POWER AUTHORITY OF THE STATE OF NEW YORK
10 COLUMBUS CIRCLE NEW YORK, N.Y. 10019
(212) 397-6200

May 20, 1983
JPN-83-45

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

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

Subject: James A. FitzPatrick Nuclear Power Plant
Docket No. 50-333
Response to 10 CFR 50.49 - Equipment Qualification

References: 1. PASNY letter, J.P. Bayne to H.R. Denton, dated March 11, 1983 (JPN-83-22).

2. NRC letter, D.B. Vassallo to J.P. Bayne dated April 19, 1983.

Dear Sir:

This letter provides the information required to be submitted to the NRC per subsection (g) of 10 CFR 50.49. Attachment I identifies all equipment requiring qualification in accordance with 10 CFR 50.49(b).

The information and qualification status for the components in this submittal are provided according to the best knowledge of the Authority. However, the Authority reserves the right to amend this submittal if necessary. The Authority will continue its verification of the information provided. If, as a result of this verification, the qualification status of a component is changed, or additional components are identified, the Authority will submit a revision promptly.

Attachment I only includes plant equipment which is currently installed in the FitzPatrick plant and which requires qualification. If, as a result of the Authority's review of Regulatory Guide 1.97 and other activities, it is determined that additional equipment is required to be installed or upgraded, this will be included in our EQ program.

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The schedules provided in Attachment I are tentative and are subject to change based on equipment availability and outage schedules. However, the qualification efforts, associated with equipment whose qualification has not been demonstrated to date will be completed by March 31, 1985, or earlier, provided circumstances do not arise that would adversely affect this qualification goal. If such circumstances arise, the Authority will promptly notify the NRC in accordance with paragraph (h) of 10 CFR 50.49.

In Reference 1, the Authority had requested a schedular exemption from the provisions of 10 CFR 50.49 (g) which require a response by May 20, 1983, in order that the response to the FitzPatrick Equipment Qualification Technical Evaluation Report (TER), transmitted in Reference 2, could be addressed simultaneously with this submittal. This request was based on the fact that the Authority was not scheduled to receive the TER until April of 1983. Actually the TER was transmitted April 19, 1983 (Reference 2). Since this request was denied, the Authority's response to the TER will be sent separately.

If you have any further questions, please contact Mr. J. A. Gray, Jr. of my staff.

Very truly yours,

J.P. Bayne
Executive Vice President
Nuclear Generation

cc: Mr. J. Linville
Resident Inspector
U.S. Nuclear Regulatory Commission
P.O. Box 136
Lycoming, N.Y. 13093

NEW YORK POWER AUTHORITY
JAMES A. FITZPATRICK NUCLEAR POWER PLANT

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26	71	Emergency Electrical Power Systems
27	Misc.	Electrical Cables
28	Misc.	Terminal Blocks/Splices
29	Misc.	Primary Containment Electrical Penetrations

INTRODUCTION

I. The Nuclear Regulatory Commission (NRC) has amended its regulations applicable to nuclear plants regarding criteria for environmental qualification of electrical equipment important to safety. The new amendment (10CFR50.49) codifies the environmental qualification methods and criteria that meets the NRC's requirements in this area.

The purpose of this submittal is to specifically meet the requirements stated in subsection (g) of 10CFR50.49.

II. Summary of Equipment Qualification Rule (10CFR50.49)

The following is a brief summary and Section 50.49 of the amended rule which provides a description of the information provided in each subsection and the formal responses required by the New York Power Authority for the James A. FitzPatrick Nuclear Power Plant.

A. Subsection (a) - This subsection establishes a requirement that each holder of or applicant for a license to operate a nuclear power plant shall establish a program for qualifying electrical equipment important to safety.

B. Subsection (b) - This subsection provides guidance for licensees to define the electrical equipment which requires qualification in accordance with the rule.

The rule applies to "electric equipment important to safety" which is defined as including:

1. Safety-related equipment.

2. Non-safety related equipment whose failure under postulated environmental conditions could prevent satisfactory accomplishment of safety functions.

3. Certain post-accident monitoring equipment.

C. Subsection (c) - This subsection specifically excludes from the rules applicability dynamic and seismic qualification, protection of electrical equipment from natural phenomena and external events, and qualification of electrical equipment important to safety located in a mild environment.

D. Subsection (d) - This subsection requires licensees and applicants to prepare a list of electric equipment covered by the scope of the rule and the requirement that a qualification file be established and maintained for this equipment. The required contents of this qualification file are also stated.

E. Subsection (e) - This subsection defines the requirements which qualification programs for new equipment must be based on.

F. Subsection (f) - This subsection lists acceptable qualification methods for qualification programs for new equipment included within the scope of the rule. The following testing methods are acceptable for qualification:

1) Testing an identical item of equipment under identical conditions or under similar conditions with a supporting analysis.

2) Testing a similar item of equipment with a supporting analysis.

3) Experience with identical or similar equipment under similar conditions with a supporting analysis to show that the equipment to be qualified is acceptable.

G. Subsection (g) - This subsection requires each holder of an operating license issued prior to February 22, 1983 to submit by May 20, 1983 a response to the rule a listing of electric equipment installed by the rule and equipment already qualified. A schedule of completion of qualification or replacement of unqualified equipment must also be provided which establishes a goal of final environmental qualification of electric equipment within the scope of the rule by the end of the second refueling outage after March 31, 1982 or by March 31, 1985 whichever is earlier.

H. Subsection (h) - This subsection requires notification within 60 days of its discovery any qualification problems which may require extension of the completion date.

I. Subsection (i) - This subsection applies specifically to license applicants and provides guidance for ensuring safe plant operation pending completion of qualification programs.

J. Subsection (j) - This subsection requires that a record of qualification be maintained in an auditable form for equipment covered by the rule.

K. Subsection (k) - This subsection states for holders of operating licenses, that if the Commission has previously required qualification of equipment to previous standards, that this equipment not be requalified in accordance with the provisions of this section.

L. Subsection (l) - This subsection requires replacement equipment to be qualified in accordance with the provisions of this section (50.49) unless there are sound reasons to the contrary.

III. Summary of Response to 10CFR50.49

This response is provided to specifically meet the requirements of subsection (g) of the rule. The listing of electrical equipment important to safety within the scope of the rule already qualified is provided in Section 04 through 29 of this submittal. A schedule for final qualification, modification, or replacement of the remaining electrical equipment in the list is also provided in these sections.

By reference IV.B the Nuclear Regulatory Commission requested that the following information also be provided in the May 20, 1983 response to 10CFR50.49.

1. The submittal should specifically indicate whether your previous submittals comply with subsections (a) and (b) of 10CFR50.49.

2. The submittal should discuss the methods used to identify the equipment covered by paragraph 10CFR50.49 (b) (2).

Section 02 and 03 address these requests for information to the best of the Authority's knowledge.

IV. References

A. Code of Federal Regulations, 10CFR50.49 - Environmental Qualification of Electric Equipment Important to Safety for Nuclear Power Plants.

B. NRC Letter (D. B. Vassallo) to New York Power Authority (J. P. Bayne) dated April 19, 1983 (Safety Evaluation for Environmental Qualification of Safety-Related Electrical Equipment).

BASES FOR COMPONENT LISTS

The Authority has previously submitted lists of safety-related equipment requiring environmental qualification based on guidance provided in NRC Bulletin 79-01B. The Authority also responded to a previous NRC safety evaluation by providing a list of safety-related system which formed the bases for the listing of components requiring qualification. This list of systems and the identified safety functions were based on a review of the JAF Final Safety Analysis Report (FSAR), JAF Operating and Emergency Procedures, system electrical drawings and flow diagrams, system descriptions and plant modifications. The listing of safety systems and essential safety functions was accepted in the FRC TER.

The initial list of electrical equipment requiring qualification for the JAF plant was submitted in October, 1980 in response to NRC Bulletin 79-01B. This listing of components was a correct representation of the systems required to mitigate postulated design basis accidents and located in harsh environments. However, the list also included many electrical components which performed non-safety related functions and thus do not require environmental qualification.

In response to the NRC SER in September, 1981 the Authority stated that based on a review of the function of this non-safety equipment, these items were deleted from the list of equipment requiring qualification. The Authority has continued to review this listing to ensure that the list is complete and encompasses all required safety-related equipment.

The Authority has again reviewed the original equipment list in preparing this response to 10CFR50.49 to ensure the completeness of the listing. This review has considered the requirements contained in 10CFR50.49b (1), (2) and (3), and equipment added by recent plant modifications. Based on this review additional electrical equipment has been added and deleted to the original listing. The additions are included in the attached sections of this submittal containing the equipment listings. This listing is expected to change as a result of on-going and future modification programs.

Attached to this Section is an updated listing of the safety-related systems and essential system safety functions which form the bases for the system equipment listings included as part of this submittal.

JAFNPP LIST OF SAFETY-RELATED SYSTEMS REQUIRED
TO MITIGATE DESIGN BASIS EVENTS

SYS. NO.	SYSTEM NAME	SYSTEM SAFETY FUNCTIONS: EMERGENCY REACTOR SHUTDOWN	CORE COOLING	CONTAINMENT AND CONTAINMENT ISOLATION	CONTAINMENT COOLING	HELB ISOLATION	POST-ACCIDENT MONITORING	NOTES
01-125	STANDBY GAS TREATMENT			X			X	
02	NUCLEAR BOILER AND PRESSURE RELIEF (ADS)		X	X		X	X	
02-2	REACTOR RECIRCULATION SYSTEM			X				
02-3	NUCLEAR BOILER VESSSEL INSTRUMENT	X	X	X	X		X	
03	CONTROL ROD DRIVE (CRD)	X						
05	REACTOR PROTECTION (RPS)	X						
06	FEEDWATER CONTROL/ REACTOR INSTRUMENT						X	
07	NEUTRON MONITORING							NOTE 2
10	RESIDUAL HEAT REMOVAL (RHR) a) LPCI Mode b) Containment Cooling c) Shutdown Cooling		X	X	X		X	
11	STANDBY LIQUID CONTROL (SBLC)							NOTE 2
12	REACTOR WATER CLEANUP (RWCU)			X		X		
13	REACTOR CORE ISOLATION COOLING (RCIC)		X (NOTE 1)	X		X		
14	CORE SPRAY		X	X				

SYS. NO.	SYSTEM NAME	EMERGENCY REACTOR SHUTDOWN	CORE COOLING	CONTAINMENT AND CONTAINMENT ISOLATION	CONTAINMENT COOLING	HELB ISOLATION	POST ACCIDENT MONITORING	NOTES
15	REACTOR BUILDING CLOSED LOOP COOLING				X			
16	CONTAINMENT AND CONTAINMENT INSTRUMENTATION			X			X	
17	PROCESS RADIATION MONITORING	X (NOTE 1)		X (NOTE 1)			X	
20	RADWASTE SYSTEM			X				
23	HIGH PRESSURE COOLANT INJECTION (HPCI)		X (NOTE 1)	X		X		
27	PRIMARY CONTAINMENT ATMOSPHERE CONTROL AND MONITORING			X			X	
29	MAIN STEAM AND MAIN STEAM LEAK COLLECTION (MSLCS)			X		X		
66	REACTOR BUILDING VENTILATION AND ISOLATION CONTROL			X				
68	DRYWELL COOLING						X	
71	EMERGENCY ELECTRICAL POWER a) 125VDC b) 120VAC c) 600VAC d) LPCI Independent Power Supply	X (NOTE 1)	X	X	X	X	X	
MISC.	CABLING							NOTE 3
MISC.	SPLICES/TERMINAL BLOCKS							NOTE 3
MISC.	CONTAINMENT ELECTRICAL PENETRATIONS							NOTE 3

NOTES

1. This system performs this essential safety function in a mild environment and therefore does not require qualification per 10CFR50.49 for this function.

