ATTACHMENT I TO JPN-92-026

REVISION 5 OF THE FITZPATRICK SECOND INTERVAL INSERVICE TEST (IST) PROGRAM

New York Power Authority

JAMES A. FITZPATRICK NUCLEAR POWER PLANT
Docket No. 50-333

NEW YORK POWER AUTHORITY
JAMES A. FITZPATRICK NUCLEAR POWER PLANT

INSERVICE TESTING PROGRAM FOR PUMPS AND VALVES

Reviewed by: Plant Operations Review Committee

Meeting No. 92-59 Date: 5/14/92

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RESIDENT MANAGER

Page No.	i	ii	1	2	3	4	5	6	7	8	9	10	11	12	13
Rev. No.	5	5	5	3	3	5	5	1	5	3	5	5	3	5	3
Page No.	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
Rev. No.	3	1	3	5	3	5	3	3	3	3	5	3	3	3	5
Page No.	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43
Rev. No.	3	3	3	5	1	5	5	5	3	3	3	5	5	5	5
Page No.	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58
Rev. No.	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Page No.	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73
Rev. No.	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Page No.	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88
Rev. No.	5	1	1	5	5	5	5	5	5	5	5	5	5	5	5
Page No.	89	90	91	92	93	94	95	96	97	98	99	100	101	102	
Rev. No.	5	5	5	5	5	5	5	5	5	5	5	5	5	5	
Page No.	103	104	105	106	107	108	109	110	111	112	113	114			
Rev. No.	5	5	5	5	5	5	3	3	5	5	5	3			
Page No.	115	116	117	118	119	120	121	122	123	124	125	126			
Rev. No.	3	3	1	1	3	5	5	5	1	3	1	1			
Page No.	127	128	129	130	131	132	133	134	135	136	137	138			
Rev. No.	5	1	5	3	3	5	5	3	3	5	1	1			
Page No.	139	140	141	142	143	144	145	146	147	148	149	150			
Rev. No.	3	1	5	1	3	3	3	3	1	3	5	5			
Page No.	151	152	153	154	155	156	157	158	159	160	161	162			
Rev. No.	5	5	5	5	5	3	5	3	3	3	3	3			
Page No.	163	164	165	166	167	168	169	170	171	172	173	174			
Rev. No.	3	3	3	5	5	5	3	5	5	3	5	5			
Page No.	175	176	177	178	179	180	181	182	183	184	185	186			
Rev. No.	5	3	3	3	5	3	5	5	5	5	5	5			
Page No.	187	188	189	190	191	192									
Rev. No.	3	5	5	5	5	5									

Rev. No. 5

INSERVICE TESTING PROGRAM FOR PUMPS AND VALVES

Table of Contents

NEW YORK POWER AUTHORITY
JAMES A. FITZPATRICK NUCLEAR POWER PLANT

INSERVICE TESTING PROGRAM FOR PUMPS AND VALVES

1.0 INTRODUCTION

Revision 5 of the James A Fitzpatrick ASME Inservice Testing (IST) Program will be in effect through the end of the second 120-month (10-year) interval unless changed and re-issued for reasons other than the routine update required at the start of the third interval per 10 CFR 50.55a(g). The third inspection interval begins on July 28, 1995.

This document outlines the IST Program for J.A. Fitzpatrick based on the requirements of Section XI of the ASME Boiler and Pressure Vessel Code, 1980 Edition, through Winter 1981 Addenda (the Code). References in this document to "IWP" or "IWV" correspond to Subsections IWP and IWV, respectively, of the Code, unless otherwise noted.

2.0 APPLICABLE DOCUMENTS

This Program Plan was developed per the requirements of the following documents:

- Title 10, Code of Federal Regulations, Part 50
- Final Safety Analysis Report, J.A. Fitzpatrick Nuclear Power Plant
- J.A. Fitzpatrick Technical Specifications
- ASME Boiler and Pressure Vessel Code, Section XI, 1980 Edition through Winter 1981 Addenda.
- NRC Safety Evaluation by the Office of Nuclear Reactor Regulation related to the Inservice Testing Program Relief Requests Power Authority of the State of New York James A. FitzPatrick Nuclear Power Plant Docket No. 50-333.

Other documents used for guidance in the development of the IST Program are listed below:

- NRC Regulatory Guide 1.26, "Quality Group Classifications and Standards for Water-, Steam-, and Radioactive-Waste-Contaminating Components of Nuclear Power Plants"
- Standard Review Plan NUREG 0800, Section 3.9.6, "Inservice Testing of Pumps and Valves"
- NRC Generic Letter 89-04, "Guidance on Developing Acceptable Inservice Testing Programs"
- NRC Minutes of the Public Meetings or Generic Letter 89-04

3.0 INSERVICE TESTING PROGRAM FOR PUMPS

3.1 Code Compliance

This IST Program for pumps is based on the requirements of Subsection IWP of the Code and any interpretations. Where these requirements have been determined to be impractical, conformance would cause unreasonable hardship without any compensating increase in safety, or an alternative test provides an acceptable level of quality and safety, relief from Code requirements is requested pursuant to the requirements of 10 CFR 50.55a(g)(iii).

3.2 Allowable Ranges of Test Quantities

The allowable ranges for test parameters as specified in Table IWP-3100-2 will be used for all measurements of pressure, flow, and vibration except as provided for in specific relief requests. In some cases the performance of a pump may be adequate to fulfill its safety function even though there may be a value of an operating parameter that falls outside the allowable ranges as set forth in Table IWP-3100-2. Should such a situation arise, an expanded allowable range may be determined, on a case-by-case basis, in accordance with IWP-3210 and ASME Code Interpretation XI-1-79-19.

3.3 Testing Intervals

The test frequency for pumps included in the Program will be as set forth in IWP-3400. A band of ±25 percent of the test interval may be applied to a test schedule as allowed by the J.A Fitzpatrick Technical Specifications to provide for operational flexibility.

3.4 Pump Program Table

Appendix A lists those pumps included in the IST Program with references to parameters to be measured and applicable requests for relief.

3.5 Relief Requests for Pump Testing

Appendix A includes relief requests related to pump testing.

4.0 INSERVICE TESTING PROGRAM FOR VALVES

4.1 Code Compliance

This IST Program for valves is based on the requirements of Subsection IWV of the Code and any interpretations or additional requirements imposed by Generic Letter 89-04. Where these requirements have been determined to be impractical, conformance would cause unreasonable hardship without any compensating increase in safety, or an alternative test provides an acceptable level of quality and safety, relief from Code requirements is requested pursuant to the requirements of 10 CFR 50.55a(g)(iii) and Generic Letter 89-04.

4.2 Testing Intervals

The test frequency for valves included in the Program will be as set forth in IWP-3400 and related relief requests. A band of ±25 percent of the test interval may be applied to a test schedule as allowed by the J.A. Fitzpatrick Technical Specifications to provide for operational flexibility. Where quarterly testing of valves is impractical or otherwise undesirable, testing may be performed during cold shutdown periods as permitted by IWV-3412(a). Justifications for this deferred testing are provided in Appendix B with elaboration of J.A. Fitzpatrick plant policy set forth in Relief Request NOTE V52.

4.3 Stroke Time Acceptance Criteria

When required, the acceptance criteria for the stroke times of power-operated valves will be as set forth in IWV-3410 and using the guidance of Generic Letter 89-04.

4.4 Check Valve Testing

Where required, full-stroke exercising of check valves to the open position using system flow requires that a test be performed whereby the predicted full accident condition flowrate through the valve be verified and measured. Any deviation to this requirement must satisfy the requirements of Generic Letter 89-04, Position 1.

4.5 Valve Program Table

Appendix B lists those valves included in the IST Program with references to required testing, respective test intervals, and applicable requests for relief or cold shutdown justifications.

4.6 Relief Requests for Valve Testing

Appendix B includes all relief requests and cold shutdown justifications related to valve testing.

5.0 SYSTEMS SUBJECT TO TESTING

	SYSTEM NAME	DRAWING #
01-125	Standby Gas Treatment	FM-48A
02-2	Reactor Water Recirculation	FM-26A
02-3	Nuclear Boiler Instrumentation	FM-47A
03	Control Rod Drive	FM-27B
07	Neutron Tip Monitors	FM-119A
10	Residual Heat Removal	FM-20A FM-20B
11	Standby Liquid Control	FM-21A
12	Reactor Water Cleanup	FM-24A
13	Reactor Core Isolation Cooling	FM-22A
14	Core Spray	FM-23A
15	Reactor Building Closed Loop Cooling	FM-15B
16-1	Leak Rate Analyzer	FM-49A
19	Fuel Pool Cooling	FM-19A
20	Radioactive Waste	FM-17A
23	High Pressure Cooling injection	FM-25A
27	Containment Atmosphere Dilution	FM-18A FM-18B FM-18D
29	Main Steam	F -29A
34	Feedwater	FM-34A
39	Breathing, Instrument & Service Air	FM-39C
46	Service & Emergency Service Water	FM-46B
66	Reactor Building Service Water	FB-10H
67	Turbine Building Service Water	FB-18H
70	Control Room Service & Chill Water	FB-35E

APPENDIX A

PUMP TESTING PROGRAM

APPENDIX A

PUMP TESTING PROGRAM

Table of Contents

APPENDIX A

PUMP TABLE EXPLANATION

Summary of Information Provided

The Pump Table provides the following information:

* Individual pump identifier
* Test type - "Design" refers to tests where design or substantial flowrate is achieved.
* The drawing on which the pump appears
* Drawing coordinates
* Speed (1)
* Inlet pressure (1)
* Flow rate (1)
* Vibration amplitude (1)
* Observation of lube oil level (1)
* Test interval
* Bearing temperature (1)

(1) These parameters are each addressed with either an "X" indicating the parameter is measured, an "X" with a note number indicating the parameter is measured but with some exception to the Code, or by a note number indicating relief is requested to eliminate measurement of the parameter. A blank indicates that measurement of the respective parameter is not applicable.

Pump Relief Requests

Notes PXX refer to relief requests for the Pump Testing Program. Each pump request for relief provides the following information:

* System
* Individual pump identifier
* ISI Classification
* Safety Function
* Code test requirement for which relief is requested
* Basis for relief
* Proposed alternate testing

NEW YORK POWER AUTHORITY
JAMES A. FITZPATRICK NUCLEAR POWER PLANT
INSERVICE TESTING PROGRAM FOR PUMPS AND VALVES

PUMP TABLE

PUMP ID	TEST TYPE	DRAWING NUMBER	DWG CO-OR	SPEED	INLET PRESSURE	DIFFERENTIAL PRESSURE	FLOW RATE	VIBRATION AMPLITUDE	BEARING TEMPERATURE	LUBE OIL LEVEL/PRESSURE	INSPECTION FREQUENCY
10P-1A	DESIGN	FM-20B	B-6		X P2	X	X P17	X P9	P14	P5	1 - QUARTERLY
10P-1B	DESIGN	FM-20B	B-5		X P2	X	X P17	X P9	P14	P5	1 - QUARTERLY
10P-1C	DESIGN	FM-20B	C-6		X P2	X	X P17	X P9	P14	P5	1 - QUARTERLY
10P-1D	DESIGN	FM-20B	C-5		X P2	X	X P17	X P9	P14	P5	1 - QUARTERLY
10P-3A	DESIGN	FM-20A	B-7		X P16	X	X P17	X P15	P14	X	1 - QUARTERLY
10P-3B	DESIGN	FM-20A	B-3		X P16	X	X P17	X P15	P14	X	1 - QUARTERLY
10P-3C	DESIGN	FM-20A	C-7		X P16	X	X P17	X P15	P14	X	1 - QUARTERLY
10P-3D	DESIGN	FM-20A	C-3		X P16	X	X P17	X P15	P14	X	1 - QUARTERLY
11P-2A	DESIGN	FM-21A	D-4		X P12	X	X P7	X P13	P14	X	1 - QUARTERLY
11P-2B	DESIGN	FM-21A	B-4		X P12	X	X P7	X P13	P14	X	1 - QUARTERLY
14P-1A	DESIGN	FM-23A	C-8		X P11	X P17	X	X P15	P14	X	1 - QUARTERLY
14P-1B	DESIGN	FM-23A	C-3		X P11	X P17	Y	X P15	P14	X	1 - QUARTERLY
23P-1B	DESIGN	FM-25A	E-5		X P17	P10	X P17	X P15	P14	X	1 - QUARTERLY
23P-1M	DESIGN	FM-25A	E-4	X P17	P10	X P17	X P17	X P15	P14	X	1 - QUARTERLY
46P-2A	DESIGN	FM-46B	D-8		X P2	X	X	X P9	P14	P5	1 - QUARTERLY

REV. NO: 5

NEW YORK POWER AUTHORITY
JAMES A. FITZPATRICK NUCLEAR POWER PLANT
INSERVICE TESTING PROGRAM FOR PUMPS AND VALVES

PUMP TABLE

PUMP ID	TEST TYPE	DRAWING NUMBER	DWG CO-OR	SPEED	INLET PRESSURE	DIFFERENTIAL PRESSURE	FLOW RATE	VIBRATION AMPLITUDE	BEARING TEMPERATURE	LUBE OIL LEVEL/PRESSURE	INSPECTION FREQUENCY
46P-2B	DESIGN	FM-46A	C-8		X P2	X	X	X P9	P14	P5	1 - QUARTERLY

INSERVICE TESTING PROGRAM FOR PUMPS AND VALVES

APPENDIX A

Pump Relief Requests

NOTE P1 This relief request has been withdrawn.

Pump Relief Requests

NOTE P2

SYSTEMS:	RHR Service Water Emergency Service Water
PUMPS:	RHRSW 10P-1A, B, C, D ESW 46P-2A, B
CLASS:	3
FUNCTION:	These pumps provide cooling water under accident conditions from the forebay to various safety related heat exchangers and back-up injection points.
TEST REQUIREMENT:	IWP-3100 and Table IWP-3100-1 requires that inlet pressure be measured before pump startup and during the test. Also, IWP-4230 requires inlet pressure measuring taps be located in a section of the flowpath that is expected to have reasonably stable flow as close as practical to the pump.
BASIS FOR RELIEF:	These pumps are of a vertical submerged open line shaft design. There is no installed instrument for direct measurement of the inlet pressure. Instead, the minimum pumping level is monitored to insure adequate NPSH is available for pump operation. Since the forebay water level is not expected to change significantly during the testing of these pumps, only one measurement per test is required.
ALTERNATE TESTING:	During each test, the difference in elevation between the forebay water level and the pump discharge pressure gauge will be determined by measurement. This value will be verified to be less than or equal to the value corresponding to the minimum water level required for pump operation and will also be used to calculate pump differential pressure.

INSERVICE TESTING PROGRAM FOR PUMPS AND VALVES

APPENDIX A

Pump Relief Requests

NOTE P3 This relief request has been withdrawn.

APPENDIX A

Pump Relief Requests

NOTE P4 This relief request has been withdrawn.

Pump Relief Requests

NOTE P5

SYSTEMS:	RHR Service Water Emergency Service Water
PUMPS:	RHRSW 10P-1A, B, C, D ESW 46P-2A, B
CLASS:	3
FUNCTION:	Provide emergency cooling water from intake bay to various emergency heat exchangers and back-up injection points.
TEST REQUIREMENT:	IWP-3100 and Table IWP-3100-1 require observation of proper lubrication level or pressure.
BASIS FOR RELIEF:	These pumps are of a vertical submerged open line shaft design. The pump bearings are water lubricated and the lube oil observation cannot be performed.
ALTERNATE TEST:	Other code required parameters being measured will detect degradation of the mechanical condition of the pumps.

INSERVICE TESTING PROGRAM FOR PUMPS AND VALVES

APPENDIX A

Pump Relief Requests

NOTE P6 This relief request has been withdrawn.

Pump Relief Requests

NOTE P7

SYSTEM: Standby Liquid Control (SLC)

PUMPS: SLC 11P-2A, B

CLASS: 2

FUNCTION: These pumps inject borated water into the reactor vessel as an alternate means for negative reactivity addition and reactor shutdown.

TEST REQUIREMENT: IWP-3500 specifies that a pump shall be run for at least five minutes under stable conditions before recording the required test data.

IWP-4600 specifies that flowrate shall be measured using a rate or quantity meter installed in the pump test circuit.

BASIS FOR RELIEF: The SLC test loop is not equipped with flow instrumentation and the only practical means of determining flowrate is to monitor the change of level in a test tank from which water is being pumped. The installed test tank has a capacity of only 210 gallons and is not capable of accommodating 5 minutes of pump operation at rated conditions ($\geq$ 50 gpm).

ALTERNATE TESTING: The flowrate of the SLC pumps will be determined by measuring the change in water level in the test tank during a period of pump operation at the reference discharge pressure over a period of at least two (2) minutes.

INSERVICE TESTING PROGRAM FOR PUMPS AND VALVES

APPENDIX A

Pump Relief Requests

NOTE P8 This relief request has been withdrawn.

Pump Relief Requests

NOTE P9

SYSTEMS:	RHR Service Water (RHRSW) Emergency Service Water (ESW)
PUMPS:	RHRSW 10P-1A, B, C, D ESW 46P-2A, B
CLASS:	3
FUNCTION:	Provide emergency cooling water from the intake bay to various emergency heat exchangers and backup injection points.
TEST REQUIREMENT:	IWP-4510 requires that, on a pump coupled to the driver, vibration measurements shall be taken on the bearing housing near the coupling.
BASIS FOR RELIEF:	These pumps are of a vertical submerged open-line shaft design with the pump bearings submerged and inaccessible below the floor slab. The bearing housing near the upper coupling, which is accessible, is in a confined area in close proximity to the rotating shaft and coupling. Access to this area is considered to present an unacceptable personnel safety hazard during vibration monitoring. ASME/ANSI OM-1988a, Part 6, "Operation and Maintenance of Nuclear Power Plants", Paragraph 4.6.4(b) identifies the access problem associated with measuring vibration of vertical line shaft pumps and directs that measurements be taken on the upper motor bearing housing in three orthogonal directions. This Standard considers measuring in this manner an acceptable method for monitoring vibration.
ALTERNATE TESTING:	Vibration measurements on these pumps will be taken on the upper motor bearing housing per ASME/ANSI OM-1988a, Part 6, "Operation and Maintenance of Nuclear Power Plants", Paragraph 4.6.4(b). In addition, vibration measurements will comply with the applicable requirements of Paragraphs 4.6.1 and 5.1 of that standard. The vibration acceptance criteria will be established in accordance with Table 3a.

APPENDIX A

Pump Relief Requests

NOTE P10

SYSTEM:	High Pressure Coolant Injection
PUMPS:	HPCI 23P-1M, B
CLASS:	2
FUNCTION:	Provide high pressure coolant injection (ECCS) to the reactor vessel under accident conditions.
TEST REQUIREMENT:	IWP-3100 and Table IWP-3100-1 require that inlet and differential pressures of each pump be measured during inservice tests.
BASIS FOR RELIEF:	There are no provisions for measuring the pressure in the connecting piping between the HPCI booster and main pumps. Since these pumps are driven by a common driver and are connected in tandem, they are tested together simultaneously under the same test conditions (i.e. same flow rate and turbine speed, etc.). Therefore, measuring the inlet pressure of the booster pump and calculating the differential pressure of both pumps will effectively verify operability and monitor the performance of the pair.
ALTERNATE TESTING:	During inservice testing of these pumps, the suction pressure of the booster pump will be measured and the differential pressure of the pair will be determined from measurements of the suction and discharge pressures of the booster and main pumps, respectively. The results of testing in this manner will be evaluated in accordance with IWP-3200 as if the pair were a single multi-stage pump.

Pump Relief Requests

NOTE P11

SYSTEM:	Core Spray
PUMPS:	14P-1A,B
CLASS:	2
FUNCTION:	Pump cooling water from the suppression pool to the reactor in the event of a LOCA.
TEST REQUIREMENT:	Per IWP-4120, the full-scale range of the pump inlet pressure instrument shall be three times the reference value or less.
BASIS FOR RELIEF:	The installed core spray pump inlet pressure indicators are designed to provide adequate inlet pressure indication during all expected operating conditions. The full-scale range, 60 psig, is sufficient for a post-accident condition when the torus is at the maximum accident pressure. This, however, exceeds the range limit for inlet pressure under the test condition (approx. 5 psig). Suction pressure measurements serve two functions. First, they provide assurance that the prescribed NPSH requirements for the pumps are met. Secondly, they are used for determining pump differential pressure. The installed gauges are calibrated to within ±2% accuracy (FS), thus the maximum variation in measured suction pressure due to inaccuracy would be ±1.2 psi. This is considered to be suitable for determining that adequate NPSH is available for proper pump operation.

Pump Relief Requests

NOTE P11 (cont.)

Pump discharge pressure during testing is typically 300 psig. which results in a calculated differential pressure of approximately 295 psid. Given the accuracy of the discharge pressure measurement of 2.5 psi, the resultant maximum variation in calculated differential pressure will be 3.7 psi. or 1.25%. This is consistent with the requirements of Table IWP-4110-1 that only requires that instrument accuracy be better than 2% of full scale.

