLUTION	STATUS
81	II.a	SV-3-2919 SV-4-2914 SV-4-2915 SV-4-2916 SV-4-2917 SV-4-2919	ASCO Solenoid valve. Auxiliary feedwater to steam generator	-Evidence of Qualification -Aging Degradation -Qualified Life -Aging Program -Aging Simulation	These valves have been replaced with fully qualified ASCO NP series valves. ASCO Test Report AQS 21678/TR, Rev. A applies	Qualified
82	II.a	SV-3-2986 Thru -2918 SV-4-2985 Thru -2918	ASCO Solenoid valve. Charcoal filter spray dousing valves	-Evidence of Qualification -Aging Degradation -Qualified Life -Aging Program -Aging Simulation -Spray	These valves have been replaced with fully qualified Target Rock Model 81AA-001 valves. Target Rock Report 237SE applies. Fully qualified CONAX seals have been installed	Qualified
83	II.c	SV-3-3789 SV-3-3713 SV-4-3789 SV-4-3713	ASCO Solenoid valve. CTMT air monitoring system	-Aging Degradation -Qualified Life or Replacement -Aging Degradation Program -Aging Simulation	Not in 18CFR50.49 scope. Equipment located in mild environment	Deleted
84	II.c	Various	ASCO Solenoid valve (replacement). CTMT purge air supply valves	-Qualified Life or Replacement	Never installed	Deleted
85	II.c	None	3M/Electro Products Electrical tape (outside containment). Electrical insulation for conductor splices.	-Aging Degradation -Qualified Life or Replacement	Aging degradation addressed using regression analysis based on Arrhenius methodology. A qualified life of 40 years has been established	Qualified
86	II.a	None	AMP/Raychem Electrical insulating sleeve. Provide protection for field interface of cables at electrical penetration	-Documented Evidence	Not in 18CFR50.49 scope. Equipment located in a mild environment	Deleted



TER ITEM	NRC CATEGORY	TAG #	COMPONENT DESCRIPTION AND FUNCTION	NRC DEFICIENCY	RESOLUTION	STATUS
87	11.c	None	Raychem RNF-10B Electrical insulating sleeve. Provide insulation for in-line splices in penetration assembly	-Aging Degradation -Qualified Life or Replacement	Aging degradation addressed using regression analysis based on Arrhenius methodology. A qualified life of 40 years has been established	Qualified
88	11.c	None	Raychem MCSF-N Electrical insulating sleeve. Provide protection for spliced conductors	-Aging Degradation -Qualified Life or Replacement	Aging degradation addressed using regression analysis based on Arrhenius methodology. A qualified life of 40 years has been established	Qualified
89	11.a	Cable Codes: N58 N52 N53 N54 N55 N56	Okonite Electrical power cable. Provide electrical power to various components	-Evidence of Qualification	A new qualification report, Okonite Test Report N-1 dated 7-3-78 addresses thermal aging, radiation exposure LOCA and Post LOCA exposure demonstrating full qualification	Qualified
90	11.c	A) MOV-3-867A MOV-3-867B MOV-4-867A MOV-4-867B B) MOV-3-872 MOV-4-872	Limiterque Motorized valve actuator. A) Boron injection tank high head valve B) Loop A&B hotleg safety injection stop valve	-Aging Degradation -Qualified Life or Replacement	Aging degradation addressed using regression analysis based on Arrhenius methodology. A qualified life of 40 years has been established	Qualified
91	11.c	A) MOV-878A B) MOV-3-843A MOV-3-843B MOV-4-843A MOV-4-843B	Limiterque Motorized valve actuator. A) HHSI pumps transfer valve B) Boron safety injection system	-Aging Degradation -Qualified Life or Replacement	Aging degradation addressed using regression analysis based on Arrhenius methodology. A qualified life of 40 years has been established	Qualified
92	11.a	Cable Codes: N21, N22, N23, N24,	Okonite Electrical power cable. Provide electrical power to various components	-Aging Degradation -Qualified Life or Replacement	A new qualification report Okonite Test Report N-1 dated 7-3-78 addresses thermal aging, radiation exposure LOCA and Post LOCA	Qualified