2. There is no equipment in this system requiring qualification per 10CFR50.49 based on the system's design bases.

3. These components perform safety-related functions which encompass most of the listed essential safety functions.

METHODOLOGY FOR ESTABLISHING 10CFR50.49 (b) 2 EQUIPMENT

I. INTRODUCTION - Based on the original electrical design criteria for safety-related electrical circuits, 10CFR50 (Appendix R) reviews of associated circuits, and previous system and component reviews for NRCB 79-01B submittals, the Authority has a high confidence level that failures of electrical equipment not requiring qualification to harsh environments per 10CFR50.49 will not prevent the accomplishment of safety functions by safety-related equipment. However, the Authority has again reviewed this item in preparation of this response. This includes reviews of systems with multiple safety and non-safety related functions which are performed in both harsh and mild environmental conditions. Examples of these systems include:

1. Residual Heat Removal (RHR) - This system performs multiple modes of operation involving mitigation of accidents,normal shutdown cooling, and abnormal operations which are performed under various environmental conditions.

2. High Pressure Coolant Injection (HPCI) - This system performs two essential safety functions under different environmental conditions. Core cooling following postulated small break LOCA's and isolation of postulated HPCI steam line breaks.

3. Reactor Water Cleanup System (RWCU) - Essential safety-related equipment requiring environmental qualification for this system include only those components required for primary containment isolation and isolation of RWCU line break.

II. METHODOLOGY - This review encompassed the review of the following categories of electrical circuitry:

1. Initiation/Actuation Logic Circuitry
2. Instrumentation
3. Motor Operated Valves
4. Solenoid Operated Valve
5. Electrical Cabling

A. Initiation/Isolation Logic Circuitry - Logic circuitry associated with various safety-related systems including: reactor protection, primary containment isolation, steam leak detection, and ECCS were reviewed. The logic design (energized or de-energized) and power source (AC or DC) were determined and failures at field sensors and components located in potential post-accident harsh environments were postulated. Postulated failures included grounds, short-circuits, and open circuits. False actuations of non-qualified equipment were also reviewed. If it was determined that the postulated failures could jeopardize the function of the logic circuit (normally due to fuse clearing) and the equipment was not included in the original list of equipment requiring qualification, then the equipment was added. The amount of equipment added as a result of this review is minimal.

Initiation and Isolation logic circuitry also includes seal-in features which prevent subsequent failure of sensors from affecting safety-related functions which have been previously initiated.

Reactor Protection System and Primary Containment Isolation System logic are normally energized (fail safe) and incorporate separate fusing for each field sensor. Failure of field sensors not requiring qualification per 10CFR50.49 for harsh environments would not affect the fail-safe performance of these circuits.

Summary - Based on this review, the equipment listing associated with this response includes all equipment which perform a safety-related function in these initiation/isolation logic circuits or equipment whose failure could potentially jeopardize the operation of these logic circuits.

B. Instrumentation - Instrumentation incorporating separate power supplies was reviewed to determine if these supplies were shared by equipment requiring qualification per 10CFR50.49. It has been confirmed that all instrumentation supplies feed individual instruments. Therefore, failure of any one field sensor would not impact other instrumentation loops due to power supply failure.

Instrumentation not incorporating separate power supplies but energized from electrical distribution panels also incorporate individual electrical protection devices so that postulated failures in equipment not requiring qualification would not effect qualified safety-related equipment.

C. Motor-Operated Valves - These valves are required to operate based on actuation signals received from automatic initiation logic (paragraph A above) or manual actuation signals from the Control/Relay Room. Each motor operated valve includes its own power circuit protective device and control circuit protection. Therefore, postulated electrical failures for motor operated valves not requiring qualification could not impact other safety-related electrical circuits.

D. Solenoid-Operated Valves - These valves are required to operate based on automatic or manual signals. Each solenoid circuit is equipped with its own coordinated protective device which would isolate postulated electrical failures from affecting other electrical equipment. These design features are true of both safety-related and non-safety related electrical solenoid-operated valves; therefore, equipment not requiring qualification could not impact other safety-related electrical circuits.

E. Electrical Cabling - Cabling of the same design and qualification have been used for electrical circuits requiring qualification and electrical circuits not requiring qualification per 10CFR50.49. Therefore, failures of non-safety related cabling do not have to be considered.

III. CONCLUSIONS - The affects of non-qualified safety-related equipment have been reviewed. Based on the review methodology described above, electrical components which could conceivably affect the functioning of safety-related electrical equipment have been identified and are included in the equipment listing.

NEW YORK POWER AUTHORITY
JAMES A. FITZPATRICK NUCLEAR POWER PLANT
LISTING AND STATUS OF HARSH ENVIRONMENT ELECTRICAL EQUIPMENT REQUIRING QUALIFICATION (10CFR50.49)

SYSTEM NO. 01-125 SYSTEM NAME: STANDBY GAS TREATMENT (SBGTS)

COMP. ID NO.	EQ FILE NO.	COMP. NAME	QUALIFICATION STATUS	LEVEL	METHOD	ACTION PLAN
01-125MOV-14A,B	6/8	Filter Train Suction Valve Operator	QUALIFIED	DOR	Test/Analysis	None required
01-125MOV-15A,B	6/9	Filter Train Discharge Valve Operator	QUALIFIED	DOR	Test/Analysis	None required
01-125E-5A,B	6/10	SBGTS Filter Train Electric Pre-Heater and Control Unit	IN PROGRESS	DOR	Test/Analysis	Complete ongoing qualification program (radiation) or replace with fully qualified equipment by the Jan. 1985 outage.

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LISTING AND STATUS OF HARSH ENVIRONMENT ELECTRICAL EQUIPMENT REQUIRING QUALIFICATION (10CFR50.49)

SYSTEM NO. 01-125 SYSTEM NAME STANDBY GAS TREATMENT (SBGTS)

COMP. ID NO.	EQ FILE NO.	COMP. NAME	QUALIFICATION STATUS	LEVEL	METHOD	ACTION PLAN
01-125FN-1A,B	6/7	SBGTS Fan Motor	IN PROGRESS	DOR	Test/Analysis	An ongoing program is expected to be completed by Aug. 1983. If this assessment does not confirm qualification motors will be replaced with fully qualified units by the Jan, 1985 refueling outage.
01-125MOV-11	6/3	Reactor Bldg. Inlet Isolation Valve Operator	QUALIFIED	DOR	Test/Analysis	None required
01-125MOV-12	6/4	Reactor Bldg. Inlet Isolation Valve Operator	QUALIFIED	DOR	Test/Analysis	None required
01-125MOV-13A	6/5	HPCI System Exhaust Isolation Valve Operator	QUALIFIED	DOR	Test/Analysis	None required
01-125MOV-13B	6/6	HPCI System Exhaust Isolation Valve Operator	QUALIFIED	DOR	Test/Analysis	None required

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SYSTEM NO. 01-125 SYSTEM NAME: STANDBY GAS TREATMENT (SBGTS)

COMP. ID NO.	EQ FILE NO.	COMP. NAME	QUALIFICATION STATUS	LEVEL	METHOD	ACTION PLAN
01-125MOV-14A,B	6/8	Filter Train Suction Valve Operator	QUALIFIED	DOR	Test/Analysis	None required
01-125MOV-15A,B	6/9	Filter Train Discharge Valve Operator	QUALIFIED	DOR	Test/Analysis	None required
01-125E-5A,B	6/10	SBGTS Filter Train Electric Pre-Heater and Control Unit	IN PROGRESS	DOR	Test/Analysis	Complete ongoing qualification program (radiation) or replace with fully quaiified equipment by the Jan. 1985 outage.

NEW YORK POWER AUTHORITY
JAMES A. FITZPATRICK NUCLEAR POWER PLANT
LISTING AND STATUS OF HARSH ENVIRONMENT ELECTRICAL EQUIPMENT REQUIRING QUALIFICATION (10CFR50.49)

SYSTEM NO. 02 SYSTEM NAME NUCLEAR BOILER

COMP. ID NO.	EQ FILE NO.	COMP. NAME	QUALIFICATION STATUS	LEVEL	METHOD	ACTION PLAN
02-DPIS-116A-D 02-DPIS-117A-D 02 DPIS-118A-D 02 DPIS-119A-D	8/1	Main Steam Line High Flow Differential Pressure Switch	QUALIFIED	DOR	Test/Analysis	None required
02MOV-53A,B	23/11	Recirc Pump Discharge Valve Operator	QUALIFIED	DOR	Test/Analysis	None required
02MOV-54A,B	23/12	Recirc Pump Discharge Bypass Valve Operator	QUALIFIED	DOR	Test/Analysis	None required
02PS-128A,B	3/118	Reactor Pressure Switch (RHR-SDC)	QUALIFIED	DOR	Test/Analysis	Note 1
02PS-134 (A-D)	8/2	Main Steam Line Low Pressure Switch	IN PROGRESS	DOR	Test/Analysis	Qualification program to be completed by Sept. 30, 1983
02SOV-71 (A-L)	5/1 5/2	Safety-Relief Valve Pilot Solenoid Valve	QUALIFIED	DOR	Test/Analysis	None required
02TS-121A-D 02TS-122A-D 02TS-123A-D 02TS-124A-D	8/3	Main Steam Line High Temperature Swiwtch (PCIS)	QUALIFIED	DOR	Test/Analysis	None required
02VMY-71 (A-L) 02VME-71 (A-L)	36/2 36/3 36/4	Safety Relief Valve Acoustical Monitoring System (accelerometer, charge-amp, and cable)	IN PROGRESS	NUREG 0588 Cat. I	Test	Test program to be completed by Oct. 1983. Modification to upgrade to tested configuration to be completed by Jan. 1985 outage.

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LISTING AND STATUS OF HARSH ENVIRONMENT ELECTRICAL EQUIPMENT REQUIRING QUALIFICATION (10CFR50.49)

SYSTEM NO. 02 SYSTEM NAME NUCLEAR BOILER

COMP. ID NO.	EQ FILE NO.	COMP. NAME	QUALIFICATION STATUS	LEVEL	METHOD	ACTION PLAN
02SOV-17 02SOV-18	8/45 8/46	Reactor Head Vent Valve Pilot Solenoid (PCIS)	IN PROGRESS	DOR	Test/Analysis	Final qualification pending completion of containment inspections during June, 1983 outage.

NEW YORK POWER AUTHORITY
JAMES A. FITZPATRICK NUCLEAR POWER PLANT

SYSTEM NO: 02 SYSTEM NAME: NUCLEAR BOILER

NOTES

1. The Authority considers this equipment qualified to the DOR Guidelines based on a previous qualification assessment completed in early 1982. However, the Authority is presently reviewing this assessment to resolve related concerns outlined in the JAF TER received by the Authority on April 25, 1983. The Authority is also reviewing TER's provided to other utilities for thee same equipment. Internal resolution of these concerns will be completed by August 15, 1983, at which time a review of these items by the NRC staff may be requested. Based on the outcome of this review, it may be necessary for the Authority to supplement this response.