ALTERNATE TESTING: Use existing vendor supplied inlet pressure indicators (as described above) for testing of the core spray pumps. (See Relief Request NOTE P16)

Pump Relief Requests

NOTE P12

SYSTEM:	Standby Liquid Control (SLC)
PUMPS:	11P-2 A, B
CLASS:	2
FUNCTION:	These pumps inject borated water into the reactor vessel as an alternate means for negative reactivity addition and reactor shutdown.
TEST REQUIREMENT:	Per IWP-4120, the full-scale range of the pump inlet pressure instrument shall be three times the reference value or less.
BASIS FOR RELIEF:	The pump inlet pressure indicators are designed to provide adequate inlet pressure indication when pumping from the SLC storage tank. These instruments have a range of 0-30 psig and are calibrated to within ±2% accuracy. Thus, there is a potential for a variation of ±0.6 psi due to instrument accuracy. Since the SLC pumps are of the reciprocating positive displacement type, pump flowrate is not sensitive to pump differential pressure. In addition, the typical pump inlet pressure (approx. 1 psi) is less than 0.1% of the developed differential pressure (1279 psid). A variation of ±0.6 psi in the inlet pressure will not significantly affect pump parameters.
ALTERNATE TESTING:	Use existing vendor supplied inlet pressure indicators for the SLC pump flow test. (See Relief Request NOTE P16)

Pump Relief Requests

NOTE P13

SYSTEM:	Standby Liquid Control (SLC)
PUMPS:	11P-2A,B
CLASS:	2
FUNCTION:	These pumps inject borated water into the reactor vessel as an alternate means for negative reactivity addition and reactor shutdown.
TEST REQUIREMENT:	Per IWP-4520(b), vibration measurement instruments shall have a frequency response range from one half minimum to at least maximum pump shaft rotational speed.
BASIS FOR RELIEF:	The speed of the SLC pump crank shaft is 520 RPM (8.67 Hz). For this running speed, the vibration instrument response range required by the Code is 4.3 to 17.4 Hz with accuracy to ±5% full scale meter amplitude. The instruments currently in use for monitoring vibration have a calibrated range of 6 to 500 Hz with accuracy to ± 5% full scale. Frequencies in the range below 6 Hz are filtered out to provide a reasonable and meaningful reading of the integrated output. Vibration readings at frequencies less than shaft speed frequency are used primarily for identifying conditions that manifest themselves in an "oil-whip" phenomenon. For recipercating pumps, oil-whip is of no concern. These instruments provide usable measurements that enable monitoring of changes in pump condition and allow for corrective action to be taken in the event of significant pump degradation - thus meeting the intent of the Code.
ALTERNATE TESTING:	The vibration measurements will be taken using instrumentation capable of measuring vibration at frequencies at or above 6.0 Hz. The data will be evaluated per IWP-3200.

APPENDIX A

Pump Relief Requests

NOTE P14

SYSTEMS: Various

PUMPS: All pumps in Program

CLASS: 2 and 3

FUNCTION: Various

TEST REQUIREMENT: IWP-3300 and IWP-4310 requires that the temperature of all centrifugal pump bearings outside the main flowpath and of the main shaft bearings of reciprocating pumps shall be measured at points selected to be responsive to changes in the temperature of the bearings.

BASIS FOR RELIEF: The data associated with bearing temperatures taken at one-year intervals provides little statistical basis for determining the incremental degradation of a bearing or any meaningful trending information or correlation.

In many cases pump bearings are water-cooled and thus, bearing temperature is a function of the temperature of the cooling medium, which can vary considerably.

Vibration measurements are a significantly more reliable indication of pump bearing degradation than are temperature measurements. All pumps in the program are subjected to vibration measurements in accordance with IWP-4500.

Although excessive bearing temperature is an indication of an imminent or existing bearing failure, it is highly unlikely that such a condition would go unnoticed during routine surveillance testing since it would manifest itself in other obvious indications such as audible noise, unusual vibration, increased motor current, etc.

Pump Relief Requests

NOTE P14 (cont.)

Any potential gain from taking bearing temperature measurements, which in most cases would be done locally using portable instrumentation, cannot offset the cost in terms of dilution of operator effort, distraction of operators from other primary duties, excessive operating periods for standby pumps, and unnecessary personnel radiation exposure.

ALTERNATE TESTING: Vibration monitoring will be performed in accordance with IWP-4500 and Relief Request No. NOTE P15. Such vibration monitoring will provide adequate monitoring and evaluation of the material condition of the pump bearings.

Pump Relief Requests

NOTE P15

SYSTEMS:	Various
PUMPS:	Various centrifugal and rotary positive displacement pumps
CLASS:	Various
FUNCTION:	This is a generic relief request.
TEST REQUIREMENTS:	Per IWP-4510, at least one displacement vibration amplitude (peak-to-peak composite) shall be read during each inservice test. The direction of displacement shall be measured in a plane approximately perpendicular to the rotating shaft, and in the horizontal or vertical direction that has the largest deflection for the particular pump installation. Per IWP-3210, the allowable ranges of inservice test quantities in relation to the reference values are tabulated in Table IWP-3100-2.
BASIS FOR RELIEF:	Measuring vibration in velocity units rather than displacement is an industry-accepted practice considered to be more sensitive to small changes that are indicative of developing mechanical problems. Velocity measurements detect both high-amplitude vibration, characteristic of major mechanical problems, and low-amplitude vibration, caused by misalignment, imbalance, or minor bearing wear. It is impractical to search for the direction with the largest deflection and procedurally return to that precise location on successive tests. In addition, the direction of maximum deflection may vary with the condition and age of the pump thus eliminating consistency between test data. Adapting this requirement to test procedures could cause confusion as to

Pump Relief Requests

NOTE P15 (cont.)

the proper locations for measuring pump vibration. Also, comparing subsequent test data to reference test data taken at different locations does not provide a good measure of pump degradation.

ASME/ANSI OMa-1987, Operation and Maintenance Of Nuclear Power Plants, Part 6, Section 4.6.4 has adopted the concept of measuring vibration at two mutually perpendicular locations for inner pump bearings and comparing subsequent test data to the reference value at that specific location.

Measuring vibration in velocity units is permitted by the most recent version of OMb - 1989 - Standard For Inservice Testing At Nuclear Power Plants, Part 6.

NOTE: This is considered to be an upgrade to the requirements presented in IWP-4510.

ALTERNATE TESTING: Pump vibration measurements may be taken in either displacement or velocity units. Acceptance criteria for velocity measurements will conform to those set forth in OMb-1989, Part 6, Tables 3 and 3a.

For centrifugal and rotary (non-reciprocating) positive displacement pumps vibration readings will be taken in a plane perpendicular to the operating shaft in two (2) mutually perpendicular directions. Test data shall be evaluated per IWP-3100 with successive vibration readings compared to reference values previously taken at that specific location.

APPENDIX A

Pump Relief Requests

NOTE P16

SYSTEMS:	Various
PUMPS:	Various
CLASS:	Various
FUNCTION:	This is a generic relief request.
TEST REQUIREMENT:	Per IWP-4210, if the presence or absence of liquid in a gage line could produce a difference of more than 0.25% in the indicated value of the measured pressure, means shall be provided to ensure or determine the presence or absence of liquid as required for the static correction used.
BASIS FOR RELIEF:	When this requirement is applied to the measurement of pump suction pressure where measured pressures are at relative low levels, the 0.25% limit is overly restrictive and oftentimes results in complicated venting procedures and unnecessary health physics risks associated with handling and disposal of radioactive contaminated water with no commensurate gain or improvement of test reliability. Normally, the only quantitative use of suction pressure measurements, where significant accuracy is required, is in determining pump differential pressure or head. In most cases the pump discharge pressure exceeds the suction pressure by at least a factor of five (5). This being the case, a 0.25% error introduced into the suction pressure measurement results in an error of 0.05% in the differential pressure calculation. This is insignificant in light of the potential 6% error allowance applied to both the suction and discharge pressure instruments (Ref IWP-4110).

Pump Relief Requests

NOTE P16 (cont.)

ALTERNATE TESTING: If the presence or absence of liquid in a gage line used for sensing pump suction pressure could produce a difference of more than 0.25% in the calculated value of the pump differential pressure, means shall be provided to ensure or determine the presence or absence of liquid as required for the static correction used.

Pump Relief Requests

NOTE P17

SYSTEMS:	Various
PUMPS:	This is a generic relief request.
CLASS:	Various
FUNCTION:	Various
TEST REQUIREMENT:	IWP-4120 requires that the full-scale range of each instrument shall be three time the reference value or less.
BASIS FOR RELIEF:	In several instances instruments used to measure pump parameters use digital readouts. Although these instruments are highly accurate and suitable for use, they are virtually unlimited in range and thus do not meet the Code requirement. ASME/ANSI OM-1987, Part 6, Paragraph 4.6.1.2 allows the use of digital instruments with limiting provisions.
ALTERNATE TESTING:	Digital instruments may be used during pump testing provided that the reference value shall not exceed 70% of the calibrated range of the instrument. Digital instruments shall have an accuracy of ±2 percent (±5 percent for vibration) over the calibrated range of the instrument.

APPENDIX A

Pump Relief Requests

NOTE P18 This relief request has been withdrawn.

APPENDIX B

VALVE TESTING PROGRAM

NEW YORK POWER AUTHORITY
JAMES A. FITZPATRICK NUCLEAR POWER PLANT

INSERVICE TESTING PROGRAM FOR PUMPS AND VALVES

APPENDIX B

VALVE TESTING PROGRAM

Table of Contents

Table of Contents

Relief Requests (Cont'd)

INSERVICE TESTING PROGRAM FOR PUMPS AND VALVES

APPENDIX B

VALVE TESTING PROGRAM

Table of Contents

Relief Requests (Cont'd)

INSERVICE TESTING PROGRAM FOR PUMPS AND VALVES

APPENDIX B

VALVE TABLE EXPLANATION

Summary of Information Provided

The Valve Table is sorted by system number then drawing number and provides the following information:

* Individual valve identifier
* Drawing coordinates
* Section XI ISI Classification
* Section XI IWV category
* Nominal size
* Valve type
* Actuator type
* Section XI test required
* Relief request (RR)/cold shutdown (CS) justification
* Alternate test
* Remarks

APPENDIX B

Cold Shutdown Justification

Notes CSXX refer to cold shutdown justifications which provide the justification for testing affected components at cold shutdown instead of every three months. (Refer to Relief Request NOTE V51) The Cold Shutdown Justifications provide the following information:

* System
* Individual valve identifier
* Section XI category
* Safety function
* Justification

APPENDIX B

Valve Relief Requests

Notes VXX refer to Relief Requests for the Valve Testing Program. The Valve Relief Requests provide the following information:

* System
* Individual valve identifier
* Section XI category
* ISI Classification
* Safety Function
* Test requirement from which relief is requested
* Basis for relief
* Alternate testing

APPENDIX B

VALVE SYMBOLS

Valve Types

3W	Three-way valve
AN	Angle valve
BF	Butterfly valve
BK	Ball check
BL	Ball valve
CK	Swing check
GA	Gate valve
GL	Globe valve
LK	Lift check
NK	Non-return check
PG	Plug valve
RL	Relief valve
SC	Stop check
SK	Spring check
TK	Testable check
WK	Wafer Check
XP	Explosive valve

Valve Actuator Types

AO	Air operator
EH	Electro-hydraulic
HO	Hydraulic operator
MA	Manual operator
MO	Motor operator
PA	Pilot actuated
SA	Self actuated
SO	Solenoid operator
SP	Spring operator
SQ	Squib actuator

INSERVICE TESTING PROGRAM FOR PUMPS AND VALVES

APPENDIX B

Test Method

TS	Stroke time measured during valve exercising	IWV-3413
TM	Stroke time measured during valve exercising	IWV-3413
FS	Full stroke exercise	IWV-3412
FC	Fail-safe to close position	IWV-3415
FO	Fail-safe to open position	IWV-3415
PE	Partial stroke exercise	IWV-3412
LK	Leak test	IWV-3420
LJ	Leak test per 10CFR50 Appendix J Type C	
RL	Relief valve test	IWV-3512
PI	Remote position indication verification	IWV-3300
DA	Disassemble and inspect per relief request	
SP	Special test (Refer to relief request)	
XP	Explosively actuated valve test	IWV-3610
FF	Forward flow check valve test	IWV-3522
RF	Reverse flow check valve test	IWV-3522
PF	Partial flow check valve test	
MS	Manual stroke test (non-intrusive)	IWV-3522
ME	Exercising check valves using manual operator	IWV-3522

Test Frequency

-1	Quarterly	-5	2 Years
-2	Cold Shutdown	-6	Special Test per Relief Request
-3	Refueling	-7	Monthly
-4	IWV-3511/3610		

NEW YORK POWER AUTHORITY
JAMES A. FITZPATRICK NUCLEAR POWER PLANT
INSERVICE TESTING PROGRAM FOR PUMPS AND VALVES

TABLE

DRAWING: FM-48A

SYSTEM: Standby Gas Treatment - SYSTEM ID: 01-125

VALVE ID	DWG CO-OR	CLASS	VALVE CATEGORY	SIZE (IN)	VALVE TYPE	ACTUATOR TYPE	SECT. XI TEST	RR / CS	ALTERNATE TEST	REMARKS
01-125MOV-100A	C-6	2	B	4.00	BF	MO	TM-1 PI-3			
01-125MOV-100B	F-6	2	B	4.00	BF	MO	TM-1 PI-3			
01-125MOV-11	G-8	2	B	24.00	BF	MO	TM-1 PI-3			
01-125MOV-12	F-8	2	B	24.00	BF	MO	TM-1 PI-3			
01-125MOV-14A	D-7	2	B	24.00	BF	MO	TM-1 PI-3			
01-125MOV-14B	E-7	2	B	24.00	BF	MO	TM-1 PI-3			
01-125MOV-15A	D-3	2	B	24.00	BF	MO	TM-1 PI-3			
01-125MOV-15B	F-3	2	B	24.00	BF	MO	TM-1 PI-3			

REV. NO: 5

NEW YORK POWER AUTHORITY
JAMES A. FITZPATRICK NUCLEAR POWER PLANT
INSERVICE TESTING PROGRAM FOR PUMPS AND VALVES

VALVE TABLE

DRAWING: FM-29A

SYSTEM: Automatic Depressurization System - SYSTEM ID: 02

VALVE ID	DWG CO-OR	CLASS	VALVE CATEGORY	SIZE (IN)	VALVE TYPE	ACTUATOR TYPE	SECT. XI TEST	RR / CS	ALTERNATE TEST	REMARKS
02RV-1	H-7	2	C	3.00	CK	SA	MS-2	V58		
02RV-10	H-7	2	C	3.00	CK	SA	MS-2	V58		
02RV-11	H-7	2	C	3.00	CK	SA	MS-2	V58		
02RV-2	H-7	2	C	3.00	CK	SA	MS-2	V58		
02RV-3	H-7	2	C	3.00	CK	SA	MS-2	V58		
02RV-4	H-7	2	C	3.00	CK	SA	MS-2	V58		
02RV-5	H-7	2	C	3.00	CK	SA	MS-2	V58		
02RV-6	H-7	2	C	3.00	CK	SA	MS-2	V58		
02RV-7	H-7	2	C	3.00	CK	SA	MS-2	V58		
02RV-71A	G-6	1	BC	6.00	RL	SA AO	FS-1 RL-4	V27	FS-3	VALVE SETPOINT-1140 PSIG
02RV-71B	G-6	1	BC	6.00	RL	SA AO	FS-1 RL-4	V27	FS-3	VALVE SETPOINT-1140 PSIG
02RV-71C	G-6	1	BC	6.00	RL	SA AO	FS-1 RL-4	V27	FS-3	VALVE SETPOINT-1140 PSIG
02RV-71D	F-6	1	BC	6.00	RL	SA AO	FS-1 RL-4	V27	FS-3	VALVE SETPOINT-1105 PSIG

REV. NO: 5

NEW YORK POWER AUTHORITY
JAMES A. FITZPATRICK NUCLEAR POWER PLANT
INSERVICE TESTING PROGRAM FOR PUMPS AND VALVES

VALVE TABLE

DRAWING: FM-29A

SYSTEM: Automatic Depressurization System - SYSTEM ID: P2

VALVE ID	DWG CO-OR	CLASS	VALVE CATEGORY	SIZE (IN)	VALVE TYPE	ACTUATOR TYPE	SECT. XI TEST	RR / CS	ALTERNATE TEST	REMARKS
02RV-71E	F-7	1	BC	6.00	RL	SA AO	FS-1 RL-4	V27	FS-3	VALVE SETPOINT-1105 PSIG
02RV-71F	F-7	1	BC	6.00	RL	SA AO	FS-1 RL-4	V27	FS-3	VALVE SETPOINT-1140 PSIG
02RV-71G	G-7	1	BC	6.00	RL	SA AO	FS-1 RL-4	V27	FS-3	VALVE SETPOINT-1140 PSIG
02RV-71H	G-7	1	BC	6.00	RL	SA AO	FS-1 RL-4	V27	FS-3	VALVE SETPOINT-1140 PSIG
02RV-71J	G-7	1	BC	6.00	RL	SA AO	FS-1 RL-4	V27	FS-3	VALVE SETPOINT-1140 PSIG
02RV-71K	G-6	1	BC	6.00	RL	SA AO	FS-1 RL-4	V27	FS-3	VALVE SETPOINT-1090 PSIG
02RV-71L	[illegible]	1	BC	6.00	RL	SA AO	FS-1 RL-4	V27	FS-3	VALVE SETPOINT-1090 PSIG
02RV-8	H-7	2	C	3.00	CK	SA	MS-2	V58		
02RV-9	H-7	2	C	3.00	CK	SA	MS-2	V58		
02VB-1	H-8	2	C	10.00	CK	SA	MS-2	V58		
02VB-10	H-8	2	C	10.00	CK	SA	MS-2	V58		

REV. NO: 5

NEW YORK POWER AUTHORITY
JAMES A. FITZPATRICK NUCLEAR POWER PLANT
INSERVICE TESTING PROGRAM FOR PUMPS AND VALVES

VALVE TABLE

SYSTEM: Automatic Depressurization System - SYSTEM ID: 02 DRAWING: FM-29A

VALVE ID	DWG CO-OR	CLASS	VALVE CATEGORY	SIZE (IN)	VALVE TYPE	ACTUATOR TYPE	SECT. XI TEST	RR / CS	ALTERNATE TEST	REMARKS
02VB-11	H-8	2	C	10.00	CK	SA	MS-2	V58		
02VB-2	H-8	2	C	10.00	CK	SA	MS-2	V58		
02VB-3	H-8	2	C	10.00	CK	SA	MS-2	V58		
02VB-4	H-8	2	C	10.00	CK	SA	MS-2	V58		
02VB-5	H-8	2	C	10.00	CK	SA	MS-2	V58		
02VB-6	H-8	2	C	10.00	CK	SA	MS-2	V58		
02VB-7	H-8	2	C	10.00	CK	SA	MS-2	V58		
02VB-8	H-8	2	C	10.00	CK	SA	MS-2	V58		
02VB-9	H-8	2	C	10.00	CK	SA	MS-2	V58		

NEW YORK POWER AUTHORITY
JAMES A. FITZPATRICK NUCLEAR POWER PLANT
INSERVICE TESTING PROGRAM FOR PUMPS AND VALVES

VALVE TABLE

SYSTEM: Reactor Water Recirculation - SYSTEM ID: 02-2

DRAWING: FM-26A

VALVE ID	DWG CO-OR	CLASS	VALVE CATEGORY	SIZE (IN)	VALVE TYPE	ACTUATOR TYPE	SECT. XI TEST	RR / CS	ALTERNATE TEST	REMARKS
02-2AOV-39	E-4	1	A	0.75	GA	AO	TM-1 FC-1 PI-3 LJ-3	V29		
02-2AOV-40	F-2	1	A	0.75	GA	AO	TM-1 FC-1 PI-3 LJ-3	V29		
02-2EFV-PS-128A	B-6	1	AC	1.00	BK	SA	LK-1 LK-3	V28	LK-3	VALVE ISOLATES ON EXCESS FLOW
02-2EFV-PS-128B	B-6	1	AC	1.00	BK	SA	LK-1 LK-3	V28	LK-3	VALVE ISOLATES ON EXCESS FLOW
02-2EFV-PT-24A	C-3	1	AC	1.00	BK	SA	LK-1 LK-3	V28	LK-3	VALVE ISOLATES ON EXCESS FLOW
02-2EFV-PT-24B	C-8	1	AC	1.00	BK	SA	LK-1 LK-3	V28	LK-3	VALVE ISOLATES ON EXCESS FLOW
02-2EFV-PT-25A	C-3	1	AC	1.00	BK	SA	LK-1 LK-3	V28	LK-3	VALVE ISOLATES ON EXCESS FLOW
02-2EFV-PT-25B	C-8	1	AC	1.00	BK	SA	LK-1 LK-3	V28	LK-3	VALVE ISOLATES ON EXCESS FLOW
02-2RWR-13A	C-3	1	AC	0.75	SK	SA	RF-1 LJ-3	V1	LJ-3	

REV. NO: 5

NEW YORK POWER AUTHORITY
JAMES A. FITZPATRICK NUCLEAR POWER PLANT
INSERVICE TESTING PROGRAM FOR PUMPS AND VALVES

VALVE TABLE

SYSTEM: Reactor Water Recirculation - SYSTEM ID: 02-2

DRAWING: FM-26A

VALVE ID	DWG CO-OR	CLASS	VALVE CATEGORY	SIZE (IN)	VALVE TYPE	ACTUATOR TYPE	SECT. XI TEST	RR / CS	ALTERNATE TEST	REMARKS
02-2RWR-13B	C-8	1	AC	0.75	SK	SA	RF-1 LJ-3	V1	LJ-3	
02-2SOV-001	D-3	1	A	0.75	GL	SO	TM-1 FC-1 PI-3 LJ-3	V29		
02-2SOV-002	D-8	1	A	0.75	GL	SO	TM-1 FC-1 PI-3 LJ-3	V29		
022EFV1DPT111A	E-3	1	AC	1.00	BK	SA	LK-1 LK-3	V28	LK-3	VALVE ISOLATES ON EXCESS FLOW
022EFV1DPT111B	E-8	1	AC	1.00	BK	SA	LK-1 LK-3	V28	LK-3	VALVE ISOLATES ON EXCESS FLOW
022EFV1FT110A	F-3	1	AC	1.00	BK	SA	LK-1 LK-3	V28	LK-3	VALVE ISOLATES ON EXCESS FLOW
022EFV1FT110C	D-3	1	AC	1.00	BK	SA	LK-1 LK-3	V28	LK-3	VALVE ISOLATES ON EXCESS FLOW
022EFV1FT110E	F-7	1	AC	1.00	BK	SA	LK-1 LK-3	V28	LK-3	VALVE ISOLATES ON EXCESS FLOW
022EFV1FT110G	D-8	1	AC	1.00	BK	SA	LK-1 LK-3	V28	LK-3	VALVE ISOLATES ON EXCESS FLOW