IER ITEM	NRC CATEGORY	TAG #	COMPONENT DESCRIPTION AND FUNCTION	NRC DEFICIENCY	RESOLUTION	STATUS
		N25, N26			exposure demonstrating full qualification	
93	11.a	Cable Codes: N19 N20	Okonite Electrical power cable. Provide electrical power to various components	-Aging Degradation -Qualified Life or Replacement	A new qualification report Okonite Test Report N-1 dated 7-3-78 addresses thermal aging, radiation exposure LOCA and Post LOCA exposure demonstrating full qualification	Qualified
94	11.a	Cable Codes: N7	Okonite Electrical power cable. Provide electrical power to various components	-Aging Degradation -Qualified Life or Replacement	A new qualification report Okonite Test Report N-1 dated 7-3-78 addresses thermal aging, radiation exposure LOCA and Post LOCA exposure demonstrating full qualification	Qualified
95	11.a	Cable Code L1P	Dekorad-Eaton Corp. 600 V instrumentation cable	-Adequate Similarity -Aging Degradation -Qualified Life or Replacement	Adequate similarity demonstrated by certified test report and certificate of conformance. Aging degradation addressed using regression analysis based on Arrhenius methodology to establish a qualified life of 40 years	Qualified
96	11.a	Cable Code: N6	General Cable power cable. Provide electrical power to various components	-Aging Degradation -Qualified Life or Replacement	Aging degradation addressed using re- gression analysis based on Arrhenius methodology. A qualified life of 40 years has been established	Qualified
97	11.a	Cable Code N77	Thermo Electric Electrical thermocouple cable. Thermocouple extension cable.	-Evidence of Qualification	Not in 18CFR50.49 scope. These thermo- couples have been replaced with RTDs and the cable has been deleted	Deleted
98	11.a	Cable Code: 61	Continental Wire Co. 600 V instrumentation cable	-Evidence of Qualification	A new Continental report and supplement demonstrate qualification by artificial aging using Arrhenius methodology, irradiation, LOCA and Post LOCA simulation	Qualified



TER ITEM	NRC CATEGORY	TAG #	COMPONENT DESCRIPTION AND FUNCTION	NRC DEFICIENCY	RESOLUTION	STATUS
99	II.a	Cable Codes: 61 62	General Electric. 600 V instrumentation cable	-Adequate Similarity	Adequate similarity demonstrated by certified test report and certificate of conformance to supplement type test	Qualified
100	II.a	Cable Codes: LP1 LT1	Anaconda Electrical 600 V instrumentation cable	-Aging Degradation -Qualified Life or Replacement	Aging degradation addressed using re- gression analysis based on Arrhenius methodology. A qualified life of 40 years has been established	Qualified
101	II.a	Cable Code: LT1	Rockbestos 600 V instrumentation cable	-Adequate Similarity	Qualification testing performed by Sandia Labs. demonstrate cable is qualified. Sandia Report NUREG/CR-2932/1 of 2 applies	Qualified
102	I.a	Cable Code: BRC	Brand-Rex Coaxial cable	-None	Fully Qualified	Qualified
103	II.a	FI-3-110 FI-4-110	Foxboro Flow transmitter. Provides flow signal for flow to charging pump	-Evidence of Qualification	Not in 10CFR50.49 scope. Equipment located in mild environment	Deleted
104	I.b	A) SV-3-2819 B) SV-4-310A SV-4-310B	ASCO Solenoid valve. Auxiliary feedwater to steam generator	-Evidence of Qualification	Valves have been replaced with fully qualified ASCO NP Series valves. ASCO Test Report No. AQS 21678/TR. Rev. A applies	Qualified
105	I.b	A) SV-3-2914 SV-3-2916 B) SV-4-2819	ASCO Solenoid valve. Auxiliary feedwater to steam generator	-Evidence of Qualification	Valves have been replaced with fully qualified ASCO NP Series valves. ASCO Test Report No. AQS 21678/TR, Rev. A applies	Qualified