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LISTING AND STATUS OF HARSH ENVIRONMENT ELECTRICAL EQUIPMENT REQUIRING QUALIFICATION (10CFR50.49)

SYSTEM NO. 02-2 SYSTEM NAME REACTOR WATER RECIRCULATION

COMP. ID NO.	EQ FILE NO.	COMP. NAME	QUALIFICATION STATUS	LEVEL	METHOD	ACTION PLAN
02-2SOV-39 (02-2AOV-39)	8/6	Reactor Water Sample Inboard Isolation Valve (pilot solenoid)	QUALIFIED	NUREG 0588 Cat. I	Test/Analysis	None required (replaced)
02-2SOV-40 (02-2AOV-40)	8/7	Reactor Water Sample Outboard Isolation Valve (pilot solenoid)	QUALIFIED	NUREG 0588 Cat. I	Test/Analysis	None required (replaced)

NEW YORK POWER AUTHORITY
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LISTING AND STATUS OF HARSH ENVIRONMENT ELECTRICAL EQUIPMENT REQUIRING QUALIFICATION (10CFR50.49)

SYSTEM NO. 02-3 SYSTEM NAME NUCLEAR BOILER VESSEL INSTRUMENT

COMP. ID NO.	EQ FILE NO.	COMP. NAME	QUALIFICATION STATUS	LEVEL	METHOD	ACTION PLAN
02-3AU-278 (A-D)	4/8	Rx. High Pressure Analog Trip Unit (RPS)	IN PROGRESS	----	----	Relocate to mild environment by the Jan. 1985 outage
02-3LIS-101 (A-D)	8/10 8/11	Reactor Water Level (RPS)	QUALIFIED	DOR	Test/Analysis	Note 1
02-3LIS-57A,B	8/8	Reactor Water Level Switch (Recirc)	QUALIFIED	DOR	Test/Analysis	Note 1
02-3LIS-58A,B	8/9	Reactor Water Level Switch (PCIS)	QUALIFIED	DOR	Test/Analysis	Note 1
02-3LIS-72 (A-D)	5/5	Reactor Water Level Switch (ECCS)	QUALIFIED	DOR	Test/Analysis	Note 1
02-3LIS-83A,B	5/6	Reactor Water Level Switch (ADS)	QUALIFIED	DOR	Test/Analysis	Note 1

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LISTING AND STATUS OF HARSH ENVIRONMENT ELECTRICAL EQUIPMENT REQUIRING QUALIFICATION (10CFR50.49)

SYSTEM NO. 02-3 SYSTEM NAME NUCLEAR BOILER VESSEL INSTRUMENT

COMP. ID NO.	EQ FILE NO.	COMP. NAME	QUALIFICATION STATUS	LEVEL	METHOD	ACTION PLAN
02-3LITS-59A,B	4/6	Reactor Water Level Indicating Switch and Indication	QUALIFIED	DOR	Test/Analysis	Although qualified, this item will be replaced with fully qualified level transmitter by Jan. 1985 outage (Plant Mod. F1-83-01)
02-3LITS-73	3/119	Reactor Shroud Water Level Indicating Switch (RHR) and Indication	IN PROGRESS	DOR	Test/Analysis	Replace with fully qualified level transmitter and analog trip unit by the Jan. 1985 outage.
02-3LITS-79	3/122	Reactor Shroud Water Level Indicating Switch (RHR) and Indication	QUALIFIED	DOR	Test/Analysis	Note 1
02-3PS-52 (A-D)	3/120	Reactor Pressure Switch (ECCS)	QUALIFIED	DOR	Test/Analysis	Note 1
02-3PS-102 (A-D)	8/45	Reactor Pressure Switch (Recirc)	IN PROGRESS	DOR	Test/Analysis	Qualification in progress to be completed by Sept. 1983. If not successful, replace by Jan. 1985 outage.
02-3PT-178 (A-D)	4/7	Reactor Pressure Transmitter (RPS)	IN PROGRESS	DOR	Test/Analysis	Ongoing program evaluating outstanding aging concern. Program to be completed by Sept. 1983. If program unsuccessful, replace with a fully qualified transmitter by Jan. 1985 outage.

NEW YORK POWER AUTHORITY
JAMES A. FITZPATRICK NUCLEAR POWER PLANT

SYSTEM NO: 02-3 SYSTEM NAME: NUCLEAR BOILER INSTRUMENT

NOTES

1. The Authority considers this equipment qualified to the DOR Guidelines based on a previous qualification assessment completed in early 1982. However, the Authority is presently reviewing this assessment to resolve related concerns outlined in the JAF TER received by the Authority on April 25, 1983. The Authority is also reviewing TER's provided to other utilities for the same equipment. Internal resolution of these concerns will be completed by August 15, 1983, at which time a review of these items by the NRC staff may be requested. Based on the outcome of this review, it may be necessary for the Authority to supplement this response.

NEW YORK POWER AUTHORITY
JAMES A. FITZPATRICK NUCLEAR POWER PLANT
LISTING AND STATUS OF HARSH ENVIRONMENT ELECTRICAL EQUIPMENT REQUIRING QUALIFICATION (10CFR50.49)

SYSTEM NO. 03 SYSTEM NAME CONTROL ROD DRIVE (CRD)

COMP. ID NO.	EQ FILE NO.	COMP. NAME	QUALIFICATION STATUS	LEVEL	METHOD	ACTION PLAN
03LS-231A-D	4/2	Scram Instrument Volume Level Switch (RPS)	IN PROGRESS	----	----	These level switches are to be replaced during the June, 1983 outage with fully qualified redundant and diverse level switches and transmitters as part of long term CRD system modifications. (Plant Mod. F1-82-18)
03SOV-31A,B	23/10	Scram Pilot Air Solenoid Valves	IN PROGRESS	----	----	Solenoid valves to be replaced with fully qualified valves as part of long term CRD system modifications (Plant Mod. F1-82-18) during June 1983 outage.
03SOV-117 03SOV-118	23/9 23/8	Scram Pilot Air Solenoid Valves (137 HCU pairs)	IN PROGRESS	DOR	Test/Analysis	An ongoing qualification evaluation will be completed by Nov. 1983 (General Electric)
03SOV-140A,B	4/11	Back-up Scram Air Solenoid Valves	IN PROGRESS	----	----	Solenoid valves to be replaced by Jan. 1985 outage
03PS-401A-D	----	Low Air Header Pressure Switch (RPS)	IN PROGRESS	---	----	Pressure switches to be deleted in June, 1983 as part of long term CRD system modifications (Plant Mod. F1-82-18)

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SYSTEM NO. 05 SYSTEM NAME REACTOR PROTECTION SYSTEM

COMP. ID NO.	EQ FILE NO.	COMP. NAME	QUALIFICATION STATUS	LEVEL	METHOD	ACTION PLAN
05PS-12 (A-D)	8/14 8/15	Primary Containment Pressure Switch (RPS)	QUALIFIED	DOR	Test/Analysis	Note 1

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SYSTEM NO: 05 SYSTEM NAME: REACTOR PROTECTION SYSTEM

NOTES

1. The Authority considers this equipment qualified to the DOR Guidelines based on a previous qualification assessment completed in early 1982. However, the Authority is presently reviewing this assessment to resolve related concerns outlined in the JAF TER received by the Authority on April 25, 1983. The Authority is also reviewing TER's provided to other utilities for thee same equipment. Internal resolution of these concerns will be completed by August 15, 1983, at which time a review of these items by the NRC staff may be requested. Based on the outcome of this review, it may be necessary for the Authority to supplement this response.

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SYSTEM NO. 06 SYSTEM NAME FEEDWATER/REACTOR INSTRUMENTATION

COMP. ID NO.	EQ FILE NO.	COMP. NAME	QUALIFICATION STATUS	LEVEL	METHOD	ACTION PLAN
06PT-61A,B	27/1	Reactor Pressure Transmitter (Indication)	QUALIFIED	NUREG 0588 Cat. I	Test	None required

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SYSTEM NO. 07 SYSTEM NAME: NEUTRON MONITORING (NMS)

COMP. ID NO.	EQ FILE NO.	COMP. NAME	QUALIFICATION STATUS	LEVEL	METHOD	ACTION PLAN
NONE	-----	----------	-----	-----	--------	----------

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SYSTEM NO. 10 SYSTEM NAME RESIDUAL HEAT REMOVAL (RHR)

COMP. ID NO.	EQ FILE NO.	COMP. NAME	QUALIFICATION STATUS	LEVEL	METHOD	ACTION PLAN
10DPIS-125A, B	----	RHR Low Flow Switch Differential Pressure	IN PROGRESS	DOR	Test/Analysis	Qualification program in progress to be completed by Sept. 30, 1983
10FT-97A,B	3/6 3/7	RHR Heat Exchanger Service Water Flow Transmitter (Indication)	IN PROGRESS	----	----	To be replaced with fully qualified flow transmitter during June, 1983 outage (Plant Mod. F1-83-01)
10FT-109A,B	3/9 3/10	RHR System Flow Transmitter (Indication)	IN PROGRESS	----	----	To be replaced with fully qualified flow transmitter during June, 1983 outage (Plant Mod. F1-83-01)
10MOV-12A,B	3/13 3/14	RHR Heat Exchanger Outlet Isolation Valve Operator	IN PROGRESS	----	----	See Note 1 for Action Plan (Mod. M1-83-04)
10MOV-13 (A-D)	3/15 3/16 3/17 3/18	RHR Pump Suction From Suppression Pool Isolation Valve Operator	QUALIFIED	DOR	Test/Analysis	None required
10MOV-15 (A-D)	3/19 3/20 3/21 3/22	RHR Pump Suction From Recirculation Loop Isolation Valve Operator	QUALIFIED	DOR	Test/Analysis	None required
10MOV-16A,B	3/23 3/24	RHR Pump Test Line to Suppression Pool Isolation Valve Operator	QUALIFIED	DOR	Test/Analysis	None required

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SYSTEM NO. 10 SYSTEM NAME: RESIDUAL HEAT REMOVAL (RHR)

COMP. ID NO.	EQ FILE NO.	COMP. NAME	QUALIFICATION STATUS	LEVEL	METHOD	ACTION PLAN
10MOV-17	3/25	Shutdown Cooling Suction From Recirc Loop Outboard Containment Isolation Valve Operator	QUALIFIED	DOR	Test/Analysis	None required
10MOV-18	3/26	Shutdown Cooling Suction From Recirc Loop Inboard Containment Isolation Valve Operator	QUALIFIED	DOR	Test/Analysis	None required
10MOV-20	3/27	RHR Loop Crosstie Isolation Valve Operator	IN PROGRESS	DOR	Test/Analysis	Qualification Program in in progress to be completed by Sept. 30, 1983
10MOV-21A,B	3/28	RHR Heat Exchanger E-2A,B Bypass to the Suppression Pool Isolation Valve Operator	QUALIFIED	DOR	Test/Analysis	None required
10MOV-25A,B	3/29 3/30	RHR Injection Line to Recirc Loop Inboard Isolation Valve Operator	QUALIFIED	DOR	Test/Analysis	None required
10MOV-26A,B	3/31 3/32	Drywell Spray Outboard Isolation Valve Operator	QUALIFIED	DOR	Test/Analysis	None required
10MOV-27A,B	3/33 3/34	RHR Injection Line to Recirc Loop Outboard Isolation Valve Operator	QUALIFIED	DOR	Test/Analysis	None required

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SYSTEM NO. 10 SYSTEM NAME: RESIDUAL HEAT REMOVAL (RHR)

COMP. ID NO.	EQ FILE NO.	COMP. NAME	QUALIFICATION STATUS	LEVEL	METHOD	ACTION PLAN
10MOV-31A,B	3/35 3/36	Drywell Spray Outboard Isolation Valve Operator	QUALIFIED	DOR	Test/Analysis	None required
10MOV-32	3/37	Reactor Head Spray Inboard Isolation Valve Operator	IN PROGRESS	----	----	See Note 1 for Action Plan (Mod. M1-83-04)
10MOV-33	3/38	Reactor Head Spray Outboard Isolation Valve Operator	QUALIFIED	DOR	Test/Analysis	None required
10MOV-34A,B	3/39 3/40	Suppression Pool Spray Bypass Isolation Valve Operator	QUALIFIED	DOR	Test/Analysis	None required
10MOV-36A,B	3/41 3/42	RCIC Pump Suction From RHR Heat Exchanger E-2A,B Isolation Valve Operator	QUALIFIED	DOR	Test/Analysis	None required
10MOV-38A,B	3/43 3/44	Suppression Pool Spray Inboard Isolation Valve Operator	QUALIFIED	DOR	Test/Analysis	None required
10MOV-39A,B	3/45 3/46	Suppression Pool Spray Outboard Isolation Valve Operator	QUALIFIED	DOR	Test/Analysis	None required

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SYSTEM NO. 10 SYSTEM NAME: RESIDUAL HEAT REMOVAL (RHR)