NEW YORK POWER AUTHORITY
JAMES A. FITZPATRICK NUCLEAR POWER PLANT
INSERVICE TESTING PROGRAM FOR PUMPS AND VALVES

VALVE TABLE

SYSTEM: Reactor Water Recirculation - SYSTEM ID: 02-2 DRAWING: FM-26A

VALVE ID	DWG CO-OR	CLASS	VALVE CATEGORY	SIZE (IN)	VALVE TYPE	ACTUATOR TYPE	SECT. XI TEST	RR / CS	ALTERNATE TEST	REMARKS
022EFV2DPT111A	E-3	1	AC	1.00	BK	SA	LK-1 LK-3	V28	LK-3	VALVE ISOLATES ON EXCESS FLOW
022EFV2DPT111B	E-8	1	AC	1.00	BK	SA	LK-1 LK-3	V28	LK-3	VALVE ISOLATES ON EXCESS FLOW
022EFV2FT110A	F-3	1	AC	1.00	BK	SA	LK-1 LK-3	V28	LK-3	VALVE ISOLATES ON EXCESS FLOW
022EFV2FT110C	D-3	1	AC	1.00	BK	SA	LK-1 LK-3	V28	LK-3	VALVE ISOLATES ON EXCESS FLOW
022EFV2FT110E	F-8	1	AC	1.00	BK	SA	LK-1 LK-3	V28	LK-3	VALVE ISOLATES ON EXCESS FLOW
022EFV2FT110G	D-8	1	AC	1.00	BK	SA	LK-1 LK-3	V28	LK-3	VALVE ISOLATES ON EXCESS FLOW
02MOV-53A	C-3	1	B	28.00	GA	MO	TM-2 PI-3	CS1		
02MOV-53B	C-7	1	B	28.00	GA	MO	TM-2 PI-3	CS1		

NEW YORK POWER AUTHORITY
JAMES A. FITZPATRICK NUCLEAR POWER PLANT
INSERVICE TESTING PROGRAM FOR PUMPS AND VALVES

VALVE TABLE

SYSTEM: Nuclear Boiler Vessel Instruments - SYSTEM ID: 02-3

DRAWING: FM-47A

VALVE ID	DWG CO-OR	CLASS	VALVE CATEGORY	SIZE (IN)	VALVE TYPE	ACTUATOR TYPE	SECT. XI TEST	RR / CS	ALTERNATE TEST	REMARKS
02-3EFV-11	F-7	1	AC	1.00	BK	SA	LK-1 LK-3	V28	LK-3	VALVE ISOLATES ON EXCESS FLOW
02-3EFV-13A	E-7	1	AC	1.00	BK	SA	LK-1 LK-3	V28	LK-3	VALVE ISOLATES ON EXCESS FLOW
02-3EFV-13B	E-4	1	AC	1.00	BK	SA	LK-1 LK-3	V28	LK-3	VALVE ISOLATES ON EXCESS FLOW
02-3EFV-15A	E-7	1	AC	1.00	BK	SA	LK-1 LK-3	V28	LK-3	VALVE ISOLATES ON EXCESS FLOW
02-3EFV-15B	E-4	1	AC	1.00	BK	SA	LK-1 LK-3	V28	LK-3	VALVE ISOLATES ON EXCESS FLOW
02-3EFV-15N	B-7	1	AC	1.00	BK	SA	LK-1 LK-3	V28	LK-3	VALVE ISOLATES ON EXCESS FLOW
02-3EFV-17A	D-7	1	AC	1.00	BK	SA	LK-1 LK-3	V28	LK-3	VALVE ISOLATES ON EXCESS FLOW
02-3EFV-17B	D-4	1	AC	1.00	BK	SA	LK-1 LK-3	V28	LK-3	VALVE ISOLATES ON EXCESS FLOW
02-3EFV-19A	D-7	1	AC	1.00	BK	SA	LK-1 LK-3	V28	LK-3	VALVE ISOLATES ON EXCESS FLOW
02-3EFV-19B	D-4	1	AC	1.00	BK	SA	LK-1 LK-3	V28	LK-3	VALVE ISOLATES ON EXCESS FLOW

NEW YORK POWER AUTHORITY
JAMES A. FITZPATRICK NUCLEAR POWER PLANT
INSERVICE TESTING PROGRAM FOR PUMPS AND VALVES

VALVE TABLE

SYSTEM: Nuclear Boiler Vessel Instruments - SYSTEM ID: 02-3

DRAWING: FM-47A

VALVE ID	DWG CO-OR	CLASS	VALVE CATEGORY	SIZE (IN)	VALVE TYPE	ACTUATOR TYPE	SECT. XI TEST	RR / CS	ALTERNATE TEST	REMARKS
02-3EFV-21A	H-5	1	AC	1.00	BK	SA	LK-1 LK-3	V28	LK-3	VALVE ISOLATES ON EXCESS FLOW
02-3EFV-21B	C-7	1	AC	1.00	BK	SA	LK-1 LK-3	V28	LK-3	VALVE ISOLATES ON EXCESS FLOW
02-3EFV-21C	C-4	1	AC	1.00	BK	SA	LK-1 LK-3	V28	LK-3	VALVE ISOLATES ON EXCESS FLOW
02-3EFV-21D	H-4	1	AC	1.00	BK	SA	LK-1 LK-3	V28	LK-3	VALVE ISOLATES ON EXCESS FLOW
02-3EFV-23	F-7	1	AC	1.00	BK	SA	LK-1 LK-3	V28	LK-3	VALVE ISOLATES ON EXCESS FLOW
02-3EFV-23A	H-5	1	AC	1.00	BK	SA	LK-1 LK-3	V28	LK-3	VALVE ISOLATES ON EXCESS FLOW
02-3EFV-23B	D-7	1	AC	1.00	BK	SA	LK-1 LK-3	V28	LK-3	VALVE ISOLATES ON EXCESS FLOW
02-3EFV-23C	D-4	1	AC	1.00	BK	SA	LK-1 LK-3	V28	LK-3	VALVE ISOLATES ON EXCESS FLOW
02-3EFV-23D	H-4	1	AC	1.00	BK	SA	LK-1 LK-3	V28	LK-3	VALVE ISOLATES ON EXCESS FLOW
02-3EFV-25	C-7	1	AC	1.00	BK	SA	LK-1 LK-3	V28	LK-3	VALVE ISOLATES ON EXCESS FLOW

NEW YORK POWER AUTHORITY
JAMES A. FITZPATRICK NUCLEAR POWER PLANT
INSERVICE TESTING PROGRAM FOR PUMPS AND VALVES

VALVE TABLE

SYSTEM: Nuclear Boiler Vessel Instruments - SYSTEM ID: 02-3

DRAWING: FM-47A

VALVE ID	DWG CO-OR	CLASS	VALVE CATEGORY	SIZE (IN)	VALVE TYPE	ACTUATOR TYPE	SECT. XI TEST	RR / CS	ALTERNATE TEST	REMARKS
02-3EFV-31A	H-5	1	AC	1.00	BK	SA	LK-1 LK-3	V28	LK-3	VALVE ISOLATES ON EXCESS FLOW
02-3EFV-31B	H-5	1	AC	1.00	BK	SA	LK-1 LK-3	V28	LK-3	VALVE ISOLATES ON EXCESS FLOW
02-3EFV-31C	H-5	1	AC	1.00	BK	SA	LK-1 LK-3	V28	LK-3	VALVE ISOLATES ON EXCESS FLOW
02-3EFV-31D	H-5	1	AC	1.00	BK	SA	LK-1 LK-3	V28	LK-3	VALVE ISOLATES ON EXCESS FLOW
02-3EFV-31E	D-7	1	AC	1.00	BK	SA	LK-1 LK-3	V28	LK-3	VALVE ISOLATES ON EXCESS FLOW
02-3EFV-31F	H-5	1	AC	1.00	BK	SA	LK-1 LK-3	V28	LK-3	VALVE ISOLATES ON EXCESS FLOW
02-3EFV-31G	H-5	1	AC	1.00	BK	SA	LK-1 LK-3	V28	LK-3	VALVE ISOLATES ON EXCESS FLOW
02-3EFV-31H	H-5	1	AC	1.00	BK	SA	LK-1 LK-3	V28	LK-3	VALVE ISOLATES ON EXCESS FLOW
02-3EFV-31J	H-4	1	AC	1.00	BK	SA	LK-1 LK-3	V28	LK-3	VALVE ISOLATES ON EXCESS FLOW
02-3EFV-31K	H-4	1	AC	1.00	BK	SA	LK-1 LK-3	V28	LK-3	VALVE ISOLATES ON EXCESS FLOW

NEW YORK POWER AUTHORITY
JAMES A. FITZPATRICK NUCLEAR POWER PLANT
INSERVICE TESTING PROGRAM FOR PUMPS AND VALVES

VALVE TABLE

SYSTEM: Nuclear Boiler Vessel Instruments - SYSTEM ID: 02-3

DRAWING: FM-47A

VALVE ID	DWG CO-OR	CLASS	VALVE CATEGORY	SIZE (IN)	VALVE TYPE	ACTUATOR TYPE	SECT. XI TEST	RR / CS	ALTERNATE TEST	REMARKS
02-3EFV-31L	H-4	1	AC	1.00	BK	SA	LK-1 LK-3	V28	LK-3	VALVE ISOLATES ON EXCESS FLOW
02-3EFV-31M	D-4	1	AC	1.00	BK	SA	LK-1 LK-3	V28	LK-3	VALVE ISOLATES ON EXCESS FLOW
02-3EFV-31N	H-4	1	AC	1.00	BK	SA	LK-1 LK-3	V28	LK-3	VALVE ISOLATES ON EXCESS FLOW
02-3EFV-31P	H-4	1	AC	1.00	BK	SA	LK-1 LK-3	V28	LK-3	VALVE ISOLATES ON EXCESS FLOW
02-3EFV-31R	H-4	1	AC	1.00	BK	SA	LK-1 LK-3	V28	LK-3	VALVE ISOLATES ON EXCESS FLOW
02-3EFV-31S	H-4	1	AC	1.00	BK	SA	LK-1 LK-3	V28	LK-3	VALVE ISOLATES ON EXCESS FLOW
02-3EFV-33	B-4	1	AC	1.00	BK	SA	LK-1 LK-3	V28	LK-3	VALVE ISOLATES ON EXCESS FLOW

NEW YORK POWER AUTHORITY
JAMES A. FITZPATRICK NUCLEAR POWER PLANT
INSERVICE TESTING PROGRAM FOR PUMPS AND VALVES

VALVE TABLE

DRAWING: FM-27B

SYSTEM: Control Rod Drive - SYSTEM ID: 03

VALVE ID	DWG CO-OR	CLASS	VALVE CATEGORY	SIZE (IN)	VALVE TYPE	ACTUATOR TYPE	SECT. XI TEST	RR / CS	ALTERNATE TEST	REMARKS
03AOV-126	C-4	2	B	1.00	GA	AO	TM-1	V2	FS-6	
							FO-1	V2	FO-6	
03AOV-127	D-4	2	B	1.00	GA	AO	TM-1	V2	FS-6	
							FO-1	V2	FO-6	
03AOV-32	H-4	2	B	1.00	GA	AO	TS-1			TECH SPEC STROKE TIME LIMIT-30 SEC
							FC-1			
							PI-3			
03AOV-33	F-4	2	B	2.00	GA	AO	TS-1			TECH SPEC STROKE TIME LIMIT-30 SEC
							FC-1			
							PI-3			
03AOV-34	H-4	2	B	1.00	GA	AO	TS-1			TECH SPEC STROKE TIME LIMIT-30 SEC
							FC-1			
							PI-3			
03AOV-35	F-4	2	B	2.00	GA	AO	TS-1			TECH SPEC STROKE TIME LIMIT-30 SEC
							FC-1			
							PI-3			
03AOV-36	H-6	2	B	1.00	GA	AO	TS-1			TECH SPEC STROKE TIME LIMIT-30 SEC
							FC-1			
							PI-3			
03AOV-37	F-6	2	B	2.00	GA	AO	TS-1			TECH SPEC STROKE TIME LIMIT-30 SEC
							FC-1			
							PI-3			

REV. NO: 5

NEW YORK POWER AUTHORITY
JAMES A. FITZPATRICK NUCLEAR POWER PLANT
INSERVICE TESTING PROGRAM FOR PUMPS AND VALVES

VALVE TABLE

SYSTEM: Control Rod Drive - SYSTEM ID: 03

DRAWING: FM-27B

VALVE ID	DWG CO-OR	CLASS	VALVE CATEGORY	SIZE (IN)	VALVE TYPE	ACTUATOR TYPE	SECT. XI TEST	RR / CS	ALTERNATE TEST	REMARKS
03AOV-38	H-6	2	B	1.00	GA	AO	IS-1 FC-1 P1-3			TECH SPEC STROKE TIME LIMIT-30 SEC
03ACV-39	F-6	2	B	2.00	GA	AO	IS-1 FC-1 P1-3			TECH SPEC STROKE TIME LIMIT-30 SEC
03HCU-114	D-4	2	C	0.75	BK	SA	FF-1	V2	FF-6	
03HCU-115	C-4	2	C	0.75	BK	SA	RF-2	CS7		
03HCU-138	C-4	2	C	0.75	BK	SA	RF-1			REVERSE FLOW TESTED VIA ROD MOTION

NEW YORK POWER AUTHORITY
JAMES A. FITZPATRICK NUCLEAR POWER PLANT
INSERVICE TESTING PROGRAM FOR PUMPS AND VALVES

VALVE TABLE

SYSTEM: Traveling In-Core Probe - SYSTEM ID: 07

DRAWING: FM-119A

VALVE ID	DWG CO-OR	CLASS	VALVE CATEGORY	SIZE (IN)	VALVE TYPE	ACTUATOR TYPE	SECT. XI TEST	RR / CS	ALTERNATE TEST	REMARKS
07EV-104A	F-4	2	D	0.37	XP	SQ	XP-4			
07EV-104B	F-4	2	D	0.37	XP	SQ	XP-4			
07EV-104C	F-4	2	D	0.37	XP	SQ	XP-4			
07SOV-104A	F-5	2	A	0.37	BL	SO	TM-1 FC-1 PI-3 LJ-3	V50		
07SOV-104B	F-4	2	A	0.37	BL	SO	TM-1 FC-1 PI-3 LJ-3	V50		
07SOV-104C	F-4	2	A	0.37	BL	SO	TM-1 FC-1 PI-3 LJ-3	V50		

NEW YORK POWER AUTHORITY
JAMES A. FITZPATRICK NUCLEAR POWER PLANT
INSERVICE TESTING PROGRAM FOR PUMPS AND VALVES

VALVE TABLE

DRAWING: FM-20A

SYSTEM: Residual Heat Removal - SYSTEM ID: 10

VALVE ID	DWG CO-OR	CLASS	VALVE CATEGORY	SIZE (IN)	VALVE TYPE	ACTUATOR TYPE	SECT. XI TEST	RR / CS	ALTERNATE TEST	REMARKS
10AOV-68A	F-6	1	AC	24.00	TK	SA AO	FS-2 RF-2 LK-3	V60 CS2	DA-6	
10AOV-68B	F-5	1	AC	24.00	TK	SA AO	FS-2 RF-2 LK-3 PI	V60 CS2	DA-6	
10MOV-13A	C-6	2	B	20.00	GA	MO	TM-1 PI-3			
10MOV-13B	C-4	2	B	20.00	GA	MO	TM-1 PI-3			
10MOV-13C	C-6	2	B	20.00	GA	MO	TM-1 PI-3			
10MOV-13D	C-5	2	B	20.00	GA	MO	TM-1 PI-3			
10MOV-15A	C-6	2	B	20.00	GA	MO	TM-1 PI-3			
10MOV-15B	C-4	2	B	20.00	GA	MO	TM-1 PI-3			
10MOV-15C	C-6	2	B	20.00	GA	MO	TM-1 PI-3			

REV. NO: 5

NEW YORK POWER AUTHORITY
JAMES A. FITZPATRICK NUCLEAR POWER PLANT
INSERVICE TESTING PROGRAM FOR PUMPS AND VALVES

VALVE TABLE

SYSTEM: Residual Heat Removal - SYSTEM ID: 10

DRAWING: FM-20A

VALVE ID	DWG CO-OR	CLASS	VALVE CATEGORY	SIZE (IN)	VALVE TYPE	ACTUATOR TYPE	SECT. XI TEST	RR / CS	ALTERNATE TEST	REMARKS
10MOV-15D	C-4	2	B	20.00	GA	MO	TM-1 PI-3			
10MOV-16A	D-8	2	B	4.00	GA	MO	TM-1 PI-3			
10MOV-16B	D-3	2	B	4.00	GA	MO	TM-1 PI-3			
10MOV-17	D-5	1	A	20.00	GA	MO	TS-2 TM-2 PI-3 LK-3 LJ-3	CS3 CS3		LK-3 SATISFIED BY LJ-3 PER EVALUATION
10MOV-18	E-5	1	A	20.00	GA	MO	TS-2 TM-2 PI-3 LK-3 LJ-3	CS3 CS3		LK-3 SATISFIED BY LJ-3 PER EVALUATION
10MOV-25A	F-8	1	A	24.00	GA	MO	TS-1 TM-1 PI-3 LK-3 LJ-3			LK-3 SATISFIED BY LJ-3 PER EVALUATION
10MOV-25B	F-3	1	A	24.00	GA	MO	TS-1 TM-1 PI-3 LK-3 LJ-3			LK-3 SATISFIED BY LJ-3 PER EVALUATION

NEW YORK POWER AUTHORITY
JAMES A. FITZPATRICK NUCLEAR POWER PLANT
INSERVICE TESTING PROGRAM FOR PUMPS AND VALVES

VALVE TABLE

SYSTEM: Residual Heat Removal - SYSTEM ID: 10

DRAWING: FM-20A

VALVE ID	DWG CO-OR	CLASS	VALVE CATEGORY	SIZE (IN)	VALVE TYPE	ACTUATOR TYPE	SECT. XI TEST	RR / CS	ALTERNATE TEST	REMARKS
10MOV-26A	G-7	2	A	10.00	GA	MO	TS-1			
							TM-1			
							PI-3			
							LJ-3	V19		
10MOV-26B	G-4	2	A	10.00	GA	MO	TS-1			
							TM-1			
							PI-3			
							LJ-3	V19		
10MOV-27A	F-8	1	A	18.00	AN	MO	TS-1			
							TM-1			
							PI-3			
							LJ-3			
10MOV-27B	F-3	1	A	18.00	AN	MO	TS-1			
							TM-1			
							PI-3			
							LJ-3			
10MOV-31A	G-6	2	A	10.00	GL	MO	TS-1			
							TM-1			
							PI-3			
							LJ-3	V19		
10MOV-31B	G-5	2	A	10.00	GL	MO	TS-1			
							TM-1			
							PI-3			
							LJ-3	V19		

NEW YORK POWER AUTHORITY
JAMES A. FITZPATRICK NUCLEAR POWER PLANT
INSERVICE TESTING PROGRAM FOR PUMPS AND VALVES

VALVE TABLE

DRAWING: FM-20A

SYSTEM: Residual Heat Removal - SYSTEM ID: 10

VALVE ID	DWG CO-OR	CLASS	VALVE CATEGORY	SIZE (IN)	VALVE TYPE	ACTUATOR TYPE	SECT. XI TEST	RR / CS	ALTERNATE TEST	REMARKS
10MOV-34A	E-7	2	B	14.00	GL	MO	TS-1 TM-1 PI-3			
10MOV-34B	E-3	2	B	14.00	GL	MO	TS-1 TM-1 PI-3			
10MOV-38A	E-7	2	A	4.00	GL	MO	TS-1 TM-1 PI-3 LJ-3	 V19		
10MOV-38B	E-4	2	A	4.00	GL	MO	TS-1 TM-1 PI-3 LJ-3	 V19		
10MOV-39A	E-8	2	A	16.00	GL	MO	TM-1 PI-3 LJ-3	 V19		
10MOV-39B	E-3	2	A	16.00	GL	MO	TM-1 PI-3 LJ-3	 V19		
10MOV-66A	D-8	2	B	20.00	GL	MO	TM-1 PI-3			

REV. NO: 5

NEW YORK POWER AUTHORITY
JAMES A. FITZPATRICK NUCLEAR POWER PLANT
INSERVICE TESTING PROGRAM FOR PUMPS AND VALVES

VALVE TABLE

SYSTEM: Residual Heat Removal - SYSTEM ID: 10 DRAWING: FM-20A

VALVE ID	DWG CO-OR	CLASS	VALVE CATEGORY	SIZE (IN)	VALVE TYPE	ACTUATOR TYPE	SECT. XI TEST	RR / CS	ALTERNATE TEST	REMARKS
10MOV-66B	D-3	2	B	20.00	GL	MO	TM-1 PI-3			
10RHR-262	H-3	2	C	4.00	CK	SA	RF-1			
10RHR-277	G-8	2	C	4.00	CK	SA	RF-1			
10RHR-42A	C-3	2	C	16.00	CK	SA	FF-1 RF-1			
10RHR-42B	C-3	2	C	16.00	CK	SA	FF-1 RF-1			
10RHR-42C	D-5	2	C	16.00	CK	SA	FF-1 RF-1			
10RHR-42D	C-3	2	C	16.00	CK	SA	FF-1 RF-1			
10RHR-52A	G-6	2	A	2.00	GA	MA	LJ-3	V19		
10RHR-52B	G-5	2	A	2.00	GA	MA	LJ-3	V19		
10RHR-64A	C-8	2	C	3.00	CK	SA	FF-1 PF-1 RF-1			
10RHR-64B	C-3	2	C	3.00	CK	SA	FF-1 PF-1 RF-1			

VALVE TABLE

SYSTEM: Residual Heat Removal - SYSTEM ID: 10

DRAWING: FM-20A

VALVE ID	DWG CO-OR	CLASS	VALVE CATEGORY	SIZE (IN)	VALVE TYPE	ACTUATOR TYPE	SECT. XI TEST	RR / CS	ALTERNATE TEST	REMARKS
10RHR-64C	D-8	2	C	3.00	CK	SA	FF-1 PF-1 RF-1			
10RHR-64D	D-3	2	C	3.00	CK	SA	FF-1 PF-1 RF-1			
10RHR-95A	E-4	2	C	0.75	SK	SA	RF-1	VS6	RF-3	
10RHR-95B	B-5	2	C	0.75	SK	SA	RF-1	VS6	RF-3	
10SV-35A	E-8	2	C	1.00	RL	SA	RL-4			
10SV-35B	E-3	2	C	1.00	RL	SA	RL-4			
10SV-40	D-5	2	C	1.00	RL	SA	RL-4			
10SV-44	H-3	2	C	1.00	RL	SA	RL-4			