TER ITEM	NRC CATEGORY	TAG #	COMPONENT DESCRIPTION AND FUNCTION	NRC DEFICIENCY	RESOLUTION	STATUS
186	1.b	A) SV-3-2905 B) SV-4-200A SV-4-200B SV-4-200C	A) ASCO Solenoid valve. Charcoal filter spray dousing valves B) ASCO Solenoid valve. RCS Letdown isolation	A) Aging Degradation, Qualified Life, Aging Program, Aging Simulation B) Evidence of Qualification	A) Valves have been replaced with fully qualified Target Rock Model 81AA-001 valves. Target Rock Report 237SE applies. Fully qualified CONAX seals have been installed B) Valves have been replaced with fully qualified ASCO NP Series valves. ASCO Test Report No. AQS 21678/TR, Rev. A applies	Qualified
187	A) 11.a B) 1.b	A) SV-3-310A B) PDV-4-2604*LS	A) ASCO Solenoid valve B) NAMCO Limit switch Reactor cooling system charging line	A) Evidence of Qualification B) Steam Exposure	A) Valve has been replaced with fully qualified ASCO solenoid NP series valve. ASCO Test Report No. AQS 21678/TR, Rev. A applies B) Switch has been replaced with fully qualified EA180 Series limit switch. NAMCO Test Report QTR 185, Rev. 3 applies	Qualified  Qualified
188	A) 11.b B) 1.a	A) SV-3-200A SV-3-200B SV-3-200C B) CV-4-2012*LS	A) ASCO Solenoid valve B) NAMCO Limit switch Reactor coolant system letdown isolation	A) Evidence of Qualification B) None	A) Valves have been replaced with fully qualified ASCO NP series solenoid valves. ASCO Test Report No. AQS 21678/TR, Rev. A applies B) Fully qualified	Qualified  Qualified



TER ITEM	NRC CATEGORY	TAG #	COMPONENT DESCRIPTION AND FUNCTION	NRC DEFICIENCY	RESOLUTION	STATUS
109	A) 11.a B) 11.c	A) SV-3-2912 SV-3-2915 SV-3-2917 B) 4N214A 4N214B	A) ASCO Solenoid valve B) REES Pushbutton switch Auxiliary feedwater to steam generator	A) Evidence of Qualification B) Aging Degradation, Qualified Life	A) Valves have been replaced with fully qualified ASCO NP series solenoid valves. ASCO test Report No. AQS 21678/TR, Rev. A applies B) Arrhenius methodology used to address aging degradation. A qualified life of 48 years has been established, based on periodic replacement of elastomers	Qualified  Qualified
110	I.b	SV-3-2918	ASCO Solenoid valve. Auxiliary feedwater to steam generator	-Aging Degradation -Qualified Life -Aging Program -Aging Simulation	Valves have been replaced with fully qualified ASCO NP series solenoid valves. ASCO test Report No. AQS 21678/TR, Rev. A applies	Qualified
111	I.b	SV-3-3188	ASCO Solenoid valve. Reactor cooling system charging line	-Evidence of Qualification	Valves have been replaced with fully qualified ASCO NP series solenoid valves. ASCO NP series Report No. AQS 21678/TR, Rev. A applies	Qualified

NOTE 1. Will be replaced during the next Unit 3 refueling outage  
presently scheduled to begin in March of 1985.



ATTACHMENT 2

JUSTIFICATION FOR CONTINUED OPERATION

OF COMPONENTS TO BE QUALIFIED



CATEGORY II.A

Item No. 20

Component:

Limit Switch

Identification No:

Assoc. W/CV-3-2810 (2 switches)  
Assoc. W/CV-3-2812 (2 switches)  
Assoc. W/CV-3-2814 (2 switches)

Function:

Provide position indication for emergency containment  
bypass control valves.

Analysis:

1) Loss of Coolant Accident

These limit switches are located outside of the containment in a room where radiation from post-accident recirculation constitutes the only harsh environment. The devices have been qualified on a component basis for the radiation levels they will be exposed to in the event of a LOCA.

During normal operation the valves associated with these limit switches provide cooling water flow through the emergency containment fan cooling units by bypassing the full flow valve on the discharge line from each cooling unit.

A thermal aging study was performed to determine qualified lifetimes and components replacement intervals for these devices. Namco Controls April 21, 1980 letter to Florida Power and Light identifies the age susceptible components in the device. Of the components fundamental to the operation of the device, only one material had a qualified life of less than 40 years. Utilizing Arrhenius techniques, it was determined that the subject Buna 'N' O-Rings and gaskets have a qualified life of 3.25 years. The results of this thermal aging study have been entered in the plant maintenance schedule.

The components are listed as maintenance items and will be replaced before their "end of life".

In the event of a LOCA, a safety injection signal will automatically open the full flow valves. The bypass valves may be closed remotely and fail in the closed position. The bypass valves are only required for containment isolation. Until the limit switches are replaced with fully qualified limit switches, operators will be informed to close the bypass valves in the event of a LOCA once open indication is received on the full flow valves.