COMP. ID NO.	EQ FILE NO.	COMP. NAME	QUALIFICATION STATUS	LEVEL	METHOD	ACTION PLAN
10MOV-57	3/47	RHR to Radwaste Downstream Isolation Valve Operator	QUALIFIED	DOR	Test/Analysis	None required
10MOV-65A,B	3/48 3/49	Inlet to RHR Heat Exchanger E-2A, B Isolation Valve Operator	QUALIFIED	DOR	Test/Analysis	None required
10MOV-66A,B	3/50 3/51	Heat Exchanger E-2A,B Bypass Isolation Valve Operator	QUALIFIED	DOR	Test/Analysis	None required
10MOV-67	3/52	RHR to Radwaste Upstream Isolation Valve Operator	QUALIFIED	DOR	Test/Analysis	None required
10MOV-89A,B	3/55 3/56	Heat Exchanger E-2A,B Service Water Discharge Isolation Valve Operator	IN PROGRESS	----	----	See Note 1 for Action Plan (Mod. M1-83-04)
10MOV-148A	3/57	Service Water Cross-Tie to RHR Loop "A" Upstream Isolation Valve Operator	IN PROGRESS	----	----	See Note 1 for Action Plan (Mod. M1-83-04)
10MOV-148B	3/58	Service Water Cross-Tie to RHR Loop "B" Upstream Isolation Valve Operator	QUALIFIED	----	Test/Analysis	None required

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SYSTEM NO. 10 SYSTEM NAME: RESIDUAL HEAT REMOVAL (RHR)

COMP. ID NO.	EQ FILE NO.	COMP. NAME	QUALIFICATION STATUS	LEVEL	METHOD	ACTION PLAN
10MOV-149A	3/59	Service Water Cross Tie to RHR Loop "A" Downstream Isolation Valve Operator	IN PROGRESS	----	----	See Note 1 for Action Plan (Mod. M1-83-04)
10MOV-149B	3/60	Service Water Cross-Tie to RHR Loop "B" Downstream Isolation Valve Operator	QUALIFIED	DOR	Test/Analysis	None required
10P-3 (A-D)	3/65 3/66 3/67 3/68	RHR Pump Drive Motor (4KV)	QUALIFIED	DOR	Test/Analysis	None required
10PS-100 (A-D)	3/77 3/78 3/79 3/80	Drywell Pressure Switch (ADS)	QUALIFIED	DOR	Test/Analysis	See Note 2
10PS-101 (A-D)	3/81 3/82 3/83 3/84	Drywell Pressure Switch (ECCS)	QUALIFIED	DOR	Test/Analysis	See Note 2

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SYSTEM NO. 10 SYSTEM NAME: RESIDUAL HEAT REMOVAL (RHR)

COMP. ID NO.	EQ FILE NO.	COMP. NAME	QUALIFICATION STATUS	LEVEL	METHOD	ACTION PLAN
10PS-119 (A-D)	3/86 3/87 3/88 3/89	Drywell Pressure Switch (RHR)	QUALIFIED	DOR	Test/Analysis	See Note 2
10PS-120 (A-H)	3/90, 3/91 3/92 3/93 3/94 3/95 3/96 3/97	RHR Pump Discharge Pressure Switch (ADS)	QUALIFIED	DOR	Test/Analysis	See Note 2

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SYSTEM NO: 10 SYSTEM NAME: RESIDUAL HEAT REMOVAL (RHR)

NOTES

1. Limitorque valve actuator motor and other actuator internal components will be replaced to upgrade this actuator to a fully qualified status. If motor delivery from Limitorque is by June 1, 1983, the upgrade will be performed during the June 1, 1983 refueling outage. If motor delivery is after June 1, 1983, the upgrade will be performed prior to completion of the January, 1985 outage.

2. It is the Authority's position that these instruments are qualified based on qualification assessments previously performed. However, due to related concerns presented in JAF's TER and TER's of other utilities, additional reviews of these assessments are required by the Authority. Internal resolution of these concerns will be completed by August 15, 1983, at which time, a review of the resolution of these items by the NRC staff may be requested. Based on the outcome of this review, it may be necessary for the Authority to modify this response.

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SYSTEM NO. 11 SYSTEM NAME: STANDBY LIQUID CONTROL (SBLCS)

COMP. ID NO.	EQ FILE NO.	COMP. NAME	QUALIFICATION STATUS	LEVEL	METHOD	ACTION PLAN
NONE	----	---------	------	-----	----------	----------

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LISTING AND STATUS OF HARSH ENVIRONMENT ELECTRICAL EQUIPMENT REQUIRING QUALIFICATION (10CFR50.49)

SYSTEM NO. 12 SYSTEM NAME: REACTOR WATER CLEANUP (RWCU)- SEE NOTE 1

COMP. ID NO.	EQ FILE NO.	COMP. NAME	QUALIFICATION STATUS	LEVEL	METHOD	ACTION PLAN
12MOV-15	8/16	Inboard Containment Isolation Valve Operator (PCIS)	IN PROGRESS	----	----	See Note 1 for Action Plan (Mod. M1-83-04)
12MOV-18	8/17	Outboard Containment Isolation Valve Operator (PCIS)	QUALIFIED	DOR	Test/Analysis	Not required
12MOV-80	8/18	Outboard Containment Isolation Bypass Valve Operator (PCIS)	QUALIFIED	DOR	Test/Analysis	Not required
12TE-117 (A-F)	8/19	Leak Detection Thermocouples	QUALIFIED	DOR	Test/Analysis	Not required See Note 2

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SYSTEM NO: 12 SYSTEM NAME: REACTOR WATER CLEANUP (RWCU)

NOTES

1. Limitorque valve actuator motor and other actuator internal components will be replaced to upgrade this valve operator to a fully qualified status. If motor delivery from the Limitorque Company is by June 1, 1983, the upgrade will be performed during the Jne, 1983 refueling outage. If motor delivery is after June 1, 1983, the upgrade will be performed by the scheduled January, 1985 outage.

2. A qualification test program to NUREG 0588, Cat. I requirements is presently in progress. Successful completion of this program will upgrade the level of qualification of this item.

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SYSTEM NO. 13 SYSTEM NAME: REACTOR CORE ISOLATION COOLING (RCIC)

COMP. ID NO.	EQ FILE NO.	COMP. NAME	QUALIFICATION STATUS	LEVEL	METHOD	ACTION PLAN
13DPIS-83	14/1	RCIC Steam Line Differential Pressure Switch (High Flow)	QUALIFIED	DOR	Test/Analysis	Note 1
13DPIS-84	14/2	RCIC Steam Line Differential Pressure Switch (High Flow)	QUALIFIED	DOR	Test/Analysis	Note 1
13FS-57	14/3	Pump Discharge Low Flow Switch	IN PROGRESS	DOR	Test/Analysis	Note 3, 5
13LS-12	14/5	Barometric Condenser Tank level Switch	IN PROGRESS	DOR	Test/Analysis	Note 4, 5
13MOV-15	14/7	Steam Line Inboard Isolation Valve Operator	QUALIFIED	DOR	Test/Analysis	None required
13MOV-16	14/8	Steam Line Outboard Isolation Valve Operator	IN PROGRESS	----	----	Valve operator to be replaced during Jan. 1985 outage
13MOV-39	14/14	Suppression Pool Downstream Isolation Valve Operator	IN PROGRESS	DOR	Test/Analysis	Note 3, 5

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SYSTEM NO. 13 SYSTEM NAME: REACTOR CORE ISOLATION COOLING (RCIC)

COMP. ID NO.	EQ FILE NO.	COMP. NAME	QUALIFICATION STATUS	LEVEL	METHOD	ACTION PLAN
13MOV-41	14/15	Suppression Pool Upstream Isolation Valve Operator	IN PROGRESS	DOR	Test/Analysis	Note 3, 5
13MOV-131	14/17	Turbine Steam Inlet Isolation Valve Operator	IN PROGRESS	DOR	Test/Analysis	Note 3, 5
13PNS-LS4	----	Turbine Trip Throttle Valve Position Switch	IN PROGRESS	DOR	Test/Analysis	Note 4, 5
13PS-67A, B	14/30, 31	RCIC Pump Low Suction Pressure Switch	IN PROGRESS	DOR	Test/Analysis	Note 3, 5
13PS-72A, B	14/32	Turbine Exhaust High Pressure Switch	IN PROGRESS	DOR	Test/Analysis	Note 3, 5
13PS-78 (A-D)	14/33	Turbine Exhaust Diaphragm High Pressure Switch	IN PROGRESS	DOR	Test/Analysis	Note 3, 5
13TE-73A, B 13TE-88A, B	14/46 14/48	Steam Line Leak Detection Thermocouple	QUALIFIED	DOR	Test/Analysis	None required. Note 2

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SYSTEM NO. 13 SYSTEM NAME: REACTOR CORE ISOLATION COOLING (RCIC)

COMP. ID NO.	EQ FILE NO.	COMP. NAME	QUALIFICATION STATUS	LEVEL	METHOD	ACTION PLAN
13TE-100 (A-D)	14/49 14/50 14/51 14/52	Steam Line Leak Detection Thermocouple	QUALIFIED	DOR	Test/Analysis	None required. Note 2
13TE-106 (A-D)	14/53 14/54 14/55 14/56	Steam line Leak Detection Thermocouple	QUALIFIED	DOR	Test/Analysis	None required. Note 2
13PS-87 (A-D)	----	RCIC Steam Supply Low Pressure	QUALIFIED	DOR	Test/Analysis	Note 3

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SYSTEM NO: 13 SYSTEM NAME: REACTOR CORE ISOLATION COOLING (RCIC)

NOTES

1. It is the Authority's position that these instruments are qualified based on qualification assessments previously performed. However, due to related concerns presented in JAF's TER and TER's of other utilities, additional reviews of these assessments are required by the Authority. Internal resolution of these concerns will be completed by August 15, 1983, at which time, a review of the resolution of these items by the NRC staff may be requested. Based on the outcome of this review, it may be necessary for the Authority to modify this response.

2. A qualification test program to NUREG-0588, Cat. I requirements is presently in progress. Successful completion of this program will upgrade the level of qualification of this item.

3. An ongoing qualification program is scheduled to be completed by September 30, 1983. This program involves extending the applicability of previously completed qualification program to this identical equipment.

4. This equipment will be replaced by the January 1985 refueling outage or a modification to provide separate electrical fusing for this component will be provided.

5. This equipment performs its safety-related design function in a mild environment. However, the existing system logic design incorporates common electrical fusing for this item and other harsh environment electrical equipment (HPCI steam line break isolation) requiring qualification. Postulated multiple DC grounds resulting fuse clearing, necessitates the need for qualifying or replacement of this equipment or modifying the circuit electrical protection.