NEW YORK POWER AUTHORITY
JAMES A. FITZPATRICK NUCLEAR POWER PLANT
INSERVICE TESTING PROGRAM FOR PUMPS AND VALVES

VALVE TABLE

SYSTEM: Residual Heat Removal - SYSTEM ID: 10

DRAWING: FM-20B

VALVE ID	DWG CO-OR	CLASS	VALVE CATEGORY	SIZE (IN)	VALVE TYPE	ACTUATOR TYPE	SECT. XI TEST	RR / CS	ALTERNATE TEST	REMARKS
10MOV-89A	D-6	3	B	16.00	GA	MO	TM-1 PI-3			
10MOV-89B	E-5	3	B	16.00	GA	MO	TM-1 PI-3			
10RHR-14A	B-7	3	C	12.00	CK	SA	FF-1 RF-1			
10RHR-14B	B-4	3	C	12.00	CK	SA	FF-1 RF-1			
10RHR-14C	C-7	3	C	12.00	CK	SA	FF-1 RF-1 TM			
10RHR-14D	C-4	3	C	12.00	CK	SA	FF-1 RF-1			
10SOV-101A	B-6	3	B	0.75	GL	SO	TM-1 FO-1 FF-3	V53		
10SOV-101B	B-5	3	B	0.75	GL	SO	TM-1 FO-1 FF-3	V53		
10SOV-101C	C-6	3	B	0.75	GL	SO	TM-1 FO-1 FF-3	V53		

NEW YORK POWER AUTHORITY
JAMES A. FITZPATRICK NUCLEAR POWER PLANT
INSERVICE TESTING PROGRAM FOR PUMPS AND VALVES

VALVE TABLE

DRAWING: FM-20B

SYSTEM: Residual Heat Removal - SYSTEM ID: 10

VALVE ID	DWG CO-OR	CLASS	VALVE CATEGORY	SIZE (IN)	VALVE TYPE	ACTUATOR TYPE	SECT. XI TEST	RR / CS	ALTERNATE TEST	REMARKS
10SOV-101D	C-5	3	B	0.75	GL	SO	TM-1 FO-1 FF-3	V53		

REV. NO: 5

NEW YORK POWER AUTHORITY
JAMES A. FITZPATRICK NUCLEAR POWER PLANT
INSERVICE TESTING PROGRAM FOR PUMPS AND VALVES

VALVE TABLE

SYSTEM: Standby Liquid Control - SYSTEM ID: 11

DRAWING: FM-21A

VALVE ID	DWG CO-OR	CLASS	VALVE CATEGORY	SIZE (IN)	VALVE TYPE	ACTUATOR TYPE	SECT. XI TEST	RR / CS	ALTERNATE TEST	REMARKS
11EV-14A	D-6	1	D	1.50	XP	SQ	XP-4			
11EV-14B	B-6	1	D	1.50	XP	SQ	XP-4			
11SLC-16	C-7	1	AC	1.50	CK	SA	FF-1	V5	FF-3	
							RF-1	V5	LJ-3	
							LJ-3			
11SLC-17	D-7	1	AC	1.50	SK	SA	FF-1	V5	FF-3	
							RF-1	V5	LJ-3	
							LJ-3			
11SLC-43A	D-6	2	C	1.50	SK	SA	FF-1			
							RF-1			
11SLC-43B	B-6	2	C	1.50	SK	SA	FF-1			
							RF-1			
11SV-39A	D-4	2	C	1.00	RL	SA	RL-4			
11SV-39B	C-4	2	C	1.00	[illegible]	SA	RL-4			

NEW YORK POWER AUTHORITY
JAMES A. FITZPATRICK NUCLEAR POWER PLANT
INSERVICE TESTING PROGRAM FOR PUMPS AND VALVES

VALVE TABLE

SYSTEM: Reactor Water Clean Up System - SYSTEM ID: 12

DRAWING: FM-24A

VALVE ID	DWG CO-OR	CLASS	VALVE CATEGORY	SIZE (IN)	VALVE TYPE	ACTUATOR TYPE	SECT. XI TEST	RR / CS	ALTERNATE TEST	REMARKS
12MOV-15	E-8	1	A	6.00	GA	MO	TS-1 PI-3 LJ-3			
12MOV-18	E-7	1	A	6.00	GA	MO	TS-1 PI-3 LJ-3	V19		
12MOV-69	H-7	1	A	4.00	GA	MO	TS-1 PI-3 LJ-3	V19		

REV. NO: 5

NEW YORK POWER AUTHORITY
JAMES A. FITZPATRICK NUCLEAR POWER PLANT
INSERVICE TESTING PROGRAM FOR PUMPS AND VALVES

VALVE TABLE

SYSTEM: Reactor Core Isolation Cooling - SYSTEM ID: 13

DRAWING: FM-22A

VALVE ID	DWG CO-OR	CLASS	VALVE CATEGORY	SIZE (IN)	VALVE TYPE	ACTUATOR TYPE	SECT. XI TEST	RR / CS	ALTERNATE TEST	REMARKS
13EFV-01A	G-7	1	AC	1.00	BK	SA	LK-1 LK-3	V28	LK-3	VALVE ISOLATES ON EXCESS FLOW
13EFV-01B	G-7	1	AC	1.00	BK	SA	LK-1 LK-3	V28	LK-3	VALVE ISOLATES ON EXCESS FLOW
13EFV-02A	G-7	1	AC	1.00	BK	SA	LK-1 LK-3	V28	LK-3	VALVE ISOLATES ON EXCESS FLOW
13EFV-02B	F-7	1	AC	1.00	BK	SA	LK-1 LK-3	V28	LK-3	VALVE ISOLATES ON EXCESS FLOW
13MOV-15	F-7	1	A	3.00	GA	MO	TS-1 PI-3 LJ-3	V19		
13MOV-16	F-7	1	A	3.00	GA	MO	TS-1 PI-3 LJ-3	V19		
13MOV-21	F-5	1	A	4.00	GA	MO	TM-1 PI-3 LJ-3	V19		
13MOV-27	E-5	2	B	2.00	GL	MO	TS-1 PI-3			
13MOV-41	D-7	2	B	6.00	GA	MO	TM-1 PI-3			

REV. NO: 5

NEW YORK POWER AUTHORITY
JAMES A. FITZPATRICK NUCLEAR POWER PLANT
INSERVICE TESTING PROGRAM FOR PUMPS AND VALVES

VALVE TABLE

DRAWING: FM-22A

SYSTEM: Reactor Core Isolation Cooling - SYSTEM ID: 13

VALVE ID	DWG CO-OR	CLASS	VALVE CATEGORY	SIZE (IN)	VALVE TYPE	ACTUATOR TYPE	SECT. XI TEST	RR / CS	ALTERNATE TEST	REMARKS
13RCIC-4	D-6	2	AC	8.00	LK	SA	RF-1 LJ-3	V6	LJ-3	
13RCIC-5	C-6	2	AC	8.00	LK	SA	RF-1 LJ-3	V6	LJ-3	
13RCIC-7	C-7	2	C	2.00	SC	SA MA	ME-1			

REV. NO: 5

NEW YORK POWER AUTHORITY
JAMES A. FITZPATRICK NUCLEAR POWER PLANT
INSERVICE TESTING PROGRAM FOR PUMPS AND VALVES

VALVE TABLE

SYSTEM: Core Spray - SYSTEM ID: 14

DRAWING: FM-23A

VALVE ID	DWG CO-OR	CLASS	VALVE CATEGORY	SIZE (IN)	VALVE TYPE	ACTUATOR TYPE	SECT. XI TEST	PR / CS	ALTERNATE TEST	REMARKS
14AOV-13A	F-5	1	AC	10.00	TK	SA AO	PE-2 FF-3 LK-3 PI	V57	FF-3	
14AOV-13B	F-6	1	AC	10.00	TK	SA AO	PE-2 FF-3 LK-3 PI	V57	FF-3	
14CSP-10A	D-8	2	C	12.00	CK	SA	FF-1			
14CSP-10B	D-3	2	C	12.00	CK	SA	FF-1			
14CSP-62A	E-7	2	C	1.00	SK	SA	RF-1	V55	DA-6	
14CSP-62B	E-3	2	C	1.00	SK	SA	RF-1	V55	DA-6	
14CSP-76A	F-7	2	C	2.00	SK	SA	RF-1			
14CSP-76B	F-4	2	C	2.00	SK	SA	RF-1			
14EFV-31A	E-4	1	AC	1.00	BK	SA	LK-1 LK-3	V28	LK-3	VALVE ISOLATES ON EXCESS FLOW
14EFV-31B	E-4	1	AC	1.00	BK	SA	LK-1 LK-3	V28	LK-3	VALVE ISOLATES ON EXCESS FLOW
14MOV-11A	F-7	1	A	10.00	GA	MO	TM-1 PI-3 LJ-3			

REV. NO: 5

NEW YORK POWER AUTHORITY
JAMES A. FITZPATRICK NUCLEAR POWER PLANT
INSERVICE TESTING PROGRAM FOR PUMPS AND VALVES

VALVE TABLE

SYSTEM: Core Spray - SYSTEM ID: 14

DRAWING: FM-23A

VALVE ID	DWG CO-OR	CLASS	VALVE CATEGORY	SIZE (IN)	VALVE TYPE	ACTUATOR TYPE	SECT. XI TEST	RR / CS	ALTERNATE TEST	REMARKS
14MOV-11B	F-4	1	A	10.00	GA	MO	TM-1 PI-3 LJ-3			
14MOV-12A	F-6	1	A	10.00	GA	MO	TM-1 PI-3 LK-3 LJ-3			LK-3 SATISFIED BY LJ-3 PER EVALUATION
14MOV-12B	F-4	1	A	10.00	GA	MO	TM-1 PI-3 LK-3 LJ-3			LK-3 SATISFIED BY LJ-3 PER EVALUATION
14MOV-26A	F-7	2	B	8.00	GL	MO	TS-1 PI-3			
14MOV-26B	F-3	2	B	8.00	GL	MO	TS-1 PI-3			
14MOV-5A	E-7	2	B	3.00	GA	MO	TM-1 PI-3			
14MOV-5B	E-3	2	B	3.00	GA	MO	TM-1 PI-3			
14MOV-7A	C-6	2	B	16.00	GA	MO	TM-1 PI-3			

REV. NO: 5

NEW YORK POWER AUTHORITY
JAMES A. FITZPATRICK NUCLEAR POWER PLANT
INSERVICE TESTING PROGRAM FOR PUMPS AND VALVES

VALVE TABLE

DRAWING: FM-23A

SYSTEM: Core Spray - SYSTEM ID: 14

VALVE ID	DWG CO-OR	CLASS	VALVE CATEGORY	SIZE (IN)	VALVE TYPE	ACTUATOR TYPE	SECT. XI TEST	RR / CS	ALTERNATE TEST	REMARKS
14MOV-7B	C-4	2	B	16.00	GA	MO	TM-1 PI-3			
14SV-20A	E-8	2	C	1.50	RL	SA	RL-4			
14SV-20B	D-2	2	C	1.50	RL	SA	RL-4			

REV. NO: 5

NEW YORK POWER AUTHORITY
JAMES A. FITZPATRICK NUCLEAR POWER PLANT
INSERVICE TESTING PROGRAM FOR PUMPS AND VALVES

VALVE TABLE

SYSTEM: Reactor ... ding Closed Loop Cooling - SYSTEM ID: 15

DRAWING: FM-15B

VALVE ID	CO-OR	CLASS	VALVE CATEGORY	SIZE (IN)	VALVE TYPE	ACTUATOR TYPE	SECT. XI TEST	R / CS	ALTERNATE TEST	REMARKS
15AOV-130A	C-7	2	A	6.00	GL	AO	TM-2 PE-7 PI-3 LJ-3	CS5		
15AOV-130B	D-5	2	A	4.00	GL	AO	TM-2 PE-7 PI-3 LJ-3	CS5		
15AOV-131A	E-7	2	A	4.00	GL	AO	TM-2 PE-7 PI-3 LJ-3	CS5		
15AOV-131B	E-4	2	A	4.00	GL	AO	TM-2 PE-7 PI-3 LJ-3	CS5		
15AOV-132A	F-5	2	A	4.00	GL	AO	TM-2 PE-7 PI-3 LJ-3	CS4		
15AOV-132B	F-7	2	A	4.00	GL	AO	TM-2 PE-7 PI-3 LJ-3	CS4		

NEW YORK POWER AUTHORITY
JAMES A. FITZPATRICK NUCLEAR POWER PLANT
INSERVICE TESTING PROGRAM FOR PUMPS AND VALVES

VALVE TABLE

DRAWING: FM-15B

SYSTEM: Reactor Building Closed Loop Cooling - SYSTEM ID: 15

VALVE ID	DWG CO-OR	CLASS	VALVE CATEGORY	SIZE (IN)	VALVE TYPE	ACTUATOR TYPE	SECT. XI TEST	RR / CS	ALTERNATE TEST	REMARKS
15AOV-133A	F-5	2	A	4.00	GL	AO	TM-2 PE-7 PI-3 LJ-3	CS4		
15AOV-133B	F-7	2	A	4.00	GL	AO	TM-2 PE-7 PI-3 LJ-3	CS4		
15AOV-134A	C-6	2	A	1.50	GL	AO	TM-2 PE-7 PI-3 LJ-3	CS5		
15RBC-21A	F-4	2	AC	4.00	CK	SA	RF-2 LJ-3	CS14 V19		
15RBC-21B	F-7	2	AC	4.00	CK	SA	RF-2 LJ-3	CS14 V19		
15RBC-22A	F-4	2	A	4.00	GL	MA	FS-2 LJ-3	CS14		
15RBC-22B	F-7	2	A	4.00	GL	MA	FS-2 LJ-3	CS14		
15RBC-24A	C-7	2	AC	6.00	CK	SA	RF-2 LJ-3	CS15 V19		

REV. NO: 5

NEW YORK POWER AUTHORITY
JAMES A. FITZPATRICK NUCLEAR POWER PLANT
INSERVICE TESTING PROGRAM FOR PUMPS AND VALVES

VALVE TABLE

DRAWING: FM-15B

SYSTEM: Reactor Building Closed Loop Cooling - SYSTEM ID: 15

VALVE ID	DWG CO-OR	CLASS	VALVE CATEGORY	SIZE (IN)	VALVE TYPE	ACTUATOR TYPE	SECT. XI TEST	RR / CS	ALTERNATE TEST	REMARKS
15RBC-24B	C-4	2	AC	4.00	CK	SA	RF-2 LJ-3	CS15 V19		
15RBC-26A	E-7	2	A	4.00	GL	MA	FS-2 LJ-3	CS15		
15RBC-26B	E-4	2	A	4.00	GL	MA	FS-2 LJ-3	CS15		
15RBC-33	C-6	2	A	1.50	GL	MA	FS-1 LJ-3			
15RBC-35A	D-4	3	C	1.50	SK	SA	RF-1			
15RBC-35B	D-8	3	C	1.50	SK	SA	RF-1			
15RBC-35C	D-3	3	C	1.50	SK	SA	RF-1			
15RBC-35D	E-8	3	C	1.50	SK	SA	RF-1			
15RBC-38A	F-4	3	C	1.50	SK	SA	RF-1			
15RBC-38B	F-3	3	C	1.50	SK	SA	RF-1			
15RBC-61	F-7	3	C	1.00	SK	SA	RF-1			

REV. NO: 5

NEW YORK POWER AUTHORITY
JAMES A. FITZPATRICK NUCLEAR POWER PLANT
INSERVICE TESTING PROGRAM FOR PUMPS AND VALVES

VALVE TABLE

SYSTEM: Reactor Building Closed Loop Cooling - SYSTEM ID: 15

DRAWING: FM-46B

VALVE ID	DWG CO-OR	CLASS	VALVE CATEGORY	SIZE (IN)	VALVE TYPE	ACTUATOR TYPE	SECT. XI TEST	RR / CS	ALTERNATE TEST	REMARKS
15MOV-175A	H-3	3	B	6.00	GA	MO	TM-1 PI-3			
15MOV-175B	H-3	3	B	6.00	GA	MO	TM-1 PI-3			

NEW YORK POWER AUTHORITY
JAMES A. FITZPATRICK NUCLEAR POWER PLANT
INSERVICE TESTING PROGRAM FOR PUMPS AND VALVES

VALVE TABLE

SYSTEM: Leak Rate Analyzer - SYSTEM ID: 16-1

DRAWING: FM-69A

VALVE ID	DWG CO-OR	CLASS	VALVE CATEGORY	SIZE (IN)	VALVE TYPE	ACTUATOR TYPE	SECT. XI TEST	RR / CS	ALTERNATE TEST	REMARKS
16-1AOV-101A	C-7	2	A	0.37	GA	AO	IM-1	V29		
							FC-1			
							P1-3			
							LJ-3	V19		
16-1AOV-101B	C-7	2	A	0.37	GA	AO	IM-1	V29		
							FC-1			
							P1-3			
							LJ-3	V19		
16-1AOV-102A	B-7	2	A	0.37	GA	AO	IM-1	V29		
							FC-1			
							P1-3			
							LJ-3	V19		
16-1AOV-102B	B-7	2	A	0.37	GA	AO	IM-1	V29		
							FC-1			
							P1-3			
							LJ-3	V19		

NEW YORK POWER AUTHORITY
JAMES A. FITZPATRICK NUCLEAR POWER PLANT
INSERVICE TESTING PROGRAM FOR PUMPS AND VALVES

VALVE TABLE

DRAWING: FM-19A

SYSTEM: Fuel Pool Cooling - SYSTEM ID: 19

VALVE ID	DWG CO-OR	CLASS	VALVE CATEGORY	SIZE (IN)	VALVE TYPE	ACTUATOR TYPE	SECT. XI TEST	RR / CS	ALTERNATE TEST	REMARKS
19VB-1A	F-5	3	C	1.50	BK	SA	MS-1			
19VB-1B	F-5	3	C	1.50	BK	SA	MS-1			

NEW YORK POWER AUTHORITY
JAMES A. FITZPATRICK NUCLEAR POWER PLANT
INSERVICE TESTING PROGRAM FOR PUMPS AND VALVES

VALVE TABLE

SYSTEM: Radwaste - SYSTEM ID: 20 DRAWING: FM-17A

VALVE ID	DWG CO-OR	CLASS	VALVE CATEGORY	SIZE (IN)	VALVE TYPE	ACTUATOR TYPE	SECT. XI TEST	RR / CS	ALTERNATE TEST	REMARKS
20AOV-83	F-6	2	A	3.00	BL	AO	TM-1 FC-1 PI-3 LJ-3	V29		
20AOV-95	C-6	2	A	3.00	BL	AO	TM-1 FC-1 PI-3 LJ-3	V29		
20MOV-82	F-7	2	A	3.00	GA	MO	TS-1 PI-3 LJ-3			
20MOV-94	C-7	2	A	3.00	GA	MO	TS-1 PI-3 LJ-3			

NEW YORK POWER AUTHORITY
JAMES A. FITZPATRICK NUCLEAR POWER PLANT
INSERVICE TESTING PROGRAM FOR PUMPS AND VALVES

VALVE TABLE

SYSTEM: High Pressure Coolant Injection - SYSTEM ID: 23

DRAWING: FM-25A

VALVE ID	DWG CO-OR	CLASS	VALVE CATEGORY	SIZE (IN)	VALVE TYPE	ACTUATOR TYPE	SECT. XI TEST	RR / CS	ALTERNATE TEST	REMARKS
23AOV-18	F-7	1	C	14.00	TK	SA AO	FS-2 PI-3	CS6		
23AOV-39	B-5	2	B	1.00	GA	AO	TM-1 FC-1 PI-3	V29		
23AOV-42	G-2	2	B	1.00	GA	AO	TM-1 FC-1 PI-3	V29		
23EFV-01A	G-7	1	AC	1.00	BK	SA	LK-1 LK-3	V28	LK-3	VALVE ISOLATES ON EXCESS FLOW
23EFV-01B	G-7	1	AC	1.00	BK	SA	LK-1 LK-3	V28	LK-3	VALVE ISOLATES ON EXCESS FLOW
23EFV-02A	G-7	1	AC	1.00	BK	SA	LK-1 LK-3	V28	LK-3	VALVE ISOLATES ON EXCESS FLOW
23EFV-02B	G-7	1	AC	1.00	BK	SA	LK-1 LK-3	V28	LK-3	VALVE ISOLATES ON EXCESS FLOW
23HOV-1	F-3	2	B	10.00	GL	MO	TM-1 PI-3	V29		
23HPI-12	C-6	2	AC	16.00	LK	SA	FF-1 RF-1 LJ-3	V34	LJ-3	

NEW YORK POWER AUTHORITY
JAMES A. FITZPATRICK NUCLEAR POWER PLANT
INSERVICE TESTING PROGRAM FOR PUMPS AND VALVES

VALVE TABLE

SYSTEM: High Pressure Coolant Injection - SYSTEM ID: 23

DRAWING: FM-25A

VALVE ID	DWG CO-OR	CLASS	VALVE CATEGORY	SIZE (IN)	VALVE TYPE	ACTUATOR TYPE	SECT. XI TEST	RR / CS	ALTERNATE TEST	REMARKS
23HPI-13	C-7	2	C	2.00	SC	SA MA	FF-1 RF-1	V35	DA-3	
23HPI-130	C-5	2	C	2.00	SK	SA	FF-1 PF-1	V54	DA-3	
23HPI-32	G-5	2	C	16.00	CK	SA	FF-1			
23HPI-402	E-7	2	C	2.00	CK	SA	FF-2 RF-2	V17 V17		
23HPI-403	E-7	2	C	2.00	CK	SA	FF-2 RF-2	V17 V17		
23HPI-56	C-6	2	C	2.00	SK	SA	FF-1	V22	DA-3	
23HPI-61	B-7	2	C	16.00	CK	SA	FF-1 PF-3	V9	DA-6	
23HPI-62	F-4	2	C	4.00	CK	SA	FF-1	V47	DA-6	
23HPI-65	C-6	2	AC	20.00	LK	SA	FF-1 RF-1 LJ-3	V34	LJ-3	
23MOV-14	F-3	2	B	10.00	GA	MO	TM-1 PI-3			
23MOV-15	F-7	1	A	10.00	GA	MO	TS-1 TM-1 PI-3 LJ-3	 V19		