If the limit switches were to fail post-LOCA, closed indication would be provided to the operators before the harsh environment could have an adverse effect on them. Once valve position is verified closed, the bypass valve will remain closed. Until these limit switches are replaced by fully qualified limit switches, operators will be trained not to rely on emergency containment cooler bypass control valve position indication after valve closure is observed in the event of a loss of coolant accident.



No significant degradation of a safety function or misleading information to the operator as a result of failure of the limit switches under the accident environment resulting from a design basis event will occur.

2) High Energy Line Break

As the limit switches are located outside containment and are only required for emergency containment cooling for postulated high energy line breaks inside containment, they will not be exposed to an accident induced harsh environment, and their operation will not be affected.

Conclusions:

Interim operation of Turkey Point Unit No. 3 with the existing limit switches is justified for the following reasons:

- a) The only harsh environment parameter the limit switches are exposed to is radiation and the devices are qualified for those radiation levels.
- b) The limit switches will provide indication of bypass valve closure before the harsh environment could have an adverse effect on them.
- c) The limit switches would not be exposed to a harsh environment for postulated high energy line break accidents they are required to mitigate.

CATEGORY II.A

Item No. 30

Component: Flow Switch

Identification No: FS-3-1422  
FS-3-1423  
FS-3-1424  
FS-3-1425  
FS-3-1426  
FS-3-1427

Function: Monitor Air Flow through Emergency Filter Units

Analysis:

1) Loss of Coolant Accident

The emergency containment filters operate post LOCA to filter airborne radioactive particulates (principally iodine) out of the containment atmosphere. A water dousing system is provided in case air flow is lost to the filter because of a concern that the decay heat of collected radioactive particles may ignite the charcoal. Each emergency filter has two air flow switches located in the airstream. During post LOCA conditions, the air flow switches alarm a loss of air flow in the filter. If an emergency containment filter fan motor should fail, resulting in loss of air flow, an interlock with the flow switches would initiate dousing of the charcoal filters following a time delay.

The primary means of initiating dousing are the emergency charcoal filter temperature elements. Each filter contains eight temperature elements. If any one of these indicates a temperature rise to 325°F, the operator is instructed to manually initiate dousing.

Until these flow switches are replaced with fully qualified flow switches, operators will be informed to rely solely on temperature element indication to initiate dousing of the charcoal filters instead of utilizing air flow indication.

No significant degradation of a safety function or misleading information to the operator as a result of failure of the flow switches under the accident environment resulting from a design basis event will occur.

2) High Energy Line Break

The emergency containment filters and associated equipment are not required following a high energy line break.

Conclusions:

Interim operation of Turkey Point Unit No. 3 with the existing air flow switches is justified for the following reasons:

- a) The charcoal filter temperature elements provide the primary means of alerting the operator to initiate dousing of the charcoal filters. Operators will be informed to rely on temperature element indication instead of air flow indication.
- b) The flow switches are not required in the mitigation of high energy line break.



ATTACHMENT 3

CURRENT 10 CFR 50.49 LIST



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## TURKEY POINT UNITS 3&amp;4 STATUS OF MASTER 18CFR 58.49 LIST

Page 1

TAG #	TER ITEM	COMPONENT DESCRIPTION AND FUNCTION	STATUS
3N201A, 3N201B, 3N201C 4N201A, 4N201B, 4N201C	65	REES Local control station. Provide local control of charging pumps	Qualified
3N214A	None	Rees Local Control Station	Qualified
3N215A 3N215B 4N215A 4N215B	61	REES Local control station. Provide local control of safety injection pump	Qualified
3N21B	None	Rees Local Control Station	Qualified
3P201A, 3P201B, 3P201C 4P201A, 4P201B 4P201C	28	Westinghouse charging pump motor	Qualified
3P210A, 3P210B 4P210A, 4P210B	27	Westinghouse RHR pump motor	Qualified
3P211A 3P211B 3P211C 4P211A 4P211B 4P211C	22	Westinghouse component cooling pump motor	Qualified
3P214A, 3P214B, 4P214A, 4P214B	29	Westinghouse containment spray pump motor	Qualified