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SYSTEM NO. 14 SYSTEM NAME: CORE SPRAY

COMP. ID NO.	EQ FILE NO.	COMP. NAME	QUALIFICATION STATUS	LEVEL	METHOD	ACTION PLAN
14FIS-45A,B	7/3 7/4	Pump Min. Flow Switch	QUALIFIED	DOR	Analysis/Test	Note 1
14FT-40A,B	7/5 7/6	Core Spray Loop Flow Transmitter (Indication)	IN PROGRESS	----	----	Transmitters being replaced with fully qualified units during June, 1983 refueling outage (Mod. F1-83-01)
14MOV-5A, B	7/7 7/8	Core spray Min. Flow Isolation Valve Operator	QUALIFIED	DOR	Analysis/Test	None required
14MOV-7A,B	7/9 7/10	Core Spray Pump Suction Isolation Valve Operator	QUALIFIED	DOR	Analysis/Test	None required
14MOV-11A,B	7/11 7/12	Core Spray Discharge Outboard Isolation Valve Operator	QUALIFIED	DOR	Analysis/Test	None required
14MOV-12A,B	7/13 7/14	Core Spray Discharge Inboard Isolation Valve Operator	QUALIFIED	DOR	Analysis/Test	None required
14MOV-26A,B	7/15 7/16	Core Spray Test Return Isolation Valve Operator	QUALIFIED	DOR	Analysis/Test	None required
14P-1A,B	7/17	Core Spray Pump Drive Motor (4KV)	QUALIFIED	DOR	Test/Analysis	None required
14PS-41A,B	7/18	Pump Discharge Pressure Switch (ADS)	QUALIFIED	DOR	Test/Analysis	Note 1
14PS-44A,B	7/19	Pump Discharge Pressure Switch (ADS)	QUALIFIED	DOR	Test/Analysis	Note 1
14PT-38A,B	7/21	Core Spray Loop Pressure Transmitter (Indication)	IN PROGRESS	----	----	Transmitters being replaced with fully qualified units during the June, 1983 refueling outage (Mod. F1-83-01)

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SYSTEM NO: 14 SYSTEM NAME: CORE SPRAY

NOTES

1. The Authority considers this equipment to be qualified to the DOR Guidelines based on two previous qualification assessments completed in August, 1982 and March, 1983. The Authority is presently reviewing these assessments based on related concerns identified in the Franklin TER received in late April, 1983. Internal resolution of these concerns by the Authority will be completed by August 15, 1983, at which time, a review of the qualification by the NRC staff may be requested. Based on the outcome of this review, it may be necessary for the Authority to supplement this response.

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SYSTEM NO. 15 SYSTEM NAME: REACTOR BUILDING CLOSED LOOP COOLING

COMP. ID NO.	EQ FILE NO.	COMP. NAME	QUALIFICATION STATUS	LEVEL	METHOD	ACTION PLAN
15MOV-101	11/1	RBCLC to ESW Cross-Connect Supply Valve Operator	QUALIFIED	DOR	Test/Analysis	None required
15MOV-102	11/2	Drywell Cooler Assembly A Supply Valve Operator	QUALIFIED	DOR	Test/Analysis	None required
15MOV-103	11/3	Drywell Cooler Assembly B Supply Valve Operator	IN PROGRESS	----	----	See Note 2 for Action Plan (Mod. M1-83-04)
15MOV-175A,B	11/4 11/5	RBCLC to ESW Return Cross-Connect Valve Operator	QUALIFIED	DOR	Test/Anaysis	None required
15PS-122 (A-D)	11/6	RBCLC/ESW Permissive Pressure Switch	QUALIFIED	DOR	Test/Analysis	Note 3

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SYSTEM NO: 15 SYSTEM NAME: REACTOR BLDG. CLOSED LOOP COOLING WATER (RBCLCW)

NOTES

1. The components of the RBCLCW system required to cross-tie of the system with the Emergency Service Water System are included.

2. Limitorque valve actuator motor and other actuator internal components will be replaced to upgrade to fully qualified status (DOR). If motor delivery from Limitorque Corporation is by June 1, 1983, the upgrade will be performed during the June, 1983 refueling outage. If motor delivery is after June 1, 1983, the upgrade will be performed prior to the completion of the January, 1985 outage.

3. The Authority considers this equipment to be qualified to the DOR Guidelines based on two previous qualification assessments completed in August, 1982 and March, 1983. The Authority is presently reviewing these assessments based on related concerns identified in the Franklin TER received in late April, 1983. Internal resolution of these concerns by the Authority will be completed by August 15, 1983, at which time, a review of the qualification by the NRC staff may be requested. Based on the outcome of this review, it may be necessary for the Authority to supplement this response.

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SYSTEM NO. 16 SYSTEM NAME: CONTAINMENT SYSTEM

COMP. ID NO.	EQ FILE NO.	COMP. NAME	QUALIFICATION STATUS	LEVEL	METHOD	ACTION PLAN
16-1RTD129-146	31/1	Suppression Pool Temperature Detector (16)	QUALIFIED	NUREG 0588 Cat. I	Test/Analysis	None required
16-1PNS-101A,B 16-1PNS-102A,B	31/3 31/4	Differential Pressure Transmitter Isolation Valve Position Switch	IN PROGRESS	----	----	To be replaced during the June, 1983 refueling outage (Mod. M1-00/9909)
16-1SOV-101A,B 16-1SOV-102A,B	31/5 31/6	Differential Pressure Transmitter Isolation Valve Pilot Solenoid	IN PROGRESS	----	----	To be replaced during the June, 1983 refueling outage
16-1RTD-107 16-1RTD-108	----	Drywell Area Ambient Temperature Detector	IN PROGRESS	----	----	To be replaced by the January, 1985 refueling outage

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SYSTEM NO. 17 SYSTEM NAME: PROCESS RADIATION MONITORING

COMP. ID NO.	EQ FILE NO.	COMP. NAME	QUALIFICATION STATUS	LEVEL	METHOD	ACTION PLAN
STACK EFFLUENTS						
17RE-50A,B	----	Stack Exhaust Effluent Monitor (Low Range) - 10^{-6} to 10^{0} micro ci/cc	IN PROGRESS	----	----	Note 1
17RE-53A,B 17RT-53A,B	26/1 26/2	Stack Exhaust Effluent Monitor (High Range) - 10E-2D to 10E6D micro ci/cc	IN PROGRESS	----	----	Note 1
TURBINE BLDG. EFFLUENTS						
17RE-431,-432	----	Turbine Bldg. Exhaust Vent Effluent Monitor (Low Range) - 10^{-6} to 10^{0} micro ci/cc	IN PROGRESS	----	----	Note 1
17RE-434A,B 17RT-434A,B	26/3 26/4	Turbine Bldg. Exhaust Vent Effluent Monitor (High Range) - 10E-2D to 10E6D micro ci/cc	IN PROGRESS	----	----	Note 1

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SYSTEM NO. 17 SYSTEM NAME: PROCESS RADIATION MONITORING

COMP. ID NO.	EQ FILE NO.	COMP. NAME	QUALIFICATION STATUS	LEVEL	METHOD	ACTION PLAN
RADWASTE BLDG. EFFLUENTS						
17RE-458A,B	----	Radwaste Bldg. Exhaust Vent Effluent Monitor (Low Range) - 10^{-6} to 10^{0} micro ci/cc	IN PROGRESS	----	----	Note 1
17RE-463A,B 17RT-463A,B	26/5 26/6	Radwaste Bldg. Exhaust Vent Effluent Monitor (High Range) - 10^{-2} to 10^{6} micro ci/cc	IN PROGRESS	----	----	Note 1

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SYSTEM NO: 17 SYSTEM NAME: PROCESS RADIATION MONITORING

NOTES

1. This equipment is located remote from the areas experiencing direct postulated accident environments. However, sample stream radiation levels can result in higher than normal local radiation levels in the area of this instrumentation. The high range effluent monitor design presently incorporates lead shielding to reduce these effects. The Authority is reviewing the existing shielding design for these monitors to confirm its adequacy. This review will be completed by September 1, 1983. If additional shielding is required, this will be added by the January, 1985 outage.

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SYSTEM NO. 20 SYSTEM NAME: RADWASTE

COMP. ID NO.	EQ FILE NO.	COMP. NAME	QUALIFICATION STATUS	LEVEL	METHOD	ACTION PLAN
20MOV-82	8/21	Drywell Floor Drain Sump Inboard Isolation Valve Operator	IN PROGRESS	----	----	Motor and actuator internals to be replaced to upgrade operator to a fully qualified status. If the replacement motor is received by June 1, 1983, the upgrade will be accomplished during the June, 1983 outage. If received after June 1, 1983, the upgrade will be accomplished by the Jan. 1985 outage.
20MOV-94	8/22	Drywell Equip. Drain Sump Inboard Isolation Valve Operator	IN PROGRESS	----	----	
20SOV-83	8/42	Drywell Floor Drain Sump Inboard Isolation Valve Pilot Solenoid	IN PROGRESS	----	----	Pilot solenoid to be replaced with a fully qualified model by the Jan. 1985 refueling outage
20SOV-95	8/43	Drywell Equip. Drain Sump Outboard Isolation Valve Pilot Solenoid	IN PROGRESS	----	----	Pilot solenoid to be replaced with a fully qualified model by the Jan. 1985 refueling outage
20PNS-83	8/44	Drywell Floor Drain Sump Inboard Isolation Valve Position Switch	IN PROGRESS	----	----	To be replaced with fully qualified switches by the January 1985 outage
20PNS-95	8/44	Drywell Equip. Drain Sump Outboard Isolation Valve Pilot Solenoid	IN PROGRESS	----	----	To be replaced by fully qualified switches by the January 1985 outage

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SYSTEM NO. 23 SYSTEM NAME: **HIGH PRESSURE COOLANT INJECTION (HPCI)**

COMP. ID NO.	EQ FILE NO.	COMP. NAME	QUALIFICATION STATUS	LEVEL	METHOD	ACTION PLAN
23DPIS-76	12/2	HPCI Steam Line High Flow Differential Pressure Switch (Leak Detection)	QUALIFIED	DOR	Test/Analysis	Note 1
23DPIS-77	12/3	HPCI Steam Line High Flow Differential Pressure Switch (Leak Detection)	QUALIFIED	DOR	Test/Analysis	Note 1
23FS-78	12/4	HPCI Low Flow Pressure Switch	IN PROGRESS	DOR	Test/Analysis	Notes 2, 5
23MOV-14	12/11	HPCI Turbine Steam Inlet Isolation Valve Operator	IN PROGRESS	DOR	Test/Analysis	Notes 2, 5
23MOV-15	12/12	HPCI Steam Line Inboard Isolation Valve Operator	QUALIFIED	DOR	Test/Analysis	None required.
23MOV-16	12/13	HPCI Steam Line Outboard Isolation Valve Operator	QUALIFIED	DOR	Test/Analysis	None required.
23LS-91A, B	12/6, 7	Suppresssion Chamber High Water Level Switch	IN PROGRESS	DOR	Test/Analysis	Notes 2, 5

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SYSTEM NO. 23 SYSTEM NAME: **HIGH PRESSURE COOLANT INJECTION (HPCI)**

COMP. ID NO.	EQ FILE NO.	COMP. NAME	QUALIFICATION STATUS	LEVEL	METHOD	ACTION PLAN
23LS-99	----	Gland Seal Condensate Hotwell Low Level Switch	IN PROGRESS	----	----	Note 4
23LS-100	----	Gland Seal Condensate Hotwell High Level Switch	IN PROGRESS	----	----	Note 4
23LT-202A, B	27/2	Suppression Pool Wire Range Level Transmitter	QUALIFIED	NUREG 0588 Cat. I	Test/Analysis	None required.
23LT-203A1, B1 23LT-203A2, B2	27/1	Containment Level Transmitter	QUALIFIED	NUREG 0588 Cat. I	Test/Analysis	None required.
23MOV-57	12/20	Suppression Pool Downstream Isolation Valve Operator	QUALIFIED	DOR	Test/Analysis	None required.
23MOV-58	12/21	Suppression Pool Upstream Isolation Valve Operator	QUALIFIED	DOR	Test/Analysis	None required.
23MOV-59	12/22	HPCI Exhaust Line Vacuum Breaker Isolation Valve Operator	QUALIFIED	DOR	Test/Analysis	None required.