REV. NO: 5

NEW YORK POWER AUTHORITY
JAMES A. FITZPATRICK NUCLEAR POWER PLANT
INSERVICE TESTING PROGRAM FOR PUMPS AND VALVES

VALVE TABLE

DRAWING: FM-25A

SYSTEM: High Pressure Coolant Injection - SYSTEM ID: 23

VALVE ID	DWG CO-OR	CLASS	VALVE CATEGORY	SIZE (IN)	VALVE TYPE	ACTUATOR TYPE	SECT. XI TEST	RR / CS	ALTERNATE TEST	REMARKS
23MOV-16	F-7	1	A	10.00	GA	MO	TS-1 TM-1 PI-3 LJ-3	 V19		
23MOV-17	G-5	2	B	16.00	GA	MO	TM-1 PI-3			
23MOV-19	F-6	1	A	14.00	GA	MO	TM-1 PI-3 LJ-3	 V19		
23MOV-20	F-6	2	B	14.00	GA	MO	TM-1 PI-3			
23MOV-21	G-6	2	B	8.00	GL	MO	TM-1 PI-3			
23MOV-25	F-5	2	B	4.00	GL	MO	TS-1 TM-1 PI-3			
23MOV-57	F-5	2	B	16.00	GA	MO	TM-1 PI-3			
23MOV-58	C-7	2	B	16.00	GA	MO	TM-1 PI-3			
23MOV-60	F-7	1	A	1.00	GL	MO	TS-1 PI-3 LJ-3	 V19		

REV. NO: 5

NEW YORK POWER AUTHORITY
JAMES A. FITZPATRICK NUCLEAR POWER PLANT
INSERVICE TESTING PROGRAM FOR PUMPS AND VALVES

VALVE TABLE

SYSTEM: High Pressure Coolant Injection - SYSTEM ID: 23

DRAWING: FM-25A

VALVE ID	DWG CO-OR	CLASS	VALVE CATEGORY	SIZE (IN)	VALVE TYPE	ACTUATOR TYPE	SECT. XI TEST	RR / CS	ALTERNATE TEST	REMARKS
23SV-34	F-6	2	C	1.00	RL	SA	RL-4			

NEW YORK POWER AUTHORITY
JAMES A. FITZPATRICK NUCLEAR POWER PLANT
INSERVICE TESTING PROGRAM FOR PUMPS AND VALVES

VALVE TABLE

SYSTEM: Containment Atmosphere Dilution - SYSTEM ID: 27 DRAWING: FM-18A

VALVE ID	DWG CO-OR	CLASS	VALVE CATEGORY	SIZE (IN)	VALVE TYPE	ACTUATOR TYPE	SECT. XI TEST	RR / CS	ALTERNATE TEST	REMARKS
27AOV-126A	G-5	2	B	1.00	GL	AO	TM-1 PI-3	V29		
27AOV-126B	F-5	2	B	1.00	GL	AO	TM-1 PI-3	V29		
27AOV-128A	G-4	2	B	1.50	GL	AO	TM-1 PI-3	V29		
27AOV-128B	E-4	2	B	1.50	GL	AO	TM-1 PI-3	V29		
27AOV-129A	F-4	2	B	1.00	GL	AO	TM-1 PI-3	V29		
27AOV-129B	F-4	2	B	1.00	GL	AO	TM-1 PI-3	V29		
27CAD-19A	G-6	2	C	2.00	CK	SA	FF-1			
27CAD-19B	C-6	2	C	2.00	CK	SA	FF-1			
27SV-115A	G-4	2	C	0.50	RL	SA	RL-4			
27SV-115B	E-4	2	C	0.50	RL	SA	RL-4			
27SV-118A	G-5	2	C	0.50	RL	SA	RL-4			

NEW YORK POWER AUTHORITY
JAMES A. FITZPATRICK NUCLEAR POWER PLANT
INSERVICE TESTING PROGRAM FOR PUMPS AND VALVES

VALVE TABLE

SYSTEM: Containment Atmosphere Dilution - SYSTEM ID: 27

DRAWING: FM-18A

VALVE ID	DWG CO-OR	CLASS	VALVE CATEGORY	SIZE (IN)	VALVE TYPE	ACTUATOR TYPE	SECT. XI TEST	RR / CS	ALTERNATE TEST	REMARKS
27SV-118B	C-6	2	C	0.50	RL	SA	RL-4			

NEW YORK POWER AUTHORITY
JAMES A. FITZPATRICK NUCLEAR POWER PLANT
INSERVICE TESTING PROGRAM FOR PUMPS AND VALVES

VALVE TABLE

SYSTEM: Containment Atmosphere Dilution - SYSTEM ID: 27

DRAWING: FM-18B

VALVE ID	DWG CO-OR	CLASS	VALVE CATEGORY	SIZE (IN)	VALVE TYPE	ACTUATOR TYPE	SECT. XI TEST	RR / CS	ALTERNATE TEST	REMARKS
27AOV-101A	C-6	2	A	20.00	BF	AO	TM-1			
							FC-1			
							PI-3			
							LJ-3	V19		
27AOV-101B	C-6	2	A	20.00	BF	AO	TM-1			
							FC-1			
							PI-3			
							LJ-3	V19		
27AOV-111	C-2	2	A	24.00	BF	AO	TS-2	CS10		
							FC-2	CS10		
							PI-3			
							LJ-3	V19		
27AOV-112	C-3	2	A	24.00	BF	AO	TS-2	CS10		
							FC-2	CS10		
							PI-3			
							LJ-3	V19		
27AOV-113	D-8	2	A	24.00	BF	AO	TS-2	CS10		
							FC-2	CS10		
							PI-3			
							LJ-3	V19		
27AOV-114	D-8	2	A	24.00	BF	AO	TS-2	CS10		
							FC-2	CS10		
							PI-3			
							LJ-3	V19		

NEW YORK POWER AUTHORITY
JAMES A. FITZPATRICK NUCLEAR POWER PLANT
INSERVICE TESTING PROGRAM FOR PUMPS AND VALVES

VALVE TABLE

SYSTEM: Containment Atmosphere Dilution - SYSTEM ID: 27

DRAWING: FM-18A

VALVE ID	DWG CO-OR	CLASS	VALVE CATEGORY	SIZE (IN)	VALVE TYPE	ACTUATOR TYPE	SECT. XI TEST	RR / CS	ALTERNATE TEST	REMARKS
27AOV-115	C-2	2	A	20.00	BF	AO	TS-2	CS10		
							FC-2	CS10		
							PI-3			
							LJ-3	V19		
27AOV-116	C-3	2	A	20.00	BF	AO	TS-2	CS10		
							FC-2	CS10		
							PI-3			
							LJ-3	V19		
27AOV-117	B-8	2	A	20.00	BF	AO	TS-1			
							FC-1			
							PI-3			
							LJ-3	V19		
27AOV-118	B-8	2	A	20.00	BF	AO	TS-1			
							FC-1			
							PI-3			
							LJ-3	V19		
27AOV-131A	C-4	2	A	1.50	GA	AO	TS-1			
							TM-1			
							FC-3			
							PI-3			
							LJ-3	V19		
27AOV-131B	C-3	2	A	1.50	GA	AO	TS-1			
							TM-1			
							FC-1			
							PI-3			
							LJ-3	V19		

REV. NO: 5

NEW YORK POWER AUTHORITY
JAMES A. FITZPATRICK NUCLEAR POWER PLANT
INSERVICE TESTING PROGRAM FOR PUMPS AND VALVES

VALVE TABLE

SYSTEM: Containment Atmosphere Dilution - SYSTEM ID: 27 DRAWING: FM-15B

VALVE ID	DWG CO-OR	CLASS	VALVE CATEGORY	SIZE (IN)	VALVE TYPE	ACTUATOR TYPE	SECT. XI TEST	RR / CS	ALTERNATE TEST	REMARKS
27AOV-132A	C-4	2	A	1.50	GA	AO	TS-1			
							TM-1			
							FC-1			
							PI-3			
							LJ-3	V19		
27AOV-132B	C-3	2	A	1.50	GA	AO	TS-1			
							TM-1			
							FC-1			
							PI-3			
							LJ-3	V19		
27CAD-67	C-4	2	AC	1.50	SK	SA	FF-1			
							RF-1			
							LJ-3	V19		
27CAD-68	C-4	2	AC	1.50	SK	SA	FF-1			
							RF-1			
							LJ-3	V19		
27CAD-69	C-3	2	AC	1.50	SK	SA	FF-1			
							RF-1			
							LJ-3	V19		
27CAD-70	C-3	2	AC	1.50	SK	SA	FF-1			
							RF-1			
							LJ-3	V19		
27MOV-113	C-8	2	A	3.00	BF	MO	TS-1			
							TM-1			
							PI-3			
							LJ-3	V19		

NEW YORK POWER AUTHORITY
JAMES A. FITZPATRICK NUCLEAR POWER PLANT
INSERVICE TESTING PROGRAM FOR PUMPS AND VALVES

VALVE TABLE

DRAWING: FM-18B

SYSTEM: Containment Atmosphere Dilution - SYSTEM ID: 27

VALVE ID	DWG CO-OR	CLASS	VALVE CATEGORY	SIZE (IN)	VALVE TYPE	ACTUATOR TYPE	SECT. XI TEST	RR / CS	ALTERNATE TEST	REMARKS
27MOV-117	B-8	2	A	3.00	BF	MO	TS-1 TM-1 PI-3 LJ-3	 V19		
27MOV-121	H-8	2	B	6.00	BF	MO	TM-1 PI-3			
27MOV-122	C-8	2	A	3.00	GL	MO	TS-1 TM-1 PI-3 LJ-3	 V19		
27MOV-123	B-8	2	A	3.00	GL	MO	TS-1 TM-1 PI-3 LJ-3	 V19		
27SOV-125A	F-5	2	A	1.00	GL	SO	TM-1 FC-1 PI-3 LJ-3	V29		
27SOV-125B	F-4	2	A	1.00	GL	SO	TM-1 FC-1 PI-3 LJ-3	V29		
27SOV-125C	F-5	2	A	1.00	GL	SO	TM-1 FC-1 PI-3 LJ-3	V29		

REV. NO: 5

NEW YORK POWER AUTHORITY
JAMES A. FITZPATRICK NUCLEAR POWER PLANT
INSERVICE TESTING PROGRAM FOR PUMPS AND VALVES

VALVE TABLE

SYSTEM: Containment Atmosphere Dilution - SYSTEM ID: 27

DRAWING: FM-18B

VALVE ID	DWG CO-OR	CLASS	VALVE CATEGORY	SIZE (IN)	VALVE TYPE	ACTUATOR TYPE	SECT. XI TEST	RR / CS	ALTERNATE TEST	REMARKS
27SOV-125D	F-4	2	A	1.00	GL	SO	TM-1 FC-1 PI-3 LJ-3	V29		
27SOV-135A	E-5	2	A	1.00	GL	SO	TM-1 FC-1 PI-3 LJ-3	V29		
27SOV-135B	F-5	2	A	1.00	GL	SO	TM-1 FC-1 PI-3 LJ-3	V29		
27SOV-135C	E-5	2	A	1.00	GL	SO	TM-1 FC-1 PI-3 LJ-3	V29		
27SOV-135D	F-5	2	A	1.00	GL	SO	TM-1 FC-1 PI-3 LJ-3	V29		
27VB-1	C-6	2	AC	30.00	CK	SA	ME-1 LK-3 PI-3	V48		

REV. NO: 5

NEW YORK POWER AUTHORITY
JAMES A. FITZPATRICK NUCLEAR POWER PLANT
INSERVICE TESTING PROGRAM FOR PUMPS AND VALVES

VALVE TABLE

SYSTEM: Containment Atmosphere Dilution - SYSTEM ID: 27

DRAWING: FM-19B

VALVE ID	DWG CO-OR	CLASS	VALVE CATEGORY	SIZE (IN)	VALVE TYPE	ACTUATOR TYPE	SECT. XI TEST	RR / CS	ALTERNATE TEST	REMARKS
27VB-2	C-6	2	AC	30.00	CK	SA	ME-1 LK-3 P1-3	V48		
27VB-3	C-6	2	AC	30.00	CK	SA	ME-1 LK-3 P1-3	V48		
27VB-4	C-6	2	AC	30.00	CK	SA	ME-1 LK-3 P1-3	V48		
27VB-5	C-6	2	AC	30.00	CK	SA	ME-1 LK-3 P1-3	V48		
27VB-6	C-6	2	AC	20.00	CK	SA	ME-1 LJ-3 P1-3	V19		
27VB-7	C-6	2	AC	20.00	CK	SA	ME-1 LJ-3 P1-3	V19		

REV. NO: 5

NEW YORK POWER AUTHORITY
JAMES A. FITZPATRICK NUCLEAR POWER PLANT
INSERVICE TESTING PROGRAM FOR PUMPS AND VALVES

VALVE TABLE

SYSTEM: Containment Atmosphere Dilution - SYSTEM ID: 27

DRAWING: FM-18D

VALVE ID	DWG CO-OR	CLASS	VALVE CATEGORY	SIZE (IN)	VALVE TYPE	ACTUATOR TYPE	SECT. XI TEST	RR / CS	ALTERNATE TEST	REMARKS
27SOV-119E1	C-7	2	A	0.37	GL	SO	IM-1 FC-1 P1-3 LJ-3	V29		
27SOV-119E2	C-6	2	A	0.37	GL	SO	IM-1 FC-1 P1-3 LJ-3	V29		
27SOV-119F1	F-4	2	A	0.37	GL	SO	IM-1 FC-1 P1-3 LJ-3	V29		
27SOV-119F2	F-4	2	A	0.37	GL	SO	IM-1 FC-1 P1-3 LJ-3	V29		
27SOV-120E1	F-6	2	A	0.37	GL	SO	IM-1 FC-1 P1-3 LJ-3	V29		
27SOV-120E2	F-6	2	A	0.37	GL	SO	IM-1 FC-1 P1-3 LJ-3	V29		

NEW YORK POWER AUTHORITY
JAMES A. FITZPATRICK NUCLEAR POWER PLANT
INSERVICE TESTING PROGRAM FOR PUMPS AND VALVES

VALVE TABLE

SYSTEM: Containment Atmosphere Dilution - SYSTEM ID: 27

DRAWING: FM-18D

VALVE ID	DWG CO-OR	CLASS	VALVE CATEGORY	SIZE (IN)	VALVE TYPE	ACTUATOR TYPE	SECT. XI TEST	RR / CS	ALTERNATE TEST	REMARKS
27SOV-120F1	G-4	2	A	0.37	GL	SO	IM-1 FC-1 P1-3 LJ-3	V29		
27SOV-120F2	G-4	2	A	0.37	GL	SO	IM-1 FC-1 P1-3 LJ-3	V29		
27SOV-122E1	F-6	2	A	0.37	GL	SO	IM-1 FC-1 P1-3 LJ-3	V29		
27SOV-122E2	F-6	2	A	0.37	GL	SO	IM-1 FC-1 P1-3 LJ-3	V29		
27SOV-122F1	G-4	2	A	0.37	GL	SO	IM-1 FC-1 P1-3 LJ-3	V29		
27SOV-122F2	G-4	2	A	0.37	GL	SO	IM-1 FC-1 P1-3 LJ-3	V29		

REV. NO: 5

NEW YORK POWER AUTHORITY
JAMES A. FITZPATRICK NUCLEAR POWER PLANT
INSERVICE TESTING PROGRAM FOR PUMPS AND VALVES

VALVE TABLE

DRAWING: FM-18D

SYSTEM: Containment Atmosphere Dilution - SYSTEM ID: 27

VALVE ID	DWG CO-OR	CLASS	VALVE CATEG	SIZE (IN)	VALVE TYPE	ACTUATOR TYPE	SECT. XI TEST	RR / CS	ALTERNATE TEST	REMARKS
27SOV-123E1	E-6	2	A	0.37	GL	SO	IM-1 FC-1 PI-3 LJ-3	V29		
27SOV-123E2	E-6	2	A	0.37	GL	SO	IM-1 FC-1 PI-3 LJ-3	V29		
27SOV-123F1	F-4	2	A	0.37	GL	SO	IM-1 FC-1 PI-3 LJ-3	V29		
27SOV-123F2	F-4	2	A	0.37	GL	SO	IM-1 FC-1 PI-3 LJ-3	V29		
27SOV-124E1	C-4	2	A	1.00	GL	SO	IM-1 FC-1 PI-3 LJ-3	V29		
27SOV-124E2	C-4	2	A	1.00	GL	SO	IM-1 FC-1 PI-3 LJ-3	V29		

NEW YORK POWER AUTHORITY
JAMES A. FITZPATRICK NUCLEAR POWER PLANT
INSERVICE TESTING PROGRAM FOR PUMPS AND VALVES

VALVE TABLE

SYSTEM: Containment Atmosphere Dilution - SYSTEM ID: 27

DRAWING: FM-18D

VALVE ID	DWG CO-OR	CLASS	VALVE CATEGORY	SIZE (IN)	VALVE TYPE	ACTUATOR TYPE	SECT. XI TEST	RR / CS	ALTERNATE TEST	REMARKS
27SOV-124F1	C-3	2	A	0.37	GL	SO	TM-1 FC-1 PI-3 LJ-3	V29		
27SOV-124F2	C-4	2	A	0.37	GL	SO	TM-1 FC-1 PI-3 LJ-3	V29		

NEW YORK POWER AUTHORITY
JAMES A. FITZPATRICK NUCLEAR POWER PLANT
INSERVICE TESTING PROGRAM FOR PUMPS AND VALVES

VALVE TABLE

SYSTEM: Containment Atmosphere Dilution - SYSTEM ID: 27

DRAWING: FM-39C

VALVE ID	DWG CO-OR	CLASS	VALVE CATEGORY	SIZE (IN)	VALVE TYPE	ACTUATOR TYPE	SECT. XI TEST	RR / CS	ALTERNATE TEST	REMARKS
27SOV-141	C-2	2	A	1.00	GL	SO	TM-1 FO-1 PI-3 LJ-3	V29		
27SOV-145	C-2	2	A	1.00	GL	SO	TM-1 FO-1 PI-3 LJ-3	V29		

NEW YORK POWER AUTHORITY
JAMES A. FITZPATRICK NUCLEAR POWER PLANT
INSERVICE TESTING PROGRAM FOR PUMPS AND VALVES

VALVE TABLE

DRAWING: FM-29A

SYSTEM: Main Steam - SYSTEM ID: 29

VALVE ID	DWG CO-OR	CLASS	VALVE CATEGORY	SIZE (IN)	VALVE TYPE	ACTUATOR TYPE	SECT. XI TEST	RR / CS	ALTERNATE TEST	REMARKS
29AOV-80A	E-5	1	A	24.00	GL	AO	TS-1			TECH SPEC LIMIT ON CLOSE TIME 3-5 SEC
							FC-2	V59		
							PI-3			
							LJ-3	V19		
29AOV-80B	D-5	1	A	24.00	GL	AO	TS-1			TECH SPEC LIMIT ON CLOSE TIME 3-5 SEC
							FC-2	V59		
							PI-3			
							LJ-3	V19		
29AOV-80C	D-5	1	A	24.00	GL	AO	TS-1			TECH SPEC LIMIT ON CLOSE TIME 3-5 SEC
							FC-2	V59		
							PI-3			
							LJ-3	V19		
29AOV-80D	D-5	1	A	24.00	GL	AO	TS-1			TECH SPEC LIMIT ON CLOSE TIME 3-5 SEC
							FC-2	V59		
							PI-3			
							LJ-3	V19		
29AOV-86A	G-4	1	A	24.00	GL	AO	TS-1			TECH SPEC LIMIT ON CLOSE TIME 3-5 SEC
							FC-2	CS12		
							PI-3			
							LJ-3	V19		
29AOV-86B	F-4	1	A	24.00	GL	AO	TS-1			TECH SPEC LIMIT ON CLOSE TIME 3-5 SEC
							FC-2	CS12		
							PI-3			
							LJ-3	V19		

REV. NO: 5

NEW YORK POWER AUTHORITY
JAMES A. FITZPATRICK NUCLEAR POWER PLANT
INSERVICE TESTING PROGRAM FOR PUMPS AND VALVES

VALVE TABLE

SYSTEM: Main Steam - SYSTEM ID: 29

DRAWING: FM-29A

VALVE ID	DWG CO-OR	CLASS	VALVE CATEGORY	SIZE (IN)	VALVE TYPE	ACTUATOR TYPE	SECT. XI TEST	RR / CS	ALTERNATE TEST	REMARKS
29AOV-86C	E-4	1	A	24.00	GL	AO	TS-1			TECH SPEC LIMIT ON CLOSE TIME 3-5 SEC
							FC-2	CS12		
							PI-3			
							LJ-3	V19		
29AOV-86D	D-4	1	C	24.00	GL	AO	TS-1			TECH SPEC LIMIT ON CLOSE TIME 3-5 SEC
							FC-2	CS12		
							PI-3			
							LJ-3	V19		
29EFV-30A	F-5	1	AC	1.00	BK	SA	LK-1	V28	LK-3	VALVE ISOLATES ON EXCESS FLOW
							LK-3			
29EFV-30B	F-5	1	AC	1.00	BK	SA	LK-1	V28	LK-3	VALVE ISOLATES ON EXCESS FLOW
							LK-3			
29EFV-30C	F-5	1	AC	1.00	BK	SA	LK-1	V28	LK-3	VALVE ISOLATES ON EXCESS FLOW
							LK-3			
29EFV-30D	F-5	1	AC	1.00	BK	SA	LK-1	V28	LK-3	VALVE ISOLATES ON EXCESS FLOW
							LK-3			
29EFV-34A	F-8	1	AC	1.00	BK	SA	LK-1	V28	LK-3	VALVE ISOLATES ON EXCESS FLOW
							LK-3			
29EFV-34B	F-8	1	AC	1.00	BK	SA	LK-1	V28	LK-3	VALVE ISOLATES ON EXCESS FLOW
							LK-3			
29EFV-34C	F-8	1	AC	1.00	BK	SA	LK-1	V28	LK-3	VALVE ISOLATES ON EXCESS FLOW
							LK-3			