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TAG #	TER ITEM	COMPONENT DESCRIPTION AND FUNCTION	STATUS
3P215A, 3P215B 4P215A, 4P215B	26	Westinghouse Safety injection pump motor	Qualified
A) 3V30A, 3V30B, 3V30C, 4V30A 4V30B, 4V30C B) 3V3A, 3V3B 3V3C, 4V3A 4V3B, 4V3C	23	Joy Mfg. Co. A) Emergency CTMT cooling fan motor B) Emergency containment filter fan motor	Qualified
Cable Code: 61	98	Continental Wire Co. 600 V instrumentation cable	Qualified
Cable Codes: 61 62	99	General Electric. 600 V instrumentation cable	Qualified
Cable Code: BRC	102	Brand-Rex Coaxial cable	Qualified
Position indication for CV-3-200A CV-3-200B CV-3-200C CV-3-2019 CV-4-200A CV-4-200B CV-4-200C	14	NAMCO Limit switch. Provide CVCS valve position indication and control	Qualified
CV-3-2010, CV-3-2012 CV-3-2014 CV-4-2010, CV-4-2012 CV-4-2014	20	NAMCO Limit switch for emergency cooling bypass valve position indication	Unit 4 Qualified Unit 3 See Note 1



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TAG #	TER ITEM	COMPONENT DESCRIPTION AND FUNCTION	STATUS
Position indication for CV-3-310A CV-3-310B CV-4-310A CV-4-310B	15	NAMCO Limit switch. Provide CVCS valve position indication and control	Qualified
DPS-3-2900 DPS-3-2901 DPS-3-2902 DPS-4-2900 DPS-4-2901 DPS-4-2902	58	Barton Differential pressure switch. Provide signal for differential pressure across feedwater control valve	Qualified
FS-3-1422 thru -1427 FS-4-1422 thru-1427	38	Fluid Components, Inc. flow switch for air flow monitor Ball Engineering flow switch for air flow monitor	Unit 4 Qualified Unit 3 See Note 1
FI-3-122, FI-3-685, FI-3-943, FI-3-948, FI-4-122, FI-4-685, FI-4-943, FI-4-948	41	Rosemount flow transmitter. Provide signal for flow indication of charging pump, RHR and safety injection pump discharge flow	Qualified
FI-3-474,-475, FI-3-484,-485 FI-3-494,-495, FI-4-474,-475, FI-4-484,-485, FI-4-494,-495	48	Rosemount flow transmitter. Provide signal for indication of steam flow in main steam line	Qualified





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TAG #	TER ITEM	COMPONENT DESCRIPTION AND FUNCTION	STATUS
FI-3-613A, FI-3-613B FI-4-613A, FI-4-613B	38	Rosemount Flow transmitter. Provide signal for component cooling water heat exchanger outlet flow indication	Qualified
FI-3-932 FI-3-933 FI-4-932 FI-4-933	39	Rosemount Flow transmitter. Provide signal for indication of safety injection (Hi head) flow to hot leg	Qualified
HCV-3-121 HCV-4-121	17	NAMCO Limit switch for letdown charging valve position indication	Qualified
Associated with: HCV-3-121 HCV-4-121	21	Fisher electrical/pneumatic transducer provides pneumatic control signal for HCV-121 in chemical volume control system	Qualified
Cable Code LIP	95	Dekorad-Eaton Corp. 600 V instrumentation cable	Qualified
Cable Codes: LPI LTI	100	Anaconda Electrical 600 V instrumentation cable	Qualified
LS-3-1570 LS-3-1571 LS-4-1570 LS-4-1571	44	600 Level switch. Provide indication of CTMT sump level.	Qualified



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TAG #	TER ITEM	COMPONENT DESCRIPTION AND FUNCTION	STATUS
LI-3-459 LI-3-468 LI-3-461 LI-4-459 LI-4-468 LI-4-461	43	Rosemount Level transmitter. Safety injection initiation, CTMT isolation	Qualified
LI-3-474, LI-4-474 LI-3-475, LI-4-475 LI-3-476, LI-4-476 LI-3-484, LI-4-484 LI-3-485, LI-4-485 LI-3-486, LI-4-486 LI-3-494, LI-4-494 LI-3-495, LI-4-495, LI-3-496, LI-4-496,	42	Rosemount Level transmitter. Monitor steam generator water level	Qualified
Cable Code: LT1	101	Rockbestos 600 V instrumentation cable	Qualified
A) MOV-3-1403 MOV-3-1405 B) MOV-3-1404 MOV-4-1404	9	Limitorque motorized valve operator. Steam stop valves to AFM pumps	Qualified
MOV-3-1411 MOV-3-1412 MOV-4-1410 MOV-4-1411 MOV-4-1412	6	ASCO solenoid valve. Steam generator blowdown valves	Qualified
MOV-3-350 MOV-4-350	4	Limitorque motorized valve operator. Emergency boration valve	Qualified