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SYSTEM NO. 23 SYSTEM NAME: HIGH PRESSURE COOLANT INJECTION (HPCI)

COMP. ID NO.	EQ FILE NO.	COMP. NAME	QUALIFICATION STATUS	LEVEL	METHOD	ACTION PLAN
23MOV-60	12/23	HPCI Steam Line Outboard Bypass Isolation Valve Operator	QUALIFIED	DOR	Test/Analysis	None required.
23PNS-LS4	12/30	HPCI Turbine Stop Valve Position Switch	IN PROGRESS	----	----	Replace with a qualified position switch by Jan. 1985 outage and also Note 5
23PS-68 (A-D)	12/39 12/40	HPCI Steam Supply Low Pressure Switch (Isolation)	QUALIFIED	DOR	Test/Analysis	Note 1
23PS-84A, B	12/43, 44	HPCI Pump Low Suction Pressure Switch	IN PROGRESS	DOR	Test/Analysis	Notes 2, 5
23PS-86 (A-D)	12/46-49	Turbine Exhaust Diaphragm High Pressure Switch	IN PROGRESS	DOR	Test/Analysis	Note 2, 5
23PS-97A, B	12/50, 51	Turbine Exhaust High Pressure Switch	IN PROGRESS	DOR	Test/Analysis	Notes 2, 5

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SYSTEM NO. 23 SYSTEM NAME: HIGH PRESSURE COOLANT INJECTION (HPCI)

COMP. ID NO.	EQ FILE NO.	COMP. NAME	QUALIFICATION STATUS	LEVEL	METHOD	ACTION PLAN
23TE-92A, B	12/65 12/66	HPCI Area Ambient Temperature Thermo-couple (Leak Detection)	QUALIFIED	DOR	Test/Analysis	Note 1
23TE-114A, B	12/68 12/69	HPCI Area Ambient Temperature Thermo-couple (Leak Detection)	QUALIFIED	DOR	Test/Analysis	Note 3

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SYSTEM NO: 23 SYSTEM NAME: HIGH PRESSURE COOLANT INJECTION

NOTES

1. The Authority considers this equipment to be qualified to the DOR Guidelines based on a previous qualification assessment performed in March, 1982. The Authority is presently reviewing this assessment based on related concerns identified in the Franklin TER received in late April, 1983. Internal resolution of these concerns by the Authority will be completed by August 15, 1983, at which time a review of the resolution of these items by the NRC staff may be requested. Based on the outcome of this review, it may be necessary for the Authority to supplement this response.

2. An ongoing qualification program is scheduled to be completed by September 30, 1983. This program involves extending a previously completed qualification program for applicability to this identical equipment.

3. A qualification test program to NUREG-0588, Cat. I requirements is presently in progress. Successful completion of this program will upgrade the level of qualification of this item.

4. This equipment will be replaced by the January 1985 outage or a modification to provide separate electrical fusing for this component will be provided.

5. This equipment performs its safety-related design function in a mild environment. However, the existing system logic design incorporates common electrical fusing for this item and other harsh environment components (HPCI steam line break isolation) requiring qualification. Postulated multiple DC grounds and resulting fuse clearing, necessitates the need for qualifying or replacement of this equipment or modifying the circuit electric protection.

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SYSTEM NO. 27 SYSTEM NAME: PRIMARY CONTAINMENT ATMOSPHERE CONTROL/MONITORING

COMP. ID NO.	EQ FILE NO.	COMP. NAME	QUALIFICATION STATUS	LEVEL	METHOD	ACTION PLAN
27DWA-PA PB includes: 2702-AZ-101A,B 27HAZ-101A,B 27MAZ-101A,B	09/1 09/8 09/9	Drywell Analyzer Panel (oxygen, hydrogen)	IN PROGRESS	----	----	1. Fully qualified H_2 Analyzer system presently being instal will be completed by end of June, 1983 refueling Outage (Mod. F1-80-20) 2. Fully qualified O_2 Analyzer will be installed by January 1985 outage.
27E/P-103A,B (27FCV-103A,B)	09/2	Nitrogen Flow to Containment Electro-pneumatic Convertor for 27FCV-103A, B	IN PROGRESS	----	----	Replace with fully qualified convertor or modify valve control method by Jan. 1985 outage
27FT-103A,B	9/6	Nitrogen Supply to Containment Flow Transmitter	IN PROGRESS	----	----	Replace with fully qualified flow transmitter during June, 1983 Outage (Mod F1-83-01)
27HAZ-102A,B	30/3	Containment Hydrogen Analyzer	QUALIFIED	NUREG 0588 Cat. I	Test/Analysis	This is replacement H_2 analyzer for 27HAZ-101A, B above (NUREG-0737)
27MOV-113	9/11	Drywell Air Exhaust Bypass Valve Operator	QUALIFIED	DOR	Test/Analysis	None required

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SYSTEM NO. 27 SYSTEM NAME: PRIMARY CONTAINMENT ATMOSPHERE CONTROL/MONITORING

COMP. ID NO.	EQ FILE NO.	COMP. NAME	QUALIFICATION STATUS	LEVEL	METHOD	ACTION PLAN
27MOV-117	9/12	Suppression Chamber Air Exhaust Bypass Valve Operator	QUALIFIED	DOR	Test/Analysis	None required
27MOV-120	9/71	Vent and Purge Exhaust to SBGTS Isolation Valve Operator	QUALIFIED	DOR	Test/Analysis	None required
27MOV-121	9/72	Vent & Purge Exhaust to SBGTS Isolation Valve	QUALIFIED	DOR	Test/Analysis	None required
27MOV-122	9/70	Drywell Exhaust Line Bypass Valve Operator	QUALIFIED	NUREG 0588 Cat. I	Test/Analysis	None required. (NUREG 0737)
27MOV-123	9/70	Suppression Pool Exhaust Bypass Valve Operator	QUALIFIED	NUREG 0588 Cat. I	Test/Analysis	None required. (NUREG 0737)
27PNS-101A,B (27AOV-101A,B)	9/15	Suppression Chamber Vent Line Isolation Position Switch	QUALIFIED	NUREG 0588 Cat. I	Test/Analysis	None required. (replaced)

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SYSTEM NO. 27 SYSTEM NAME: PRIMARY CONTAINMENT ATMOSPHERE CONTROL/MONITORING

COMP. ID NO.	EQ FILE NO.	COMP. NAME	QUALIFICATION STATUS	LEVEL	METHOD	ACTION PLAN
27PNS-103A,B (27FCV-103A,B)	9/16	Nitrogen Flow Control Valve Position Switches	QUALIFIED	DOR	Test/Analysis	None required. (replaced)
27PNS-111 (27AOV-111)	9/17	Drywell Purge Supply Isolation Valve Position Switches	QUALIFIED	NUREG 0588 Cat. I	Test/Anaysis	None required. (replaced)
27PNS-112	9/18	Drywell Purge Supply Isolation Valve Position Switches	QUALIFIED	NUREG 0588 Cat. I	Test/Analysis	None required. (replaced)
27PNS-132A,B (27AOV-132A,B)	9/26	Nitrogen to Suppression Pool Isolation Valve Position Switch	QUALIFIED	NUREG 0588 Cat. I	Test/Analysis	None required. (replaced)
27PNS-141 thru -147 (27VB-1 thru -7)	9/27-9/33	Suppression Chamber Vacuum Breaker Position Switches	QUALIFIED	NUREG 0588 Cat. I	Test/Analysis	None required. (replaced)
27PS-110A,B	9/34	Drywell Vacuum Breaker Isolation Signal Pressure Switch	IN PROGRESS	----	----	Replace with fully qualified pressure switch or transmitter by Jan. 1985 outage

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SYSTEM NO. 27 SYSTEM NAME: PRIMARY CONTAINEMNT ATMOSPHERE CONTROL/MONITORING

COMP. ID NO.	EQ FILE NO.	COMP. NAME	QUALIFICATION STATUS	LEVEL	METHOD	ACTION PLAN
27PT-114	9/37	Nitrogen Train "A" Pressure Transmitter (Indication)	IN PROGRESS	----	----	To be replaced with fully qualifie pressure transmitter during 1983 refueling outage (Mod. F1-83-01)
27PT-115A1, A2	27/1	Primary Containment Pressure - Low Range (Indication)	QUALIFIED	NUREG 0588 Cat. I	Test	None required. (NUREG 0737)
27PT-115B1,B2	27/1	Primary Containment Pressure - Low Range (Indication)	QUALIFIED	NUREG 0588 Cat. I	Test	None required. (NUREG 0737)
27RE-104A,B	28/1	Primary Containment High Range Radiation Detector (Indication and Isolation Signal)	QUALIFIED	NUREG 0588 Cat. I	Test	None required. (NUREG 0737)
27PNS-113 (27AOV-113)	9/19	Drywell Purge Exhaust Isolation Valve Position Switch	QUALIFIED	NUREG 0588 Cat. I	Test/Analysis	None required. (replaced)
27PNS-114 (27AOV-114)	9/20	Drywell Purge Exhaust Isolation Valve Position Switch	QUALIFIED	NUREG 0588 Cat. I	Test/Analysis	None required. (replaced)

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SYSTEM NO. 27 SYSTEM NAME: PRIMARY CONTAINMENT ATMOSPHERE CONTROL/MONITORING

COMP. ID NO.	EQ FILE NO.	COMP. NAME	QUALIFICATION STATUS	LEVEL	METHOD	ACTION PLAN
27PNS-115 (27AOV-115)	9/21	Drywell Purge Supply Isolation Valve Position Switch	QUALIFIED	NUREG 0588 Cat. I	Test/Analysis	None required. (replaced)
27PNS-116 (27AOV-116)	9/22	Drywell Purge Supply Isolation Valve Position Switch	QUALIFIED	NUREG 0588 Cat. I	Test/Analysis	None required. (replaced)
27PNS-117 (27AOV-117)	9/23	Suppression Chamber Exhaust Isolation Valve Position Switch	QUALIFIED	NUREG 0588 Cat. I	Test/Analysis	None required. (replaced)
27PNS-118 (27AOV-118)	9/24	Suppression Chamber Exhaust Isolation Valve Position Switch	QUALIFIED	NUREG 0588 Cat. I	Test/Analysis	None required. (replaced)
27PNS-131A,B (27AOV-131A,B)	9/25	Nitrogen to Drywell Isolation Valve Position Switch	QUALIFIED	NUREG 0588 Cat. I	Test/Analysis	None required. (replaced)
27RTD-101 (A-D)	9/41	Suppression Pool Temperature RTD	IN PROGRESS	----	----	To be replaced with fully qualified RTD by Jan. 1985 outage.
27RTD-112 (27FT-103A)	9/42	Temperature Compensation for Nitrogen	IN PROGRESS	----	----	To be replaced with a fully qualified RTD by the Jan. 1985

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SYSTEM NO. 27 SYSTEM NAME: PRIMARY CONTAINMENT ATMOSPHERE CONTROL/MONITORING

COMP. ID NO.	EQ FILE NO.	COMP. NAME	QUALIFICATION STATUS	LEVEL	METHOD	ACTION PLAN
27SOV-101A,B (27AOV-101A,B)	9/43	Suppression Chamber Vent Line Isolation Valve Pilot Solenoid	QUALIFIED	NUREG 0588 Cat. I	Test	None required. (replaced)
27SOV-111 (27AOV-111)	9/44	Drywell Purge Supply Isolation Valve Pilot Solenoid	QUALIFIED	NUREG 0588 Cat. I	Test	None required. (replaced)
27SOV-112 (27AOV-112)	9/45	Drywell Purge Supply Isolation Valve Pilot Solenoid	QUALIFIED	NUREG 0588 Cat. I	Test	None required. (replaced)
27SOV-113 (27AOV-113)	9/46	Drywell Purge Exhaust Isolation Valve Pilot Solenoid	QUALIFIED	NUREG 0588 Cat. I	Test	None required. (replaced)
23SOV-114 (27AOV-114)	9/47	Drywell Purge Exhaust Isolation Valve Pilot Solenoid	QUALIFIED	NUREG 0588 Cat. I	Test	None required. (replaced)
27SOV-115 (27AOV-115)	09/48	Drywell Purge Supply Isolation Valve Pilot Solenoid	QUALIFIED	NUREG 0588 Cat. I	Test	None required. (replaced)