REV. NO: 5

NEW YORK POWER AUTHORITY
JAMES A. FITZPATRICK NUCLEAR POWER PLANT
INSERVICE TESTING PROGRAM FOR PUMPS AND VALVES

VALVE TABLE

DRAWING: FM-29A

SYSTEM: Main Steam - SYSTEM ID: 29

VALVE ID	DWG CO-OR	CLASS	VALVE CATEGORY	SIZE (IN)	VALVE TYPE	ACTUATOR TYPE	SECT. XI TEST	RR / CS	ALTERNATE TEST	REMARKS
29EFV-34D	F-8	1	AC	1.00	BK	SA	LK-1 LK-3	V28	LK-3	VALVE ISOLATES ON EXCESS FLOW
29EFV-53A	E-8	1	AC	1.00	BK	SA	LK-1 LK-3	V28	LK-3	VALVE ISOLATES ON EXCESS FLOW
29EFV-53B	E-8	1	AC	1.00	BK	SA	LK-1 LK-3	V28	LK-3	VALVE ISOLATES ON EXCESS FLOW
29EFV-53C	E-8	1	AC	1.00	BK	SA	LK-1 LK-3	V28	LK-3	VALVE ISOLATES ON EXCESS FLOW
29EFV-53D	E-8	1	AC	1.00	BK	SA	LK-1 LK-3	V28	LK-3	VALVE ISOLATES ON EXCESS FLOW
29EFV-54A	E-5	1	AC	1.00	BK	SA	LK-1 LK-3	V28	LK-3	VALVE ISOLATES ON EXCESS FLOW
29EFV-54B	E-5	1	AC	1.00	BK	SA	LK-1 LK-3	V28	LK-3	VALVE ISOLATES ON EXCESS FLOW
29EFV-54C	E-5	1	AC	1.00	BK	SA	LK-1 LK-3	V28	LK-3	VALVE ISOLATES ON EXCESS FLOW
29EFV-54D	E-5	1	AC	1.00	BK	SA	LK-1 LK-3	V28	LK-3	VALVE ISOLATES ON EXCESS FLOW
29MOV-200A	C-3	2	B	1.00	GL	MO	TM-1 PI-3			

REV. NO: 5

NEW YORK POWER AUTHORITY
JAMES A. FITZPATRICK NUCLEAR POWER PLANT
INSERVICE TESTING PROGRAM FOR PUMPS AND VALVES

VALVE TABLE

DRAWING: FM-29A

SYSTEM: Main Steam - SYSTEM ID: 29

VALVE ID	DWG CO-OR	CLASS	VALVE CATEGORY	SIZE (IN)	VALVE TYPE	ACTUATOR TYPE	SECT. XI TEST	RR / CS	ALTERNATE TEST	REMARKS
29MOV-200B	B-3	2	B	1.00	GL	MO	TM-1 PI-3			
29MOV-201A	C-3	2	B	1.00	GL	MO	TM-1 PI-3			
29MOV-201B	B-3	2	B	1.00	GL	MO	TM-1 PI-3			
29MOV-202A	C-3	2	B	1.00	GL	MO	TM-1 PI-3			
29MOV-202B	B-3	2	B	1.00	GL	MO	TM-1 PI-3			
29MOV-203A	H-3	2	B	1.00	GL	MO	TM-2 PI-3	CS13		
29MOV-203B	H-3	2	B	1.00	GL	MO	TM-2 PI-3	CS13		
29MOV-204A	C-3	2	B	1.00	GL	MO	TM-1 PI-3			
29MOV-204B	B-3	2	B	1.00	GL	MO	TM-1 PI-3			
29MOV-74	C-6	1	A	3.00	GA	MO	TS-1 PI-3 LJ-3			

REV. NO: 5

NEW YORK POWER AUTHORITY
JAMES A. FITZPATRICK NUCLEAR POWER PLANT
INSERVICE TESTING PROGRAM FOR PUMPS AND VALVES

VALVE TABLE

DRAWING: FM-29A

SYSTEM: Main Steam - SYSTEM ID: 29

VALVE ID	DWG CO-OR	CLASS	VALVE CATEGORY	SIZE (IN)	VALVE TYPE	ACTUATOR TYPE	SECT. XI TEST	RR / CS	ALTERNATE TEST	REMARKS
29MOV-77	C-5	1	A	3.00	GA	MO	IS-1 PI-3 LJ-3			

REV. NO: 5

NEW YORK POWER AUTHORITY
JAMES A. FITZPATRICK NUCLEAR POWER PLANT
INSERVICE TESTING PROGRAM FOR PUMPS AND VALVES

VALVE TABLE

DRAWING: FM-34A

SYSTEM: Feedwater System - SYSTEM ID: 34

VALVE ID	DWG CO-OR	CLASS	VALVE CATEGORY	SIZE (IN)	VALVE TYPE	ACTUATOR TYPE	SECT. XI TEST	RR / CS	ALTERNATE TEST	REMARKS
34FWS-28A	E-7	1	AC	18.00	CK	SA	RF-1 LJ-3	V12	LJ-3	
34FWS-28B	F-7	1	AC	18.00	CK	SA	FF-1 RF-1 LJ-3	V12	LJ-3	
34NRV-111A	E-7	1	AC	18.00	NK	SA AO	RF-2 LJ-3	CS9 V19		
34NRV-111B	F-7	1	AC	18.00	NK	SA AO	RF-2 LJ-3	CS9 V19		

REV. NO: 5

NEW YORK POWER AUTHORITY
JAMES A. FITZPATRICK NUCLEAR POWER PLANT
INSERVICE TESTING PROGRAM FOR PUMPS AND VALVES

VALVE TABLE

DRAWING: FM-39C

SYSTEM: Instrument Air System - SYSTEM ID: 39

VALVE ID	DWG CO-OR	CLASS	VALVE CATEGORY	SIZE (IN)	VALVE TYPE	ACTUATOR TYPE	SECT. XI TEST	RR / CS	ALTERNATE TEST	REMARKS
39IAS-22	C-1	2	AC	2.00	CK	SA	FF-2 RF-1 LJ-3	V14		
39IAS-29	C-1	2	AC	1.00	CK	SA	FF-2 R -1 LJ-3	V14		

REV. NO: 5

NEW YORK POWER AUTHORITY
JAMES A. FITZPATRICK NUCLEAR POWER PLANT
INSERVICE TESTING PROGRAM FOR PUMPS AND VALVES

VALVE TABLE

SYSTEM: Service Water - SYSTEM ID: 46

DRAWING: FB-10H

VALVE ID	DWG CO-OR	CLASS	VALVE CATEGORY	SIZE (IN)	VALVE TYPE	ACTUATOR TYPE	SECT. XI TEST	RR / CS	ALTERNATE TEST	REMARKS
46SWS-60A	B-5	3	C	4.00	CK	SA	RF-1			
46SWS-60B	B-5	3	C	4.00	CK	SA	RF-1			
66PCV-101	C-3	3	B	3.00	GL	AO	FO-1			
66TCV-107E	B-3	3	B	2.50	GL	AO	FO-1			
66TCV-107F	B-7	3	B	2.50	GL	AO	FO-1			

NEW YORK POWER AUTHORITY
JAMES A. FITZPATRICK NUCLEAR POWER PLANT
INSERVICE TESTING PROGRAM FOR PUMPS AND VALVES

VALVE TABLE

DRAWING: FB-18H

SYSTEM: Emergency Service Water - SYSTEM ID: 46

VALVE ID	DWG CO-OR	CLASS	VALVE CATEGORY	SIZE (IN)	VALVE TYPE	ACTUATOR TYPE	SECT. XI TEST	RR / CS	ALTERNATE TEST	REMARKS
46ESW-19A	D-6	3	C	2.00	SK	SA	FF-1			
46ESW-20B	E-6	3	C	2.00	SK	SA	FF-1			
46ESW-21B	E-6	3	C	2.00	SK	SA	FF-1			
46ESW-22A	D-6	3	C	2.00	SK	SA	FF-1			
46SWS-67A	D-6	3	C	3.00	CK	SA	RF-1			
46SWS-67B	E-6	3	C	3.00	CK	SA	RF-1			
46SWS-68	E-6	3	C	3.00	CK	SA	RF-1			
46SWS-69	E-6	3	C	3.00	CK	SA	RF-1			
67PCV-101	F-6	3	B	2.50	GL	AO	FO-1			

REV. NO: 5

NEW YORK POWER AUTHORITY
JAMES A. FITZPATRICK NUCLEAR POWER PLANT
INSERVICE TESTING PROGRAM FOR PUMPS AND VALVES

VALVE TABLE

DRAWING: FB-35E

SYSTEM: Emergency Service Water - SYSTEM ID: 46

VALVE ID	DWG CO-OR	CLASS	VALVE CATEGORY	SIZE (IN)	VALVE TYPE	ACTUATOR TYPE	SECT. XI TEST	RR / CS	ALTERNATE TEST	REMARKS
46(70)ESW-101	G-6	3	B	4.00	GA	MA	FS-1	V49	FS-3	
46(70)ESW-102	C-6	3	B	4.00	GA	MA	FS-1	V49	FS-3	
46(70)ESW-103	F-6	3	B	4.00	GA	MA	FS-1	V49	FS-3	
46(70)ESW-104	C-6	3	B	4.00	GA	MA	FS-1	V49	FS-3	
46(70)SWS-101	H-8	3	C	6.00	CK	SA	RF-1			
46(70)SWS-102	H-8	3	C	6.00	CK	SA	RF-1			
46(70)SWS-13	G-4	3	B	6.00	GL	MA	FS-1			
46(70)SWS-14	E-4	3	B	6.00	GL	MA	FS-1			
70TCV-120A	F-7	3	B	2.00	3W	AO	FO-1			
70TCV-120B	C-6	3	B	2.00	3W	AO	FO-1			
70TCV-121A	F-6	3	B	2.00	3W	AO	FO-1			
70TCV-121B	C-7	3	B	2.00	3W	AO	FO-1			
70WAC-12A	F-6	3	B	4.00	GA	MA	FS-1			
70WAC-12B	C-6	3	B	4.00	GA	MA	FS-1			
70WAC-5A	F-2	3	B	4.00	GA	MA	FS-1			

REV. NO: 5

NEW YORK POWER AUTHORITY
JAMES A. FITZPATRICK NUCLEAR POWER PLANT
INSERVICE TESTING PROGRAM FOR PUMPS AND VALVES

VALVE TABLE

DRAWING: 8-35E

SYSTEM: Emergency Service Water - SYSTEM ID: 46

VALVE ID	DWG CO-OR	CLASS	VALVE CATEGORY	SIZE (IN)	VALVE TYPE	ACTUATOR TYPE	SECT. XI TEST	RR / CS	ALTERNATE TEST	REMARKS
70WAC-58	D-2	3	B	4.00	GA	MA	FS-1			

REV. NO: 5

NEW YORK POWER AUTHORITY
JAMES A. FITZPATRICK NUCLEAR POWER PLANT
INSERVICE TESTING PROGRAM FOR PUMPS AND VALVES

VALVE TABLE

SYSTEM: Emergency Service Water - SYSTEM ID: 46

DRAWING: FM-46B

VALVE ID	DWG CO-OR	CLASS	VALVE CATEGORY	SIZE (IN)	VALVE TYPE	ACTUATOR TYPE	SECT. XI TEST	RR / CS	ALTERNATE TEST	REMARKS
46ESW-13A	E-3	3	C	3.00	CK	SA	FF-1			
46ESW-13B	C-2	3	C	3.00	CK	SA	FF-1			
46ESW-15A	E-2	2	AC	4.00	CK	SA	RF-1 LJ-3	 V19		
46ESW-15B	C-3	2	AC	4.00	CK	SA	RF-1 LJ-3	 V19		
46ESW-16A	E-3	2	AC	4.00	CK	SA	RF-1 LJ-3	 V19		
46ESW-16B	C-3	2	AC	6.00	CK	SA	RF-1 LJ-3	 V19		
46ESW-1A	E-7	3	C	12.00	CK	SA	FF-1			
46ESW-1B	D-7	3	C	12.00	CK	SA	FF-1			
46ESW-40A	E-5	3	C	1.00	CK	SA	RF-1			
46ESW-40B	E-4	3	C	1.00	CK	SA	RF-1			
46ESW-7A	H-8	3	C	6.00	CK	SA	FF-1			
46ESW-7B	H-8	3	C	6.00	CK	SA	FF-1			
46ESW-9A	E-4	3	C	8.00	CK	SA	FF-1			

NEW YORK POWER AUTHORITY
JAMES A. FITZPATRICK NUCLEAR POWER PLANT
INSERVICE TESTING PROGRAM FOR PUMPS AND VALVES

VALVE TABLE

SYSTEM: Emergency Service Water - SYSTEM ID: 46

DRAWING: FM-46B

VALVE ID	DWG CO-OR	CLASS	VALVE CATEGORY	SIZE (IN)	VALVE TYPE	ACTUATOR TYPE	SECT. XI TEST	RR / CS	ALTERNATE TEST	REMARKS
46ESW-9B	D-4	3	C	8.00	CK	SA	FF-1			
46MOV-101A	E-6	3	B	10.00	GA	MO	TM-1 PI-3			
46MOV-101B	D-6	3	B	10.00	GA	MO	TM-1 PI-3			
46MOV-102A	E-6	3	B	8.00	GA	MO	TM-1 PI-3			
46MOV-102B	D-6	3	B	8.00	GA	MO	TM-1 PI-3			

Cold Shutdown Justifications

1. SYSTEM: **REACTOR WATER RECIRCULATION (RWR)**

   COMPONENTS: 02MOV-53A, B CATEGORY: B

   SAFETY FUNCTION: These valves close, on low reactor pressure to isolate the faulted loop coincident with initiation of the RHR System in the LPCI mode, to prevent diversion of LPCI flow.

   JUSTIFICATION: In order to exercise these valves, the respective recirculation pump must be secured. Securing either pump (single loop operation) is limited by Technical Specification requirements and is not prudent. Single loop operation also requires a reduction in power.

2. SYSTEM: **RESIDUAL HEAT REMOVAL**

   COMPONENTS: 10AOV-68A, B CATEGORY: A,C

   SAFETY FUNCTION: These valves open to provide flowpaths for LPCI and core spray injection to the reactor vessel. They close for pressure isolation from the reactor vessel.

   JUSTIFICATION: With the reactor at operating pressure, the RHR pumps cannot develop sufficient discharge pressure to open these valves. The installed air operators are designed to open these valves at zero differential pressure which is not practical with the reactor at operating pressure. Therefore, these valves cannot be full or part-stroke exercised during normal plant operation.

   Verifying closure during plant operation is impractical due to personnel safety concerns related to the potential release of radioactive steam at high pressure.

Cold Shutdown Justifications

3. SYSTEM: **RESIDUAL HEAT REMOVAL**

   COMPONENTS: 10MOV-17 and 10MOV-18 CATEGORY: A

   SAFETY FUNCTION: These valves remain closed to protect the RHR System piping and components from over-pressurization during plant operation and inadvertent drain down events while in cold shutdown. They also perform a containment isolation function.

   JUSTIFICATION: With the reactor pressure greater than 75 psig, these valves are prevented from opening by an electrical interlock.

4. SYSTEM: **REACTOR BUILDING CLOSED LOOP COOLING**

   COMPONENTS: 15AOV-132A, B; 15AOV-133A, B CATEGORY: A

   SAFETY FUNCTION: These valves close to provide containment isolation.

   JUSTIFICATION: During normal plant operation, these valves must remain open to provide cooling water to the recirculation pump motor and seal coolers. Closing these valves would result in damage to the recirculation pumps.

5. SYSTEM: **REACTOR BUILDING CLOSED LOOP COOLING**

   COMPONENTS: 15AOV-130A, B; 15AOV-131A, B; 15AOV-134A CATEGORY: A

   SAFETY FUNCTION: These valves close to provide containment isolation.

   JUSTIFICATION: During plant operation, these valves must remain open to provide cooling water to the Drywell coolers and Drywell equipment drain sump cooler. Closing these valves during operation could cause a spike in Drywell pressure due to the loss of cooling water flow which may result a reactor scram and plant shutdown.

Cold Shutdown Justifications

6. SYSTEM: **HIGH PRESSURE COOLANT INJECTION**

COMPONENT: 23AOV-18 CATEGORY: C

SAFETY FUNCTION: This valve opens to provide a flowpath for the HPCI system injection to the reactor vessel.

JUSTIFICATION: With the reactor at operating pressure, the HPCI pump can develop sufficient discharge pressure to open this valve, however HPCI injection of cold water to the reactor vessel during critical operation could result in an undesirable reactivity excursion and thermal transient to the piping components. The installed air operators are designed to open these valves at zero differential pressure. Therefore, these valves cannot be exercised during normal plant operation.

7. SYSTEM: **CONTROL ROD DRIVE HYDRAULICS**

COMPONENTS: 03HCU-115 (Typical for 137 HCUs) CATEGORY: C

SAFETY FUNCTION: These valves close on initiation of a scram to prevent diversion of scram drive water flow into a depressurized charging header.

JUSTIFICATION: Exercising these valves during operation would require depressurization of the charging header with the potential for a loss of scram function.

Cold Shutdown Justifications

8. SYSTEM: **DELETED**

9. SYSTEM: **FEEDWATER**

COMPONENTS: 34NRV-111A,B CATEGORY: A,C

SAFETY FUNCTION: These valves close to provide containment isolation and to prevent diversion of HPCI flow into the feedwater system.

JUSTIFICATION: Exercising these valves during operation would require isolation of feedwater flow to the reactor vessel. This not prudent nor practical without a plant shutdown.

10. SYSTEM: **CONTAINMENT VENT & PURGE**

COMPONENTS: 27AOV-111, 112, 113, 114, 115, 116 CATEGORY: A

SAFETY FUNCTION: These valves close to provide a containment isolation function.

JUSTIFICATION: Due to NRC concerns that these valves will not close under Design Basis Accident conditions, they will not be opened whenever primary containment is required except for safety-related reasons. For this reason these valves will be tested at cold shutdown when primary containment is not required.

11. SYSTEM: **DELETED**

Cold Shutdown Justifications

12. SYSTEM: **MAIN STEAM**

COMPONENTS: 29AOV-86A, B, C, D CATEGORY: A

SAFETY FUNCTION: These valves close to provide containment isolation.

JUSTIFICATION: Performance of the fail close test for the MSIVs requires entry into the Steam Tunnel. This cannot be done during normal operation.

13. SYSTEM: **MAIN STEAM**

COMPONENTS: 29MOV-203A, B CATEGORY: B

SAFETY FUNCTION: These valves open to provide flowpaths for post-accident MSIV packing leak-off to the standby gas treatment system.

JUSTIFICATION: Opening these valves during power operation could subject downstream piping to pressures in excess of its 150 psi design pressure.

14. SYSTEM: **REACTOR BUILDING CLOSED LOOP COOLING**

COMPONENTS: 15RBC-21A,B CATEGORY: AC
15RBC-22A,B CATEGORY: A

SAFETY FUNCTION: These valves close for containment isolation.

JUSTIFICATION: Closing these valves would interrupt cooling water flow to the reactor recirculation pumps. During normal plant operating conditions, this could result in significant damage to these pumps.

Cold Shutdown Justifications

15. SYSTEM: **REACTOR BUILDING CLOSED LOOP COOLING**

COMPONENTS: 15RBC-24A,B CATEGORY: AC
15RBC-26A,B CATEGORY: A

SAFETY FUNCTION: These valves close for containment isolation.

JUSTIFICATION: Exercising these valves will interrupt cooling water flow to one of the two operating containment vessel (drywell) cooling water trains. Due to the limited capacity of the drywell cooling system, under normal operating conditions this could result in significant temperature excursions within the drywell with the associated potential for a plant trip on "high containment pressure".

Valve Relief Requests

NOTE V1

SYSTEM:	Reactor Water Recirculation (RWR)
VALVES:	02-2RWR-13A, B
CATEGORY:	A,C
CLASS:	1
FUNCTION:	These recirculation pump seal water injection valves close to provide containment isolation.
TEST REQUIREMENT:	Per IWV-3521, exercise valves closed every three months.
BASIS FOR RELIEF:	To test during normal operations or cold shutdown requires securing the RWR pumps and entering containment to check the valves closed via a back-leakage test. Testing during operation is therefore impossible and, during cold shutdown, performing back-leakage tests would place an undue burden on the plant staff.
ALTERNATE TESTING:	During each refuel outage, these normally open valves will be verified to close during leak testing performed per 10CFR50, Appendix J.

Valve Relief Requests

NOTE V2

SYSTEM:	Control Rod Drive (CRD)	
VALVES:	03AOV-126 03AOV-127	03HCU-114
CATEGORY:	B	C
CLASS:	2	2

FUNCTION: During a reactor scram, 03AOV-126 and -127 receive a signal to open and thus allow the scram charging water flow from the HCU accumulators to the CRD mechanism and the scram discharge water flow from the CRD mechanism to the scram discharge volumes. Check valve 03HCU-114 is located downstream of 03AOV-127, and opens to permit scram discharge flow.

TEST REQUIREMENT: Per IWV-3411, exercise these valves for operability every three months.

Per IWV-3413(b), the stroke time of all power-operated valves shall be measured.

BASIS FOR RELIEF: Exercising these valves quarterly during power operations would result in rapid insertion of control rods. This is undesirable because of subjecting the reactor core to rapid reactivity transients

The AOVs are fast-acting valves with full-stroke time within a fraction of a second and are not equipped with indication of both open and close position. Direct measurement of full stroke time is impractical.

ALTERNATE TESTING: These valves will be tested in accordance with the JAF Technical Specification scram time test requirements as follows:

- 10% of all operable control rods shall be scram time tested every 16 weeks (TS Section 4.3.C.2)

NOTE V2 (cont'd.)

- All operable control rods shall be scram time tested after each refueling outage with reactor pressure above 950 psig (TS Section 4.3.C.1).

In all cases the measured scram time will be evaluated. A satisfactory scram time test verifies proper operation of these valves.

APPENDIX B

Valve Relief Requests

NOTE V3 This relief request has been withdrawn.

INSERVICE TESTING PROGRAM FOR PUMPS AND VALVES

APPENDIX B

Valve Relief Requests

NOTE V4 This relief request has been withdrawn.

Valve Relief Requests

NOTE V5

SYSTEM:	Standby Liquid Control (SLC)
VALVES:	11SLC-16 11SLC-17
CATEGORY:	A,C
CLASS:	1
FUNCTION:	These valves prohibit backflow from the reactor vessel to the SLC System and provide for containment isolation. They open to permit SLC System flow to the reactor vessel.
TEST REQUIREMENT:	Per IWV-3521, exercise valves every three months.
BASIS FOR RELIEF:	Full or partial-stroke exercising these valves requires that flow be established through the subject check valves. The only practical means of initiating flow through these valves requires actuation of the SLC system and pumping from the SLC Tank to the reactor vessel. This would introduce boron into the reactor vessel resulting in unacceptable reactivity and chemistry transients. Testing during cold shutdown would result in chemistry transients and undue burden on the plant staff with respect to maintenance of the SLC Pump explosive valves.
ALTERNATE TESTING:	Once during each operating cycle (normally a refuel outage) and as required by Technical Specifications, the valves shall be cycled open by injecting water into the reactor vessel by use of the Standby Liquid Control pumps. Following the exercise test as described above, the valves will be verified to close by means of a leakrate test performed per 10CFR50, Appendix J.