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TAG #	TER ITEM	COMPONENT DESCRIPTION AND FUNCTION	STATUS
A) MOV-3-535 MOV-3-536 MOV-4-535 MOV-4-536 B) MOV-3-866B MOV-4-866B	1	Limited torque motorized valve operator. A) Pressurizer relief isolation valve  B) SI to RCS hotleg isolation valve	Qualified
MOV-3-744A MOV-3-744B MOV-4-744A MOV-4-744B	2	Limited torque motorized valve operator. RCS inlet isolation valve	Qualified
MOV-3-75B MOV-3-751 MOV-4-75B MOV-4-751	3	Limited torque motorized valve operator. RCS to RHR inlet isolation valve	Qualified
MOV-3-868A MOV-3-868B MOV-4-868A MOV-4-868B	11	Limited torque motorized valve operator. Containment sump isolation valve	Qualified
MOV-3-863A MOV-3-863B MOV-4-863A MOV-4-863B	18	Limited torque motorized valve operator. RHR heat exchanger outlet replacement	Qualified
MOV-3-866A MOV-3-866B MOV-4-866A MOV-4-866B	12	Limited torque motorized valve operator. SI to RCS hotleg isolation valve	Qualified

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TAG #	TER ITEM	COMPONENT DESCRIPTION AND FUNCTION	STATUS
A) MOV-3-867A MOV-3-867B MOV-4-867A MOV-4-867B B) MOV-3-872 MOV-4-872	90	Limiterque Motorized valve actuator. A) Boron injection tank high head valve B) Loop A&B hotleg safety injection stop valve	Qualified
A) MOV-3-869 MOV-4-869 B) MOV-878B	5	Limiterque motorized valve operator. A) Loop A & B hotleg SI valve B) HHSI pump transfer valve.	Qualified
MOV-3-888A, MOV-4-888A MOV-3-888B, MOV-4-888B	7	Limiterque motorized valve operator. Containment spray pump discharge isolation valve	Qualified
A) MOV-4-1403 MOV-4-1405 B) MOV-3-1410	8	A) Limitorque motorized valve operator. Steam stop valve to AFW pump B) ASCD solenoid valve. Steam generator blow-down valve	Qualified
A) MOV-878A B) MOV-3-843A MOV-3-843B MOV-4-843A MOV-4-843B	91	Limiterque Motorized valve actuator. A) HHSI pumps transfer valve B) Boron safety injection system	Qualified
Cable Codes: N19 N20	93	Okonite Electrical power cable. Provide electrical power to various components	Qualified



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TAG #	IER ITEM	COMPONENT DESCRIPTION AND FUNCTION	STATUS
N206 3N203B 3N203A 4N203B 4N203A	64	REES Local control station. Provide local control of boric acid transfer pump	Qualified
Cable Codes: N21 N22 N23 N24 N25 N26	92	Okonite Electrical power cable. Provide electrical power to various components	Qualified
Cable Codes: N50 N52 N53 N54 N55 N56	89	Okonite Electrical power cable. Provide electrical power to various components	Qualified
Cable Code: N6	96	General Cable power cable. Provide electrical power to various components	Qualified
Cable Codes: N7	94	Okonite Electrical power cable. Provide electrical power to various components	Qualified
None	85	JM/Electro Products Electrical tape (outside containment). Electrical insulation for conductor splices	Qualified





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TAG #	TER ITEM	COMPONENT DESCRIPTION AND FUNCTION	STATUS
None	87	Raychem RNF-100 Electrical insulating sleeve. Provide insulation for in-line splices in penetration assembly	Qualified
None	88	Raychem MCSF-N Electrical insulating sleeve. Provide protection for spliced conductors	Qualified
PC-3-600 PC-4-601	56	United Electric Controls Pressure controller. RHR pump discharge pressure indication and interlock	Qualified
PC-3-601 PC-4-600	55	United Electric Controls Pressure controller. RHR pump discharge pressure indication and interlock	Qualified
PC-3-611 PC-4-611	54	United Electric Controls Pressure controller. Provide interlock to component cooling water pump motor	Qualified
PC-957A, PC-957B, PC-957C, PC-957D	53	Barton Pressure controller. Interlock for safety injection pump control	Qualified
PCV-3-455C PCV-3-456 PCV-4-455C PCV-4-456	18	NAMCO Limit switch for pressurizer PORV position indication and control	Qualified