SYSTEM NO. 27 SYSTEM NAME: PRIMARY CONTAINMENT ATMOSPHERE CONTROL/MONITORING

COMP. ID NO.	EQ FILE NO.	COMP. NAME	QUALIFICATION STATUS	LEVEL	METHOD	ACTION PLAN
27SOV-116 (27AOV-116)	09/49	Drywell Purge Suppy Isolation Valve Pilot Solenoid	QUALIFIED	NUREG 0588 Cat. I	Test	None required. (replaced)
27SOV-117 (27AOV-117)	09/50	Suppression Chamber Exhaust Isolation Valve Pilot Solenoid	QUALIFIED	NUREG 0588 Cat. I	Test	None required. (replaced)
27SOV-118 (27AOV-118)	09/51	Suppression Chamber Exhaust Isolation Valve Pilot Solenoid	QUALIFIED	NUREG 0588 Cat. I	Test	None required. (replaced)
27SOV-119A,B	09/52	Suppression Chamber Sample Flow to Containment Sampling System Solenoid Isolation Valve	QUALIFIED	DOR	Test/Analysis	None required - Notes 1, 3
27SOV-120A,B	09/53	Drywell Sample Flow to Containment Sampling System Solenoid Isolation Valve	QUALIFIED	DOR	Test/Analysis	None required - Notes 1, 3
27SOV-121A,B	9/54	Drywell Sample Flow to Containment Sampling System Solenoid Isolation Valve	QUALIFIED	DOR	Test/Analysis	None required - Notes 1, 3

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SYSTEM NO. 27 SYSTEM NAME: PRIMARY CONTAINMENT ATMOSPHERE CONTROL/MONITORING

COMP. ID NO.	EQ FILE NO.	COMP. NAME	QUALIFICATION STATUS	LEVEL	METHOD	ACTION PLAN
27SOV-122A,B	9/55	Drywell Sample Flow Containment Sampling System Solenoid Isolation Valve	QUALIFIED	DOR	Test/Analysis	None required - Notes 1, 3
27SOV-123A,B	9/56	Drywell Sample Flow to Moisture Analyzer Solenoid Isolation Valve	QUALIFIED	DOR	Test/Analysis	None reuqired - Notes 2, 3
27SOV-124A,B	9/57	Containment Sampling System Return Line to Suppression Chamber Solenoid Isolation Valve	QUALIFIED	DOR	Test/Analysis	None required - Notes 2, 3
27SOV-125A,B	9/58	Containment Radiation Monitor Return to Drywell Solenoid Isolation Valve	QUALIFIED	DOR	Test/Analysis	None required - Notes 1, 3
27SOV-131A,B (27AOV-131A,B)	9/59	Nitrogen to Drywell Isolation Valve Pilot Solenoid	QUALIFIED	NUREG 0588 Cat. I	Test	None required. (replaced)

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SYSTEM NO. 27 SYSTEM NAME: PRIMARY CONTAINMENT ATMOSPHERE CONTROL/MONITORING

COMP. ID NO.	EQ FILE NO.	COMP. NAME	QUALIFICATION STATUS	LEVEL	METHOD	ACTION PLAN
27SOV-132A,B (27AOV-132A,B)	9/60	Nitrogen to Suppression Pool Isolation Valve Pilot Solenoid	QUALIFIED	NUREG 0588 Cat. I	Test	None required. (replaced)
27SOV-135A,B	9/61	Containment Sample Flow to Radiation Monitors Solenoid Isolation Valve	QUALIFIED	DOR	Test/Analysis	None required - Note 2
27DWA-HTA,HTB 27RTD-102A1,B1 -102A2,B2 thru -107A1,B1 -107A2,B2	9/67 9/64 9/65 9/66	Containment Atmosphere Monitoring Heat Tracing System	IN PROGRESS	----	----	A fully qualified heat tracing system will be installed as part of the new H_2 Analyzer System (Mod. F1-80-20) and the replacement O_2 Analyzer System to be installed by the Jan. 1985 outage. The Authority is awaiting the final qualification test report. This equipment is not presently installed and operational.
27SOV-119E,F 27SOV-120E,F 27SOV-122E,F 27SOV-123E,F 27SOV-124E,F	30/1	Hydrogen Sampling System Solenoid Isolation Valves	QUALIFIED	NUREG 0588 Cat. I	Test	None required

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SYSTEM NO: 27 SYSTEM NAME: PRIMARY CONTAINMENT ATMOSPHERE CONTROL/ MONITORING

NOTES

1. These solenoid valves provide isolation from the primary containment or the existing containment atmosphere monitoring system (27DWA-PA, PB). With the completion of the installation of the new hydrogen analyzer (27HAZ-102A, B) and replacement oxygen analyzer these solenoid valves will provide only a primary containment isolation function and will not be required to be re-opened for containment sampling following a postulated accident.

   The new containment atmosphere monitoring equipment will be isolated by separate fully qualified containment isolation solenoid valves.

2. Provides containment isolation function only.

3. The Authority considers this equipment to be qualified to the DOR Guidelines based on two previous qualification assessments completed in August, 1982 and March, 1983. The Authority is presently reviewing these assessments based on related concerns identified in the Franklin TER received in late April, 1983. Internal resolution of these concerns by the Authority will be completed by August 15, 1983, at which time, a review of the qualification by the NRC staff is requested. Based on the outcome of this review, it may be necessary for the Authority to supplement this response.

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SYSTEM NO. 29 SYSTEM NAME: MAIN STEAM AND MAIN STEAM LEAK COLLECTION SYSTEM (MSLCS)

COMP. ID NO.	EQ FILE NO.	COMP. NAME	QUALIFICATION STATUS	LEVEL	METHOD	ACTION PLAN
29MOV-74	8/23	Main Steam Line Drain Inboard Isolation Valve Operator	IN PROGRESS	----	----	Note 1
29MOV-77	8/24	Main Steam Line Drain Outboard Isolation Valve Operator	IN PROGRESS	DOR	Test/Analysis	Qualification Program to be complete by Sept. 1, 1983. If not successful, motors will be replaced by Jan. 1985 outage.
29MOV-200A, B	8/45	Leak Collection System Master Isolation Valve Operator	IN PROGRESS	DOR	Test/Analysis	Qualification Program to be completed by Sept. 1, 1983. If not successful, motors will be replaced by Jan. 1985 outage.
29MOV-201A, B	8/46	Leak Collection System to Standby-Gas Isolation Valve Operator	IN PROGRESS	DOR	Test/Analysis	Qualification Program to be completed by Sept. 1, 1983. If not successful, motors will be replaced by Jan. 1985 outage.
29MOV-202A, B	8/47	Leak Collection System to Standby-Gas Backup isolation Valve Operator	IN PROGRESS	DOR	Test/Analysis	Qualification Program to be completed by Sept. 1, 1983. If not successful, motors will be replaced by Jan. 1985 outage.
29MOV-203A, B	8/48	MSIV Steam Packing Isolation Valve Operator	IN PROGRESS	DOR	Test/Analysis	Qualification Program to be completed by Sept. 1, 1983. If not successful, motors will be replaced by Jan. 1985 outage.

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SYSTEM NO. 29 SYSTEM NAME: MAIN STEAM AND MAIN STEAM LEAK COLLECTION (MSLCS)

COMP. ID NO.	EQ FILE NO.	COMP. NAME	QUALIFICATION STATUS	LEVEL	METHOD	ACTION PLAN
29MOV-204A, B	8/49	Leak Collection System Backup Drain Valve Operator	IN PROGRESS	DOR	Test/Analysis	Qualification Program to be completed by Sept. 1, 1983. If not successful, motors will be replaced by Jan. 1985 outage.
29PNS-80 A1, A2, A3	8/25	Main Steam Isolation Valve (Inboard) Position Switches	QUALIFIED	NUREG 0588 Cat. I	Test/Analysis	None required (replaced)
29PNS-80 B1, B2, B3	8/26					
29PNS-80 C1, C2, C3	8/27					
29PNS-80 D1, D2, D3	8/28					
29PNS-86 A1, A2, A3	8/29 8/30	Main Steam Isolation Valve (Outboard) Position Switches	QUALIFIED	NUREG 0588 Cat. I	Test/Analysis	None required (replaced)
29PNS-86 B1, B2, B3						
29PNS 86 C1, C2, C3	8/31					
29PNS-86 D1, D2, D3						
29SOV-80 A2, A3	8/34	Main Steam Isolation Valve (Inboard) Pilot Solenoid	IN PROGRESS	----	----	To be replaced by Jan. 1985 refueling outage with fully qualified solenoid valves.
29SOV-80 B2,B3	8/35					
29SOV-80 C2,C3	8/36					
29SOV-80 D2,D3	8/37					

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SYSTEM NO. 29 SYSTEM NAME: **MAIN STEAM AND MAIN STEAM LEAK COLLECTION (MSCLS)**

COMP. ID NO.	EQ FILE NO.	COMP. NAME	QUALIFICATION STATUS	LEVEL	METHOD	ACTION PLAN
29SOV-86 A2, A3 29SOV-86 B2, B3 29SOV-86 C2, C3 29SOV-86 D2, D3	8/38 8/39 8/40 8/41	Main Steam Isolation Valve (Outboard) Pilot Solenoid	IN PROGRESS	----	----	To be replaced by Jan. 1985 outage with fully qualified solenoid valves.
29PS-201A, B	8/49	Leak Collection System High Pressure Switch	IN PROGRESS	DOR	Test/Analysis	A qualification program for these switches is in progress. Completion is expected by Sept. 15, 1983.
29PS-202A, B	8/50	Leak Collection System High Pressure Switch	IN PROGRESS	DOR	Test/Analysis	A qualification program for these switches is in progress. Completion is expected by Sept. 15, 1983.

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SYSTEM NO: 29 SYSTEM NAME: MAIN STEAM AND MAIN STEAM LEAK COLLECTION

NOTES

1. Limitorque valve actuator motor and other actuator internal components will be replaced to upgrade this actuator to a fully qualified status. If motor delivery from Limitorque is by June 1, 1983, the upgrade will be performed during the June, 1983 outage. If motor delivery is after June 1, 1983 the upgrade will be performed by the January 1985 outage.

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SYSTEM NO. 66 SYSTEM NAME: REACTOR BUILDING VENTILATION

COMP. ID NO.	EQ FILE NO.	COMP. NAME	QUALIFICATION STATUS	LEVEL	METHOD	ACTION PLAN
66HV-3A, B	10/5 10/6	Crescent Area Unit Cooler Local Control Panel	IN PROGRESS	----	----	See Note 1
66PNS-100A1,A2 66PNS-100B1, B2	10/12	Reactor Bldg. Inlet Isolation Damper Switch	QUALIFIED	NUREG 0588 Cat. I	Test/Analysis	None required (replaced)
66PNS-101A, A2 66PNS-101B, B2	10/13	Reactor Bldg. Outlet Outlet Isolation Damper Position Switch	QUALIFIED	NUREG 0588 Cat. I	Test/Analysis	None Required (replaced)
66SOV-100A, B	10/8 10/9	Reactor Bldg. Inlet Isolation Damper Pilot Solenoid Valve	QUALIFIED	NUREG 0588 Cat. I	Test/Analysis	None required (replaced)
66SOV-101A, B	10/10 10/11	Reactor Bldg. Outlet Isolation Damper Pilot Solenoid Valve	QUALIFIED	NUREG 0588 Cat. I	Test/Analysis	None required (replaced)
66UC-22 (A-K)	13/2	Crescent Area Unit Cooler Motors	IN PROGRESS	DOR	Test/Analysis	Successfully complete existing qualification of program by Sept. 30, 1983 of replace with fully qualified fan motors by Jan. 1985 refueling outage.

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SYSTEM NO: 66 SYSTEM NAME: REACTOR BUILDING VENTILATION

NOTES

1. A modification will be performed to the wiring in Panels 66HV-3A, 3B to eliminate local control of the Crescent Area fan coolers from these panels. This modification will consist of removing existing control switches and splicing the control cables. This modification will eliminate the need for qualifying this ventilation panel and will be completed by the January 1985 refueling outage.