Valve Relief Requests

NOTE V6

SYSTEM:	Reactor Core Isolation Cooling
VALVES:	13RCIC-04 13RCIC-05
CATEGORY:	A,C
CLASS:	2
FUNCTION:	These valves close to provide containment isolation.
TEST REQUIREMENT:	Per IWV-3521, exercise these valves closed every three months.
BASIS FOR RELIEF:	These valves are exercised open during RCIC surveillance testing performed periodically during plant operations in accordance with the JAF Technical Specifications. Since there is no provision on either of these valves that provides position indication of the disc, valve closure must be verified by backflow or leakage testing. In order to verify valve closure by the backflow technique, the RCIC exhaust line must be isolated for the duration of the test causing the RCIC System to be inoperable. The potential safety impact of voluntarily placing the RCIC System in an inoperable status during plant operation at power is considered to be imprudent and unwarranted in relation to any apparent gain in system reliability derived from the closure verification. In addition, the valves are located approximately twenty (20) feet from the floor necessitating erection of a large scaffold in the vicinity of the RCIC pump. This also is considered to be undesirable from the aspect of potential damage to RCIC System components should the scaffold be subjected to structural failure.

Valve Relief Requests

NOTE V6 (cont'd.)

Based on the foregoing discussion, testing of these valves during plant operation at power is considered to be impractical. During cold shutdowns, erection of the scaffold in addition to other activities related to test performance would place an extreme burden on the plant staff and would likely result in unwarranted extensions to all forced outages with the added negative impact on plant performance and availability.

Verifying closure of these valves during each refuel outage will provide sufficient assurance that the valves will continue to be operable with respect to their capability to close.

ALTERNATE TESTING: At each refueling outage, these valves will be verified to close in conjunction with leak testing performed per 10CFR50, Appendix J.

APPENDIX B

Valve Relief Requests

NOTE V7 This relief request has been withdrawn.

Valve Relief Requests

NOTE V8 This relief request has been withdrawn.

INSERVICE TESTING PROGRAM FOR PUMPS AND VALVES

APPENDIX B

Valve Relief Requests

NOTE V9

SYSTEM:	High Pressure Coolant Injection (HPCI)
VALVE:	23HPI-61
CATEGORY:	C
CLASS:	2
FUNCTION:	This valve opens to provide a flowpath from the suppression chamber to the suction of the HPCI booster pump.
TEST REQUIREMENT:	Per IWV-3521, exercise this valve open every three months.
BASIS FOR RELIEF:	The only practical method available to full flow exercise this valve is to pump water from the suppression pool into the reactor vessel or the Condensate Storage Tank. Due to the lack of suitable water quality in the suppression pool, neither of these options is practical.
ALTERNATE TESTING:	This valve will be partial-flow tested once per operating cycle. At least once every six (6) years this valve will be disassembled, inspected, and verified to be operable.

APPENDIX B

Valve Relief Requests

NOTE V10 This relief request has been withdrawn.

APPENDIX B

Valve Relief Requests

NOTE V11 This relief request has been withdrawn.

Valve Relief Requests

NOTE V12

SYSTEM:	Feedwater System
VALVES:	34FWS-28A, B
CATEGORY:	A,C
CLASS:	1
FUNCTION:	These valves close for containment isolation upon cessation of feedwater flow during accident conditions.
TEST REQUIREMENT:	Per IWV-3521, exercise these valves closed every three months.
BASIS FOR RELIEF:	There are no position indicators on these valves or other means to verify closure, thus, the only practical means of verifying closure is to perform a backflow or leakage test. Performing such a test requires entry into the containment vessel and extensive system preparations, including draining of the main feedwater piping from the outlet of the sixth point feedwater heaters to the reactor vessel isolation valves (approximately 2000 gallons per line). Furthermore, testing of 34FWS-28B requires shutdown of the cleanup system. It is estimated that testing of either of these valves would require up to 24 hours and demand significant staff resources. During plant operation at power, these valves cannot be closed without precipitating a plant shutdown. Verifying closure of these valves during each refuel outage will provide sufficient assurance that the valves continue to be operable with respect to their capability to close.
ALTERNATE TESTING:	At each refueling outage, these valves will be verified to close in conjunction with leak testing performed per 10CFR50, Appendix J.

INSERVICE TESTING PROGRAM FOR PUMPS AND VALVES

APPENDIX B

Valve Relief Requests

NOTE V13 This relief request has been withdrawn.

Valve Relief Requests

NOTE V14

SYSTEM:	Instrument Air
VALVES:	39IAS-22 39IAS-29
CATEGORY:	A,C
CLASS:	2
FUNCTION:	These valves open to provide nitrogen to the MSIV's and the SRV accumulators inside the containment. They close for containment isolation.
TEST REQUIREMENTS:	Per IWV-3521, exercise these valves open every three months.
BASIS FOR RELIEF:	Exercising these valves (open) is performed by charging the bleed-down header following MSIV testing. During plant operation at power, this is impractical since closure of the MSIV's would cause a plant trip. Also, performing such a test requires entry into the containment vessel and local manipulation of test connections located inside the drywell. During plant operation at power and, on occasion, while in the cold shutdown mode, the containment atmosphere is maintained in a nitrogen-inerted condition. During such periods, entry into the containment is not practical due to personnel safety concerns.
ALTERNATE TESTING:	These valves will be exercised (open) during cold shutdown periods when the containment is de-inerted consistent with the requirements of IWV-3522 and the provisions of Note V51.

Valve Relief Requests

NOTE V15 This relief request has been withdrawn.

APPENDIX B

Valve Relief Requests

NOTE V16 This relief request has been withdrawn.

Valve Relief Requests

NOTE V17

SYSTEM:	High Pressure Coolant Injection
VALVES:	23HPI-402 23HPI-403
CATEGORY:	C
CLASS:	2
FUNCTION:	These valves open to eliminate any differential pressure that could force water from the suppression chamber into the HPCI exhaust piping when the suppression chamber pressure is greater than atmospheric. They close to prevent HPCI exhaust steam from entering the suppression chamber air space, thus bypassing the quenching action of the suppression pool.
TEST REQUIREMENTS:	Per IWV-3521, exercise these valves open and closed every three months.
BASIS FOR RELIEF:	There are no position indicators on these valves or other means for verifying valve closure, thus the only practical means of verifying closure is to perform a backflow or leakage test. Since the valves are installed in series with no intermediate test tap, verifying that each individual valve closes is not practical. In order to perform the specified safety function in the closed direction, only one valve of the pair needs to close. Thus, verifying that either valve closes is adequate to demonstrate reliable operation of the pair. Operation of the HPCI pump turbine itself does not prove operability of these valves and special testing is required. This testing necessitates isolation of the vacuum breaker piping which, in turn, results in the inoperability of the HPCI System for the duration of the test. Due to the importance of the HPCI System Function and the lack of a redundant HPCI train, it is not considered prudent to perform this testing during plant operation at power.

Valve Relief Requests

NOTE V17 (cont'd.)

ALTERNATE TESTING: These valves will be exercised open and the pair (at least one valve) will be verified to close during cold shutdown periods per IWV-3522. Should the closure test of both valves fail, then corrective action will be applied to both valves prior to returning the system to operability.

Valve Relief Requests

NOTE V18 This relief request is withdrawn.

Valve Relief Requests

NOTE V19

SYSTEM:	Containment Isolation Valves
VALVES:	See Valve List Attached
CATEGORY:	A
CLASS:	See Valve List Attached
FUNCTION:	Containment Isolation.
TEST REQUIREMENT:	Per IWV-3426, measure individual containment isolation valves leak rates.
BASIS FOR RELIEF:	By original plant design, these valves are tested in established groupings to determine a penetration leak rate. The Appendix J, Type C LLRT test methodology has been reviewed and addressed in Section 3.7 of the Technical Specifications.
ALTERNATE TESTING:	Test these containment isolation valves by the original design groupings.

Valve Relief Requests

NOTE V19 (cont.)

VALVE ID	CLASS	VALVE ID	CLASS
10MOV-26A,B	2	27AOV-113	2
10MOV-31A,B	2	27AOV-114	2
10MOV-38A,B	2	27AOV-115	2
10MOV-39A,B	2	27AOV-116	2
10RHR-52A,B	2	27AOV-117	2
12MOV-18	1	27AOV-118	2
12MOV-69	1	27AOV-131A,B	2
13MOV-15	1	27AOV-132A,B	2
13MOV-16	1	27CAD-67,68,69,70	2
13MOV-21	1	27MOV-113	2
13MOV-21A,B	2	27MOV-117	2
15RBC-24A,B	2	27MOV-122	2
16-1AOV-101A,B	2	27MOV-123	2
16-1AOV-102A,B	2	27VB-6	2
23MOV-15	1	27VB-7	2
23MOV-16	1	27AOV-80A,B,C,D	1
23MOV-19	1	29AOV-86A,B,C,D	1
23MOV-60	1	34NRV-111A,B	1
27AOV-101A,B	2	46ESW-15A,B	2
27AOV-111	2	46ESW-16A,B	2
27AOV-112	2		

APPENDIX B

Valve Relief Requests

NOTE V20 This relief request has been withdrawn.

Valve Relief Requests

NOTE V21 This relief request has been withdrawn.

INSERVICE TESTING PROGRAM FOR PUMPS AND VALVES

APPENDIX B

Valve Relief Requests

NOTE V22

SYSTEM:	High Pressure Coolant Injection
VALVE:	23HPI-56
CATEGORY:	C
CLASS:	2
FUNCTION:	Opens to permit HPCI turbine condensate to drain to the suppression chamber.
TEST REQUIREMENTS:	Per IWV-3521, exercise this valve open every three months.
BASIS FOR RELIEF:	There is no means for exercising this valve to the open position where positive indication of acceptable valve performance is verified.
ALTERNATE TESTING:	In accordance with Generic Letter 89-04 Position 2, at least once during each operating cycle (normally a refuel outage) the valve will be disassembled, inspected, and verified to be operable.

APPENDIX B

Valve Relief Requests

NOTE V23 This relief request has been withdrawn.

INSERVICE TESTING PROGRAM FOR PUMPS AND VALVES

APPENDIX B

Valve Relief Requests

NOTE V24 This relief request has been withdrawn.

APPENDIX B

Valve Relief Requests

NOTE V25 This relief request has been withdrawn.

Valve Relief Requests

NOTE V26 This relief request has been withdrawn.

INSERVICE TESTING PROGRAM FOR PUMPS AND VALVES

APPENDIX B

Valve Relief Requests

NOTE V27

SYSTEM:	Automatic Depressurization (ADS)/Main Steam
VALVES:	02RV-71A,B,C,D,E,F,G,H,J,K and L
CATEGORY:	B,C
CLASS:	1
FUNCTION:	All these valves are required to open when actuated by manual switch to relieve reactor pressure during an accident or transient condition. Valves 02RV-71A,B,C,D,E,G, and H open upon receipt of ADS actuation signal.
TEST REQUIREMENT:	Per IWV-3411 and 3413(b), exercise and measure the stroke time every three months.
BASIS FOR RELIEF:	These valves are fast-acting valves and do not have position indication. Therefore, stroke time cannot be effectively measured. When testing these valves, a reactor pressure of at least 50 psig is needed for opening by the pilot assembly and a minimum reactor pressure of 940 psig is specified to minimize potential damage to the pilot valve and disc surfaces. Testing at each start-up from a cold shutdown condition would produce additional stress cycles which may lead to a low cycle fatigue failure.
ALTERNATE TESTING:	Following each refuel outage or once each operating cycle with reactor pressure at least 940 psig, these valves will be exercised in accordance with the operational test requirements set forth in the JAF Technical Specifications. SRV tailpipe temperature and acoustic monitors will be used to verify valve opening. Additionally, in accordance with Technical Specification requirements, the pilot assembly for each SRV will be bench tested at least once every two operating cycles. The bench testing includes "as-found" setpoint, leakage and pilot disc sticking tests.

Valve Relief Requests

NOTE V27 (cont.)

In addition to the pilot assembly bench testing, refurbishment is performed, if necessary, in accordance with the valve manufacturer's procedure including inspection of the pilot valve stem labyrinth seal area. This program of testing, inspections, and maintenance is performed in accordance with the related BWROG recommendations to monitor and resolve setpoint drift problems.

Valve Relief Requests

NOTE V28

SYSTEM:	Various
VALVES:	Excess Flow Check Valves (Attached)
CATEGORY:	A,C
CLASS:	1
FUNCTION:	These valves close to isolate the respective instrument lines in the event of a pipe break downstream of the valves.
TEST REQUIREMENT:	Per IWV-3521, exercise these valves closed every three months.
BASIS FOR RELIEF:	Testing these valves requires isolation of their associated safety-related instrument which could place the plant in an unsafe condition. In addition, the induced hydraulic transients resulting from establishing flow and subsequent valve closure would most likely result in an engineered safety feature actuation. During such testing, radiation doses to test personnel would be high due to the location of these valves and effluence of reactor water during the test. These valves have proven to be highly reliable and testing at the Code-required frequency would not significantly increase the reliability of these valves.
ALTERNATE TESTING:	Exercise these valves closed for operability once each operating cycle.

Valve Relief Requests

NOTE V28 (cont.)

EXCESS FLOW CHECK VALVES

02-2EFV-PS-128A,B	02-3EFV-11	02-3EFV-23
02-2EFV-PT-24A,B	02-3EFV-13A,B	02-3EFV-25
02-2EFV-PT-25A,B	02-3EFV-15A,B	02-3EFV-31A,B,C,D
02-2EFV1-DPT-111A,B	02-3EFV-15N	02-3EFV-31E,F,G,H
02-2EFV1-FT-110A,C,E,G	02-3EFV-17A,B	02-3EFV-31J,K,L,M
02-2EFV2-DPT-111A,B	02-3EFV-19A,B	02-3EFV-31N,P,R,S
02-2EFV2-FT-110A,C,E,G	02-3EFV-21A,B,C,D	02-3EFV-33
	02-3EFV-23A,B,C,D	
13EFV-01A,B	14EFV-31A,B	
13EFV-02A,B		
23EFV-01A,B	29EFV-30A,B,C,D	29EFV-53A,B,C,D
23EFV-02A,B	29EFV-34A,B,C,D	29EFV-54A,B,C,D

Valve Relief Requests

NOTE V29

SYSTEM:	Various
VALVES:	Fast Acting Valves (Attached)
CATEGORY:	See Valve List on Next Page
CLASS:	See Valve List on Next Page
FUNCTION:	See Valve List on Next Page
TEST REQUIREMENT:	Valve stroke time shall be evaluated and test intervals changed with respect to corrective action requirements of IWV-3417(a).
BASIS FOR RELIEF:	The measured stroke times of these valves are consistently well below two (2) seconds and can vary significantly due to circumstances unrelated to the condition of the valves. Two reasons for these variations are inconsistency of operator reaction times and changes in system parameters. Because of this, trending the stroke times of these fast acting valves will provide inaccurate, and sometimes misleading indication of valve degradation.
ALTERNATE TESTING:	In accordance with Generic Letter 89-04, Position 6, if the measured stroke time is greater than the maximum limiting stroke time of 2 seconds, corrective action per IWV-3417(b) will be taken. Test records will verify satisfactory stroke time is achieved but, need not require recording of the actual measured stroke time.

Valve Relief Requests

NOTE V29 (cont.)

VALVE ID	CATEGORY	CLASS	FUNCTION
02-2AOV-39	A	1	Close
02-2AOV-40	A	1	Close
02-2SOV-001	A	1	Close
02-2SOV-002	A	1	Close
16-1AOV-101A, B	A	2	Close
16-1AOV-102A, B	A	2	Close
20AOV-95	A	2	Close
20AOV-83	A	2	Close
23HOV-1	B	2	Close
23AOV-39	B	2	Close
23AOV-42	B	2	Close
27SOV-119E1, E2, F1, F2	A	2	Close
27SOV-120E1, E2, F1, F2	A	2	Open, Close
27SOV-122E1, E2, F1, F2	A	2	Close
27SOV-123E1, E2, F1, F2	A	2	Close
27SOV-124E1, E2, F1, F2	A	2	Open, Close
27SOV-125A, B, C, D	A	2	Close
27SOV-135A, B, C, D	A	2	Close
27SOV-141	A	2	Open, Close
27SOV-145	A	2	Open, Close
27AOV-126A, B	B	2	Open, Close
27AOV-128A, B	B	2	Open, Close
27AOV-129A, B	B	2	Open, Close

Note: Function is the direction in which the valve is considered to be fast acting, ≤ 2 seconds.

Valve Relief Requests

NOTE V30 This relief request has been withdrawn.

INSERVICE TESTING PROGRAM FOR PUMPS AND VALVES

APPENDIX B

Valve Relief Requests

NOTE V31 This relief request has been withdrawn.

APPENDIX B

Valve Relief Requests

NOTE V32 This relief request has been withdrawn.

APPENDIX B

Valve Relief Requests

NOTE V33 This relief request has been withdrawn.

Valve Relief Requests

NOTE V34

SYSTEM:	High Pressure Coolant Injection
VALVES:	23HPI-12 23HPI-65
CATEGORY:	A,C
CLASS:	2
FUNCTION:	These valves open to provide a flowpath from the HPCI turbine exhaust to the suppression pool. They close to provide containment isolation.
TEST REQUIREMENTS:	Per IWV-3521, exercise these valves closed every three months.
BASIS FOR RELIEF:	These valves are exercised open quarterly during HPCI surveillance testing performed during plant operation in accordance with the JAF Technical Specifications. Since there is no disc position indication on either of these valves, closure must be verified by backflow or leakage testing. In order to verify valve closure by the backflow technique, the HPCI exhaust line must be isolated for the duration of the test, causing the HPCI System to be inoperable. The potential safety impact of voluntarily placing the HPCI System in an inoperable status during plant operation at power is considered to be imprudent and unwarranted in relation to any apparent gain in system reliability derived from the closure verification. In addition, the valves are located approximately twenty (20) feet from the floor, necessitating erection of a large scaffold in the vicinity of the HPCI pump. This also is considered to be undesirable from the aspect of potential damage to HPCI System components should the scaffold be subjected to structural failure.

Valve Relief Requests

NOTE V34 (cont.)

Based on the foregoing discussion, testing of these valves during plant operation at power is considered to be impractical. During cold shutdowns, erection of the scaffold in addition to other activities related to test performance would place an extreme burden on the plant staff and would likely result in unwarranted extensions to all forced outages with the added negative impact on plant performance and availability.

Verifying closure of these valves during each refuel outage will provide sufficient assurance that the valves will continue to be operable with respect to their capability to close.

ALTERNATE TESTING: At each refuel outage, these valves will be verified to close in conjunction with leak testing performed per 10CFR50, Appendix J.

Valve Relief Requests

NOTE V35

SYSTEM:	High Pressure Coolant Injection
VALVE:	23HPI-13
CATEGORY:	C
CLASS:	2
FUNCTION:	This valve opens to permit HPCI turbine condensate to drain to the suppression chamber.
TEST REQUIREMENTS:	Per IWV-3521, exercise this valve open every three months.
BASIS FOR RELIEF:	There is no position indicator on this valve or any other means to verify the valve opens.
ALTERNATE TESTING:	In accordance with Generic Letter 89-04 Position 2, at least once each operating cycle (normally a refuel outage) the valve will be disassembled, inspected, and verified to be operable.

APPENDIX B

Valve Relief Requests

NOTE V36 This relief request has been withdrawn.

APPENDIX B

Valve Relief Requests

NOTE V37 This relief request has been withdrawn.

APPENDIX B

Valve Relief Requests

NOTE V38 This relief request has been withdrawn.

APPENDIX B

Valve Relief Requests

NOTE V39 This relief request has been withdrawn.

INSERVICE TESTING PROGRAM FOR PUMPS AND VALVES

APPENDIX B

Valve Relief Requests

NOTE V40 This relief request has been withdrawn.

INSERVICE TESTING PROGRAM FOR PUMPS AND VALVES

APPENDIX B

Valve Relief Requests

NOTE V41 This relief request has been withdrawn.

APPENDIX B

Valve Relief Requests

NOTE V42 This relief request has been withdrawn.

APPENDIX B

Valve Relief Requests

NOTE V43 This relief request has been withdrawn.

Valve Relief Requests

NOTE V44 This relief request has been withdrawn.

INSERVICE TESTING PROGRAM FOR PUMPS AND VALVES

APPENDIX B

Valve Relief Requests

NOTE V45 This relief request has been withdrawn.

Valve Relief Requests

NOTE V46

SYSTEM:	Various
VALVES:	Containment Isolation Valves (≥6 inches Nominal Pipe Size)
CATEGORY:	A and A,C
CLASS:	1 or 2
FUNCTION:	These valves close to provide containment isolation.
TEST REQUIREMENTS:	Per IWV-3427(b), seat leakage rate shall be trended and corrective action taken.
BASIS FOR RELIEF:	Based on input from many utilities and NRC staff review of testing data at some plants, the NRC determined that the usefulness of IWV-3427(b) does not justify the burden of complying with the requirements of IWV-3427(b).
ALTERNATE TESTING:	In accordance with Generic Letter 89-04, Position 10, these valves are provided with leak rate limits specified in accordance with IWV-3426 and will be repaired or replaced whenever seat leakages exceed established limits.

Valve Relief Requests

NOTE V46 (cont.)