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TAG #	TER ITEM	COMPONENT DESCRIPTION AND FUNCTION	STATUS
Position indication for POV-3-2681 POV-3-2683 POV-4-2681 POV-4-2683 SV-4-2819	19	NAMCO Limit switch. Provide CVCS valve position indication and control	Qualified
POV-3-2684 POV-3-2685 POV-3-2686 POV-4-2685 POV-4-2686	16	NAMCO Limit switch for position indication for POV valves in main steam system	Qualified
PS-3-281A PS-3-281B PS-3-281C PS-4-281A PS-4-281B PS-4-281C	51	United Electric Controls Pressure switch. Provides interlock in the charging pump control	Qualified
PT-3-483 PT-4-483	47	Rosemount pressure transmitter. Provide reactor coolant pressure indication	Qualified
PT-3-484 PT-3-486 PT-4-484 PT-4-486	58	Rosemount Pressure transmitter. Provide signal for reactor coolant subcooling margin monitor	Qualified
PT-3-485 PT-4-485	48	Rosemount pressure transmitter. Provide reactor coolant pressure indication	Qualified

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TAG #	TER ITEM	COMPONENT DESCRIPTION AND FUNCTION	STATUS
PT-3-455 PT-3-456 PT-3-457 PT-4-455 PT-4-456 PT-4-457	46	Rosemount pressure transmitter. Provide pressurizer pressure indication	Qualified
PT-3-474, PT-3-475, PT-3-476, PT-3-464, PT-3-466, PT-3-468, PT-3-484, PT-3-485, PT-3-486, PT-3-494, PT-3-495, PT-3-496, PT-4-474, PT-4-475, PT-4-476, PT-4-464, PT-4-466, PT-4-468, PT-4-484, PT-4-485, PT-4-486, PT-4-494, PT-4-495, PT-4-496	49	Rosemount pressure transmitter. Provide main steam pressure indication	Qualified
PT-3-940, PT-3-943, PT-4-940, PT-4-943	57	Rosemount pressure transmitter. Monitor safety injection pressure	Qualified
RD-3-11, RD-3-12 RD-4-11, RD-4-12	31	Tracer Labs Radiation detector CTMT air particle monitor	Qualified
A) SV-3-200A SV-3-200B SV-3-200C B) CV-4-2012+LS	108	A) ASCO Solenoid valve B) NAMCO Limit switch Reactor coolant system letdown isolation	Qualified



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TAG #	TER ITEM	COMPONENT DESCRIPTION AND FUNCTION	STATUS
SV-3-2601 SV-3-2603 SV-3-2804 SV-3-2806 SV-4-2601 SV-4-2603 SV-4-2804 SV-4-2806	88	ASCO Solenoid valve. Containment ventilation valves	Qualified
A) SV-3-2604 SV-3-2605 SV-3-2609 SV-3-2610 SV-3-2615 SV-4-2604 SV-4-2605 SV-4-2609 SV-4-2610 SV-4-2614 SV-4-2615	79	ASCO Solenoid valve. A) Main steam isolation valve	Qualified
B) SV-3-2900 SV-3-2902 SV-3-2904 SV-4-2900 SV-4-2902 SV-4-2904		B) Feedwater flow to steam generator	Qualified
SV-3-2614	None	ASCO Solenoid Valve for main steam isolation	Qualified



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TAG #	IER ITEM	COMPONENT DESCRIPTION AND FUNCTION	STATUS
SV-3-2810,SV-4-2810 SV-3-2812,SV-4-2812 SV-3-2814,SV-4-2814	75	ASCO Solenoid valve. Emergency CTMT cooling bypass valve	Qualified
A) SV-3-2819 B) SV-4-318A SV-4-318B	184	A) ASCO Solenoid valve. Auxiliary feedwater to steam generator B) RCS Charging line valve	Qualified
A) SV-3-2885 B) SV-4-288A SV-4-288B SV-4-288C	186	A) Target Rock Solenoid valve. Charcoal filter spray dousing valves B) ASCO Solenoid valve. RCS letdown isolation	Qualified
SV-3-2906 Thru -2910 SV-4-2905 Thru -2910	82	Target Rock solenoid valve. Charcoal filter spray dousing valves	Qualified
SV-3-2911 SV-3-2913 SV-4-2911 SV-4-2912 SV-4-2913	78	ASCO Solenoid valve. CTMT air monitoring	Qualified
A) SV-3-2912 SV-3-2915 SV-3-2917 B) 4N214A 4N214B	189	A) ASCO Solenoid valve B) REES Pushbutton switch Auxiliary feedwater to steam generator	Qualified
A) SV-3-2914 SV-3-2916 B) SV-4-2819	185	ASCO Solenoid valve. Auxiliary feedwater to steam generator	Qualified