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SYSTEM NO. 68 SYSTEM NAME: DRYWELL COOLING SYSTEM

COMP. ID NO.	EQ FILE NO.	COMP. NAME	QUALIFICATION STATUS	LEVEL	METHOD	ACTION PLAN
68TE-201 thru 212 (Total = 12)	----	Drywell Area Temperature Thermocouples	IN PROGRESS	----	----	Replace all 26 thermocouples with fully qualified units by the Jan. 1985 refueling outage
68TE-301 thru 310 (Total = 10)						
68TE-102, 103 104, 105	23/4-7	Drywell Cooling Direct Temperature Thermocouples				

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SYSTEM NO. 71 SYSTEM NAME: ELECTRICAL POWER

COMP. ID NO.	EQ FILE NO.	COMP. NAME	QUALIFICATION STATUS	LEVEL	METHOD	ACTION PLAN
BMCC-1, 2, 3, 4, 6	17/3-5	Motor Control Centers (125VDC)	IN PROGRESS	DOR	Similarity/ Analysis	Note 1
MCC-151, 152 153, 155, 161, 162, 163, 164 165	17/12-20	Motor Control Centers (600VAC)	IN PROGRESS	DOR	Similarity/ Analysis	Note 1
L-15 L-16	21/3 21/4	Unit Substation - 4KV/600VAC Incl. Isolation Switch, Transformer and Breaker Cubicle	IN PROGRESS	DOR	Similarity/ Analysis	Note 2
71BAT-3A, B 71INV-3A, B	22/1 22/2	LPCI Independent Power Supply Charger/ Inverter Incl. Battery (400KW)	IN PROGRESS	----	----	Note 4
71ACA5 71ACB5 PT-71ACA5 PT-71ACB5	23/17 23/18 23/19 23/20	Reactor Bldg. Emerg. Control & Instrument Bus Distribution Panel (120VAC) including 600/120VAC Transformer	IN PROGRESS	----	----	Note 3

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SYSTEM NO: 71 SYSTEM NAME: ELECTRICAL POWER

NOTE

1. Motor Control Center (MCC) Qualification - The Authority with a group of six (6) other BWR owners are working on a joint two phase program for confirming qualification to the DOR Guidelines based on analysis and similarity. This qualification program is based on qualification test data from a later version of the General Electric 7700 Series motor control centers. Phase I of this program is scheduled for completion in September, 1983. Phase II will require an additional six months to complete. It is not feasible to type test the existing models because of lack of spare MCC sections of the proper vintage. The Authority will inform the Commission of this program's progress in October, 1983.

2. AKD-5 Switchgear Qualification - The Authority has pursued with the General Electric Company a program for verifying qualification of these two substations to the DOR Guidelines. Phase I will be completed by September, 1983. if Phase I is successful, then final qualification will be performed during a Phase II program. No schedule can be provided for Phase II at this time. The Authority will advise the Commission of the program's progress in October, 1983. it is not feasible to type test the existing equipment due to size and the unavailability of a similar component of the same vintage.

3. 71ACA5, 71ACB5 - In lieu of qualifying these local 120VAC distribution panels, and associated distribution transformers the Authority intends to relocate to a distribution panel located in a mild environment the load breakers for the following safety-related components:

   a. 27NS-CA, CB - Nitrogen Instrument Supply Panel
   b. 71INV-3A, 3B - Control Power for LPCI inverters

   The other loads on these distribution panels have been reviewed and are not required to be functional during and following postulated design basis accidents.

4. LPCI Independent Power Supply - Due to this equipment's design, size, and complexity, it is not feasible to perform a type test program. These are also no qualified replacement equipment for this item. The Authority is precently reviewing this equipment's design bases as a

method of exempting it from harsh environment qualification with additional modifications. This is based on the following:

a. LOCA (large) - This equipment is located remote from the direct harsh environment of this accident and would perform its intended design function of providing power to the LPCI valve bus prior to the local temperature, radiation, or humidity significantly exceeding normal condition. The required operating time is less than 3 minutes.

b. LOCA (small) - This equipment is located remote from the direct accident environment. Although the required operating time is significantly longer for this accident, no significant accident radiation exposure is expected due to its elevation in the Reactor Building and minimal fuel damage can be postulated for this accident. The long term temperature does not significantly increase above normal.

c. HELB - This equipment would be required to operate following a postulated HELB for establishing RHR flow to the vessel. For this accident, access to the Reactor Building would be possible for manual operation of the RHR injection valve or for the transferring of the power source for these valves from the LPCI independent power supply to the alternate emergency feeder (maintenance supply).

The Authority is investigating a modification which would provide for transfer of the power source of the LPCI valve bus from the LPCI Independent Power Supply to the alternate source by way of operator action in the Control Room (should the inverter system fail).

The Authority will complete the investigation of the licensing and design bases for this item and provide a final plan for resolution of this issue to the Commission by September 30, 1983. It is the Authority's goal to provide resolution of the qualification issues for this item by the January, 1985 outage.

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LISTING AND STATUS OF HARSH ENVIRONMENT ELECTRICAL EQUIPMENT REQUIRING QUALIFICATION (10CFR50.49)

SYSTEM NO. MISC. SYSTEM NAME: SPLICES/TERMINAL BLOCKS

COMP. ID NO.	EQ FILE NO.	COMP. NAME	QUALIFICATION STATUS	LEVEL	METHOD	ACTION PLAN
SPLICE	----	Okonite T-95/35 Splice	QUALIFIED	DOR	Test/Analysis	Note 1
SPLICE	35/1	Raychem WCSF Cable Sleeve	QUALIFIED	NUREG 0588 Cat. I	Test/Analysis	None required
SPLICE	35/3	Raychem Insulating End Cap (with sleeve) 101A011-094-52	QUALIFIED	NUREG 0588 Cat. I	Test/Analysis	None required
SPLICE	20/1, 3 4, 5, 6 7	GE EB-5,-25 Terminal Blocks in a Gasketed Steel Junction Box	IN PROGRESS	DOR	Test/Analysis	Final qualification pending completion of drilling of 1/4" weep holes in various junction boxes in the Reactor Bldg. This will be completed by the Jan.,1985 refueling outage.
SPLICE	20/10	Buchanan NQ Series Terminal Blocks in a NEMA 4 Junction Box	QUALIFIED	NUREG 0588 Cat. I	Test/Analysis	None required
CONNECTOR	35/2	Thomas & Betts Ring Terminal (Tefzel)	QUALIFIED	NUREG 0588 Cat. I	Test/Analysis	None required
SPLICE	20/2	Cinch-Jones Terminal Blocks in a Gasketed Steel Junction Box	IN PROGRESS	----	----	Replace with fully qualified terminal blocks by the Jan. 1985 outage.

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SYSTEM NO: MISC. SYSTEM NAME: SPICES/TERMINAL BLOCKS

NOTES

1. The Authority considers this equipment to be qualified to the DOR Guidelines based on a previous qualification assessment. However, the Authority is presently re-reviewing this item based on related concerns regarding similarity contained in the Franklin TER received in late April, 1983. Internal resolution of these concerns will be completed by August 15, 1983, at which time, a review of the resolution of these items by the NRC staff may be requested. Based on the outcome of this review, it may be necessary for the Authority to update this response.

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LISTING AND STATUS OF HARSH ENVIRONMENT ELECTRICAL EQUIPMENT REQUIRING QUALIFICATION (10CFR50.49)

SYSTEM NO. MISC SYSTEM NAME: ELECTRICAL CABLING

COMP. ID NO. MARK NO.	EQ FILE NO.	COMP. NAME	QUALIFICATION STATUS	LEVEL	METHOD	ACTION PLAN
NFE-2,5, 6, 8,9 11, 13, 20, 21 22, 23, 24, 25 26, 34, 36, 52 NFF-15,30	16/1	Power/Control Cable 600VAC - XLPE (Okonite)	QUALIFIED	DOR	Test/Analysis	Note 1
NFE-61, 62, 63 64, 65, 66 NFF-21, 22, 24 25, 26, 27 28, 29, 31, 32, 33	16/2	Power/Control Cable 600/1000 VAC-FR Vulkene (GE)	QUALIFIED	DOR	Test/Analysis	Note 1
NFE-61 thru 66 NFF-21, 24, 26 27, 28, 29, 31 32, 33, 35 NFG-02, 03, 04 11, 13, 15, 16 19, 20, 21, 22, 23, 26, 34-41, 43, 64	16/3 16/4	Control/Instrument Cable 600/1000 VAC - Pyrotrol III (Cerro)	QUALIFIED	DOR	Test/Analysis	Note 1
NFG-67, 69, 85	16/5	Thermocouple Extension Wire - Pyrotrol III (Cerro)	QUALIFIED	DOR	Test/Analysis	Note 1
NFE-1, 4, 7 35	16/7	Power/Control Cable 600 VAC-EPR	QUALIFIED	DOR	Test/Analysis	Note 1

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SYSTEM NO. MISC SYSTEM NAME: ELECTRICAL COOLING

COMP. ID NO.	EQ FILE NO.	COMP. NAME	QUALIFICATION STATUS	LEVEL	METHOD	ACTION PLAN
NFF-4, 44, 46	16/8	Power Cable 5KV-XLPE Armored	QUALIFIED	DOR	Test/Analysis	Note 1
NFG-5, 7	16/9	Instrumentation Cable Flametrol (Raychem)	QUALIFIED	DOR	Test/Analysis	Note 1
RSS-6-104-1981	16/10	Coaxial Cable (Rockbestos)	QUALIFIED	NUREG 0588 Cat. I	Test/Analysis	Note 1
1952-68310	16/12 16/13	Instrument Cable (Eaton-Dekorad)	QUALIFIED	NUREG 0588 Cat. I	Test/Analysis	Note 1
FR-EP	16/14	Instrument Cable (Anaconda)	QUALIFIED	NUREG 0588 Cat. I	Test/Analysis	Note 1
14538-H-006	16/18	Instrument Cable (B/W)	QUALIFIED	NUREG 0588 Cat. I	Test/Analysis	Note 1
T7600	16/20	Power/Control (Ultrol)	QUALIFIED	NUREG 0588 Cat. I	Test/Analysis	None required
Firewall III	16/17	Power/Control Cable (Rockbestos)	QUALIFIED	NUREG 0588 Cat. I	Test/Analysis	None required

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SYSTEM NO: MISC. SYSTEM NAME: ELECTRICAL CABLING

1. It is the Authority's position that these cables are qualified based on qualification assessments previously performed. However, due to concerns presented in the Franklin TER (received in late April, 1983) relative to similarity, these assessments require additional reviews. Internal resolution of these concerns by the Authority will be completed by August 15, 1983, at which time, a review of the resolution of these items by the NRC staff may be requested. Based on the outcome of this review, it may be necessary for the Authority to supplement this response.

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LISTING AND STATUS OF HARSH ENVIRONMENT ELECTRICAL EQUIPMENT REQUIRING QUALIFICATION (10CFR50.49)

SYSTEM NO. MISC. SYSTEM NAME: CONTAINMENT ELECTRICAL PENETRATIONS

COMP. ID NO.	EQ FILE NO.	COMP. NAME	QUALIFICATION STATUS	LEVEL	METHOD	ACTION PLAN
JB-X-100D	15/13	Containment Electrical Penetration (Instrument)	QUALIFIED	NUREG 0588 Cat. I	Test/Analysis	None required
JB-X-100B JB-X-100F JB-X-100G JB-X-101B JB-X-104D JB-X-111B JB-X-109 JB-X-110D	15/1 15/2 15/3 15/4 15/9 15/12 15/10 15/11	Containment Electrical Penetration (Low Voltage/Control)	QUALIFIED	DOR	Test/Analysis	None required
JB-X-103A JB-X-103B JB-X-110C	15/7 15/8	Containment Electrical Penetration (Instrumentation)	QUALIFIED	DOR	Test/Analysis	None required
JB-X-101E	15/5	Containment Electrical Penetration (Instrumentation)	IN PROGRESS	DOR	Test/Analysis	See System 02 Items 36/2, 3, 4