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TAG #	TER ITEM	COMPONENT DESCRIPTION AND FUNCTION	STATUS
SV-3-2918	118	ASCO Solenoid valve. Auxiliary feedwater to steam generator	Qualified
SV-3-2919	81	ASCO Solenoid valve. Auxiliary feedwater to steam generator	Qualified
SV-4-2914			
SV-4-2915			
SV-4-2916			
SV-4-2917			
SV-4-2919			
SV-3-2928	76	ASCO Solenoid valve. Emergency containment cooling water valves	Qualified
Thru -2925			
SV-4-2928			
Thru -2925			
A) SV-3-318A	187	A) ASCO Solenoid valve B) NAMCO Limit switch Reactor cooling system charging line	Qualified
B) PDV-4-2684*LS			
SV-3-3188	111	ASCO Solenoid valve. Reactor cooling system charging line	Qualified

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TAG #	IER ITEM	COMPONENT DESCRIPTION AND FUNCTION	STATUS
SV-4-2918	None	ASCO Solenoid Valve in auxiliary feedwater system	Qualified
T3P11, T3P12, T3P22, T3P41, T3P42, T3P43, T3P51, T3P53, T3C11, T3C12, T3C13, T3C21, T3C22, T3C23, T3I11, T3I12, T3I14, T3I15, T3I21, T3I22, T3I23, T3I24 T4P12, T4P21, T4P22, T4P41, T4P42, T4P43, T4P51, T4P52, T4C11, T4C12, T4C13, T4C21, T4C22, T4C23, T4I12, T4I14, T4I15, T4I21, T4I22, T4I23, T4I24	74	Crouse-Hinds Containment penetration assembly. 600 V power, control and instrumentation penetration	Qualified
T4C22	None	Crouse-Hinds 600 V control cable penetration	Qualified
T4I23	None	Crouse-Hinds 600 V instrumentation cable penetration	Qualified
T4I24	None	Crouse-Hinds 600 V instrumentation cable penetration	Qualified
T4P51	None	Crouse-Hinds 600 V power cable penetration	Qualified

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TAG #	IER ITEM	COMPONENT DESCRIPTION AND FUNCTION	STATUS
T4P52	None	Crouse-Hinds 600 V power cable penetration	Qualified
TE-3-344B through TE-3-3463 TE-4-344B through TE-4-3463	32	Pyco RTDs. Provide temperature indication for containment ventilation charcoal filter	Qualified
TE-3-41B TE-3-42B TE-3-43B TE-4-41B TE-4-42B TE-4-43B	34	Pyco resistance temperature detector (RTD). RCS cold leg temperature to recorder	Qualified
TE-3-412B, TE-3-412D TE-3-422B, TE-3-422D TE-3-432B, TE-3-432D TE-4-412B, TE-4-412D TE-4-422B, TE-4-422D TE-4-432B, TE-4-432D	33	Rosemount resistance temperature detector (RTD). Provide RCS hotleg over- temperature trip signal	Qualified
TE-3-413A, TE-3-413B TE-3-423A, TE-3-423B TE-3-433A, TE-3-433B TE-4-413A, TE-4-413B TE-4-423A, TE-4-423B TE-4-433A, TE-4-433B	35	PYCO resistance temperature detector (RTD). Reactor coolant subcooling margin monitor	Qualified



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TAG #	TER ITEM	COMPONENT DESCRIPTION AND FUNCTION	STATUS
2T/2S-3-6303A 2T/2S-3-6303B 2T/2S-3-6303C 2T/2S-4-6303A 2T/2S-4-6303B 2T/2S-4-6303C	59	Tech. for Energy Corp. Acoustic monitor. Safety valve acoustic monitoring system	Qualified

NOTE 1. Will be replaced during the next Unit 3 refueling outage  
presently scheduled to begin in March of 1985.