VALVE ID	VALVE ID
10MOV-26A,B	27AOV-101A,B
10MOV-27A,B	27AOV-111
10MOV-31A,B	27AOV-112
10MOV-39A,B	27AOV-113
12MOV-15	27AOV-114
12MOV-18	27AOV-115
13RCIC-4	27AOV-116
13RCIC-5	27AOV-117
14MOV-11A,B	27AOV-118
15AOV-130A	27VB-6
15RBC-24A	27VB-7
23HPI-12	29AOV-80A,B,C,D
23HPI-65	29AOV-86A,B,C,D
23MOV-15	34FWS-28A,B
23MOV-16	34NRV-111A,B
23MOV-19	46ESW-16B

Valve Relief Requests

NOTE V47

SYSTEM:	High Pressure Coolant Injection
VALVES:	23HP1-62
CATEGORY:	C
CLASS:	2
FUNCTION:	This valve opens to provide a flowpath for minimum flow from the HPCI main pump.
TEST REQUIREMENTS:	Per IWV-3521, exercise this valve open every three months.
BASIS FOR RELIEF:	Due to the configuration of the minimum flow motor operated valve control logic, fully developed flow cannot be achieved through this check valve. Additionally, full-stroke exercising cannot be verified with existing instrumentation, and therefore cannot be performed.
ALTERNATE TESTING:	In accordance with Generic Letter 89-04 Position 2, the valve will be disassembled and inspected each operating cycle (normally a refuel outage).

INSERVICE TESTING PROGRAM FOR PUMPS AND VALVES

APPENDIX B

Valve Relief Requests

NOTE V48

SYSTEM:	Containment Atmospheric Dilution (CAD)
VALVES:	27VB-1 thru 5
CATEGORY:	A,C
CLASS:	2
FUNCTION:	These valves open to relieve vacuum from the suppression chamber to the drywell if differential pressure between them should exceed 0.5 psid. They close to prevent bypass flow from the drywell to the suppression chamber without the quenching action of the suppression pool.
TEST REQUIREMENTS:	Per IWV-3424 and IWV-3426, measure individual valve leakrates for valves. Per IWV-3427(b), seat leakage rate shall be trended and corrective action taken.
BASIS FOR RELIEF:	The configuration of the vacuum breaker lines precludes measuring individual valve leakrates. In accordance with JAF Technical Specifications, Section 4.7.A.5.d, these valves are leak tested each cycle (normally during refueling outages) as a group with other elements of the containment vessels in conjunction with an integrated drywell/suppression chamber bypass leakage test. This test method may be subjected to significant variations associated with other contributing factors involved with the difficulty of performing the test rather than indication of valve degradation. As such, the usefulness of applying IWV-3427(b) would not justify the burden and uncertainties associated with the performance of this test.
ALTERNATE TESTING:	These valves will be tested together and appropriate acceptance criteria established in accordance with JAF Technical Specifications, Section 4.7.A.5.d.

Valve Relief Requests

NOTE V49

SYSTEM:	Emergency Service Water
VALVES:	46(70)ESW-101 thru 104
CATEGORY:	B
CLASS:	3
FUNCTION:	These valves are manually opened to provide ESW flow to Control and Relay Room air handlers to ensure continued cooling in the event the normal chilled water system is rendered inoperable.
TEST REQUIREMENTS:	Per IWV-3411, exercise these valves open every three months.
BASIS FOR RELIEF:	These valves provide isolation between the raw ESW System and the glycol/water mixture in the chilled water system. Opening these valves will cause contamination of the glycol/water solution.
ALTERNATE TESTING:	These valves will be exercised during each reactor refueling outage.

Valve Relief Requests

NOTE V50

SYSTEM:	Transversing In-Core Probe (TIP)
VALVES:	07SOV-104A, B, C
CATEGORY:	A
CLASS:	2
FUNCTION:	These valves close to provide containment isolation.
TEST REQUIREMENTS:	Per IWV-3413(b), measure the full stroke time of the valve.
BASIS FOR RELIEF:	The computer control system for TIP system includes a provision for measuring valve cycle time (opened and closed) and not closure time alone. The sequence opens the subject valve (stroke < 2 seconds), maintains it energized for 10 seconds (including the opening stroke), and de-energizes the valve solenoid allowing the valve to stroke closed (< 2 seconds). The total elapsed valve cycle time is specified to be ≤ 12 seconds.
ALTERNATE TESTING:	The overall cycle time (opened and closed) for these valves will be measured and evaluated per IWV-3413 and IWV-3417.

Valve Relief Requests

NOTE V51

SYSTEM:	Various
VALVES:	All valves tested during cold shutdown conditions.
CATEGORY:	Various
CLASS:	Various
FUNCTION:	Various
TEST REQUIREMENT:	Valves shall be exercised ... unless such operation is not practical during plant operation. If only limited operation is practical during plant operation, the valve shall be part-stroke exercised during plant operation and full stroke exercised during cold shutdowns. Full stroke exercising during cold shutdowns for all valves not full-stroke exercised during plant operation shall be on a frequency determined by the intervals between shutdowns as follows: For intervals of 3 months or longer - exercise during each shutdown. (IWV-3412 and IWV-3522)
BASIS FOR RELIEF:	In many instances testing of all valves designated for testing during cold shutdown cannot be completed due to the brevity of an outage or the lack of plant conditions needed for testing specific valves. It has been the policy of the NRC that if testing commences in a reasonable time and reasonable efforts are made to test all valves, then outage extension is not required when the only reason is to provide the opportunity for completion of valve testing. ASME/ANSI OMa-1987, Operation and Maintenance Of Nuclear Power Plants, Part 10 (Paragraphs 4.2.1.2 and 4.3.2.2) recognizes this issue and allows deferred testing as set forth below.

Valve Relief Requests

NOTE V51 (cont.)

ALTERNATE TESTING: For those valves designated to be exercised or tested during cold shutdown, exercising shall commence as soon as practical after the plant reaches a stable cold shutdown condition as defined by the applicable Technical Specification but no later than 48 hours after reaching cold shutdown. The 48-hour requirement need not apply if all valves are tested during an outage. Valve testing need not be performed more often than once every three (3) months except as provided for in IWV-3417(a). Completion of all valve testing during a cold shutdown outage is not required if the length of the shutdown period is insufficient to complete all testing. Testing not completed prior to startup will be rescheduled for the next cold shutdown in a sequence such that the test schedule does not omit nor favor certain valves or groups of valves.

INSERVICE TESTING PROGRAM FOR PUMPS AND VALVES

APPENDIX B

Valve Relief Requests

NOTE V52 This relief request has been withdrawn.

Valve Relief Requests

NOTE V53

SYSTEM:	RHR Service Water
VALVES:	10SOV-101 A thru D
CATEGORY:	B
CLASS:	3
FUNCTION:	These valves automatically open upon pump start to allow cooling water to flow through the RHR Service Water pump upper lubricating oil coolers. When the pump is stopped, the associated valve closes to prevent draining of the RHR service water header(s).
TEST REQUIREMENTS:	Per IWV-3413(b), measure the stroke time every three months. If, for power-operated valves with full stroke times less than 10 seconds, an increase of stroke time of 50% or more from the previous test is observed, the test frequency shall be increased to once each month until corrective action is taken. (IWV-3417(a))
BASIS FOR RELIEF:	These are rapid-acting solenoid actuated pilot operated valves with no position indication. Therefore, the only practical method of verifying valve operation is by monitoring cooling water discharged from the cooler drain lines. This satisfies the requirement for exercising per IWV-3412(b), however, by utilizing this method, a true value for valve stroke time cannot be accurately determined. In addition, due to the lack of precision related to stroke time measurements derived from this method, a wide range of measurements (greater than 50%) is expected. Adhering to the requirements of IWV-3417(a) would result in frequent and unnecessary testing at a monthly frequency.

Valve Relief Requests

NOTE V53 (cont.)

BASIS FOR RELIEF (cont.)

Measuring the time interval from pump start to the time water is emitted from the drain lines will provide a measure of valve stroke time as well as the degree of valve opening. Should either of these degrade, the measured time interval will lengthen providing indication that a potential valve problem exists. Typical transit time measurements are in the range of 1-3 seconds indicating a flowrate greatly in excess of that required for cooling. (The minimum cooling water flow equates to approximately 11 seconds for the most limiting case) Based on this, establishing a limit of five (5) seconds for initiating monthly testing is reasonable and conservative.

The drain lines from the coolers are open-ended and have no convenient means of measuring flow through the coolers. Thus, ascertaining that a valve has "full-stroked" is not possible by this simple timing technique. Flowrate, however, can be determined by collecting discharged water over an elapsed period of time. Such testing done at a frequency of once each operating cycle in conjunction with the "stroke" timing described above provides adequate assurance that cooling water flow to the lube oil coolers is adequate.

ALTERNATE TESTING: These valves will be exercised in conjunction with testing of the respective RHR service water pumps and a measure of "stroke time" using the time interval from pump start to the emission of water from the cooler drain line will be recorded. Should this time interval exceed five (5) seconds, the testing frequency will be increased to once each month until corrective action is taken.

Once each operating cycle a flowrate check will be performed to verify flow through each coolers is satisfactory.

Valve Relief Requests

NOTE V54

SYSTEM:	High Pressure Coolant Injection
VALVE:	23HPI-130
CATEGORY:	C
CLASS:	2
FUNCTION:	This valve opens to provide a flowpath for cooling water circulation through the HPCI turbine lube oil cooler.
TEST REQUIREMENTS:	Per IWV-3521, exercise this valve open every three months.
BASIS FOR RELIEF:	This valve has no means of determining disc position or flowrate and, thus there is no mechanism for verifying full accident flow and nor full-stroke of this valve. Satisfactory operation of the HPCI turbine during quarterly testing verifies adequate operation of valve and cooling system.
ALTERNATE TESTING:	In accordance with Generic Letter 89-04 Position 2, at least once during each operating cycle (normally a refuel outage) the valve will be disassembled, inspected, and verified to be operable.

Valve Relief Requests

NOTE V55

SYSTEM:	Core Spray
VALVES:	14CSP-62A,B
CATEGORY:	C
CLASS:	2
FUNCTION:	The 14CSP-62A and B valves open to provide minimum flow required for the core spray holding pump and close to prevent reverse flow from the Torus.
TEST REQUIREMENTS:	Per IWV-3521, exercise these valves closed every three months.
BASIS FOR RELIEF:	There are no position indicators on these valves or other means to verify closure, thus, the only practical method of verifying closure is by means of back-leakage tests. These valves cannot be verified to close by means of a reverse flow test.
ALTERNATE TESTING:	In accordance with Generic Letter 89-04 Position 2, at least once each operating cycle (normally a refuel outage) one valve will be disassembled, inspected, and verified to be operable. If a valve is found to be inoperable, the other valve will be disassembled and inspected prior to startup.

Valve Relief Requests

NOTE V56

SYSTEM:	Residual Heat Removal
VALVES:	10RHR-95A,B
CATEGORY:	C
CLASS:	2
FUNCTION:	These valves close to prevent reverse flow from the Torus.
TEST REQUIREMENTS:	Per IWV-3521, exercise these valves closed every three months.
BASIS FOR RELIEF:	These are simple check valves with no means of determining disc position without performing a backleakage test. Performing such a test, would require setting up a hydrostatic pump in a high radiation area. During cold shutdown, the system lineup changes and effort involved with testing would constitute an unreasonable burden on the plant staff.
ALTERNATE TESTING:	During each refuel outage these valves will be verified to close during a hydrostatic leakrate test.

Valve Relief Requests

NOTE V57

SYSTEM:	Core Spray
VALVES:	14AOV-13A,B
CATEGORY:	A,C
CLASS:	1
FUNCTION:	These valves open to provide flowpaths from the Core Spray System to the reactor vessel. They close for pressure isolation protection of the low pressure core spray piping.
TEST REQUIREMENTS:	Per IWV-3521, exercise these valves open every three months.
BASIS FOR RELIEF:	There is no mechanism by which these valves can be full-stroke exercised without injecting water from the core spray pumps to the reactor vessel. During plant operation, the core spray pumps cannot produce sufficient discharge pressure to overcome reactor vessel pressure and provide flow into the vessel. The installed air operators are capable of exercising the valves, providing there is no differential pressure across the valve seat; obviously this is not the case. During cold shutdown, injecting into the reactor vessel requires a major effort to establish the prerequisite conditions and realignment of the Core Spray System to allow supplying water from the CST. Torus water cannot be used since it does not meet the chemistry requirements for reactor grade make-up. It is estimated that such a test would take about 24 hours to perform and would result in a significant burden on the plant operating staff. In addition, there is a potential for overfilling the reactor vessel and flooding the main steam lines. This could adversely affect the performance of the main steam safety/relief valves (SRV's) since there is cause to believe that a contributing factor to the historically poor performance of the SRV's is water contamination of the operators.

Valve Relief Requests

NOTE V57 (cont.)

The installed check valve operators are capable of exercising the valves through their full stroke; however, the sizing of the operators does not satisfy the criteria set forth in IWV-3522(b).

ALTERNATE TESTING: During cold shutdown, each of these valves will be exercised using the installed operators.

Each of these valves will be full-stroke exercised during each refuel outage by injecting full accident flow into the reactor vessel.

Valve Relief Requests

NOTE V58

SYSTEM:	Automatic Depressurization
VALVES:	02RV-1 thru 02RV-11 02VB-1 thru 02VB-11
CATEGORY:	C
CLASS:	2
FUNCTION:	These valves remain closed to prevent steam from an open safety/relief valve (SRV) from entering the drywell. They open following closure of an SRV to prevent the formation of a water column within the downcommer that could cause torus damage during subsequent lifting of the same SRV.
TEST REQUIREMENTS:	Per IWV-3521, exercise these valves open and closed every three months.
BASIS FOR RELIEF:	Exercising these valves require local manipulation of each valve and thus entry into the containment. During plant operation at power, and on occasion while in cold shutdown, the containment atmosphere is maintained in a nitrogen-inerted condition. During such periods, entry into the containment is not practical due to personnel safety concerns.
ALTERNATE TESTING:	These valves will be exercised during cold shutdowns when the containment is de-inerted consistent with the requirements of IWV-3522 and the provisions of Note V51.

INSERVICE TESTING PROGRAM FOR PUMPS AND VALVES

APPENDIX B

Valve Relief Requests

NOTE V59

SYSTEM:	Main Steam
VALVES:	29AOV-80A, B, C, D
CATEGORY:	A
CLASS:	1
FUNCTION:	These valves are normally open to provide steam to the main turbine generator and auxiliaries. They close to isolate steam flow and for containment isolation.
TEST REQUIREMENTS:	Per IWV-3415, fail-safe test these valves closed every three months or during cold shutdowns.
BASIS FOR RELIEF:	Fail-safe exercising these valves requires local manipulation of valves located inside the containment vessel and thus entry into the containment. During plant operation at power, and on occasion while in cold shutdown, the containment atmosphere is maintained in a nitrogen-inerted condition. During such periods, entry into the containment is not practical due to personnel safety concerns.
ALTERNATE TESTING	These valves will be fail-safe exercised during cold shutdowns when the containment is de-inerted consistent with the requirements of IWV-3415 and the provisions of Note V51.

Valve Relief Requests

NOTE V60

SYSTEM:	Residual Heat Removal
VALVES:	10AOV-68A,B
CATEGORY:	A,C
CLASS:	1
FUNCTION:	These valves open to provide LPCI injection and close to provide containment and pressure isolation.
TEST REQUIREMENTS:	Per IWV-3521, exercise these valves open and closed every three months.
BASIS FOR RELIEF:	These valves may be exercised by either operation using the installed air operators or by flow from the RHR pumps into the Recirculation System. During plant operation, neither method is practical since the RHR pumps cannot develop sufficient head to overcome reactor pressure and the air operators are designed to open the valves with zero differential pressure. At cold shutdown, a zero differential pressure is obtainable and operation with the air operators is possible. However, the theoretical force of the operators does not satisfy the quantitative limit of IWV-3522(b). Thus, exercising by using the air actuators can only be considered a part-stroke exercise. During cold shutdown when the RHR System is in the shutdown cooling mode, these valves are opened by normal shutdown cooling flow. Full accident flow (as required by GL 89-04, Position 1) is currently defined as 13,900 GPM which can only be obtained by operating two pumps in parallel. Unacceptable vibration levels related to system and component design preclude throttling of the pump flow. Thus, with two RHR pumps in parallel, the resultant flow would be approximately 17,000 to 18,000 GPM. It has yet to be confirmed that the system can be operated safely in the shutdown cooling mode at this high flowrate due to the size of the common pump suction header.

Valve Relief Requests

NOTE V60 (cont.)

These valves cannot be fully opened at a single pump flowrate. Thus, full stroke exercising using one pump, in conjunction with confirmation of full stroke valve operation by a non-intrusive testing method, is also not possible.

Therefore, if operation of two RHR pumps in parallel is not practical, these valves will be disassembled and inspected on a rotating basis, one each refuel outage.

ALTERNATE TESTING: Each valve will be full stroke exercised open (if practical) and closed during each cold shutdown in accordance with the requirements of Note V51. Should full flow exercising, as outlined above, be found to be impractical, each valve will be partial-stroke exercised with flow at cold shutdown. Each cycle (normally a refuel outage) one of these valves will be disassembled and inspected on a rotating basis in accordance with GL 89-04, Position 2.

APPENDIX C

SUMMARY OF CHANGES

APPENDIX C

Pump Changes

PAGE	PUMP ID(s)	CHANGE	REASON
9,10	Various	Drawing and coordinate changes.	FM/OP consolidation effort.
9,10,32	46P-2A,B	Relief Request Note P18 has been withdrawn.	Determined that flow instrumentation meets code requirements.
12	10P-1A,B,C,D 46P-2A,B	Deleted forebay level measurement deviation.	Put required deviation in the test procedure.
17	11P-2A,B	Deleted portion pertaining to expanded flowrate limits.	NRC SER denied use.
19	10P-1A,B,C,D 46P-2A,B	Revised Relief Request Note P9 to measure vibration per ASME/ANSI OM-1988a, Part 6.	NRC SER requirement.
24	11P-2A,B	Revised Relief Request Note P13 to provide more justification.	Respond to NRC SER comments.
28	Various	Revised Relief Request Note P15 to include a note.	To have relief request re-review.

APPENDIX C

Valve Changes

PAGE(s)	VALVE ID(s)	CHANGE	REASON
42 thru 107	Various	Drawing and coordinate changes.	FM/OP consolidation effort.
43,44,45	N/A	Corrected the spelling error in the system title.	Typo.
43,44,45, 111,183	02RV-1 thru 11 02VB-1 thru 11	Deleted CSB and replaced with Relief Request Note V58.	SER requires a relief request for conditional cold shutdown testing.
46,149	02-2AOV-39,40	These valves were SOV's in Rev. 4. Replaced by AOV's of different size and type during 1992 RFO.	Plant modification.
56,108 185	10AOV-68A,B	Revised CS2 and added Relief Request Note V60 for forward flow requirement.	Actuators do not meet the requirements of IWV-3522(b).
56,57,68 69,167 168	10AOV-68A,B 10MOV-17,18 10MOV-25A,B 14AOV-13A,B 14MOV-12A,B	Reference of these valves was removed from Relief Request V46.	SER required trending of PIV leak rates.
57,58,59, 65,66,69, 77,79,80, 84,85,86, 87,98,99	10MOV-17, 18, 25A,B, 26A,B, 27A,B, 31A,B, 34A,B, 38A,B, 12MOV-15, 18, 69, 13MOV-15, 16, 27, 14MOV-26A,B, 20MOV-82, 94, 23MOV-15, 16, 25, 60, 27AOV-111, 112,113,114, 115,116,117, 118, 131A,B, 132A,B, 27MOV-113, 117,122,123, 29MOV-74, 77	Deleted remark for Technical Specification stroke time limit.	Stroke time limits no longer in Technical Specification.
57,69,141	10MOV-17,18, 25A,B, 14MOV-12A,B	A remark was added to these valves and Relief Request Note V24 has been withdrawn.	Code allows this testing method.
59	10MOV-32,33	These valves have been deleted from the Program.	Removed during 1992 RFO.

APPENDIX C

PAGE(s)	VALVE ID(s)	CHANGE	REASON
60,150	10RHR-262, 277	Deleted disassembly requirement and Relief Request Note V30 has been withdrawn.	Valves reverse flow testable due to modification during 1992 RFO.
60,61,152	10RHR-64A,B,C,D	Deleted disassembly requirement and Relief Request Note V32 has been withdrawn.	Valves will be full flow tested quarterly using ultrasonic flow meters.
65,136	12MOV-80	This valve has been deleted from the Program and Relief Request Note V19.	Removed during 1992 RFO.
68,181	14AOV-13A,B	Change the full stroke test at cold shutdown to a partial exercise and added Relief Request Note V57 and full flow test at refuel.	Determined that full stroke test was not in accordance with IWV-3522(b) requirements.
68,179	14CSP-76A,B	Deleted disassembly requirement and Relief Request Note V55 deleted reference to these valves.	Valves reverse flow testable due to modification installed during 1992 RFO.
72,112, 145	15RBC-21A,B	Changed the reverse flow test requirement from quarterly to cold shutdown and added CS14. Relief Request Note V33 has been withdrawn.	Determined that these valves can be tested at cold shutdown.
72,112, 143	15RBC-22A,B	Changed the full stroke test requirement from quarterly to cold shutdown and added CS14. Relief Request Note V31 has been withdrawn.	Determined that these valves can be tested at cold shutdown.
72,73, 112,145	15RBC-24A,B	Changed the reverse flow test requirement from quarterly to cold shutdown and added CS15. Relief Request Note V33 has been withdrawn.	Determined that these valves can be tested at cold shutdown.
73,112, 143	15RBC-26A,B	Changed the full stroke test requirement from quarterly to cold shutdown and added CS15. Relief Request Note V31 has been withdrawn.	Determined that these valves can be tested at cold shutdown.

APPENDIX C

PAGE(s)	VALVE ID(s)	CHANGE	REASON
73,151	15RBC-33	Relief Request Note V31 has been withdrawn and valve will be full stroke exercised quarterly.	Determined that this valve can be tested quarterly.
73,122	15RBC-35A,B,C,D 15RBC-38A,B 15RBC-61	Deleted disassembly requirement and Relief Request Note V7 has been withdrawn.	Valves reverse flow testable due to modification installed during 1992 RFO.
77	20AOV-83 20AOV-95	The valve type has been change from PG to BL.	Valves were replaced during 1992 RFO.
77	20MOV-82 20MOV-94	The valve type has been changed from PG to GA.	Valves were replaced during 1992 RFO.
79,132, 133	23HPI-402 23HPI-403	Deleted disassembly requirement and incorporated full flow and reverse flow testing at cold shutdown. Relief Request Note V17 was revised to discuss reverse flow test method.	Determined that valves can be tested at cold shutdown.
86,157	27CAD-67, 68, 69, 70	Relief Request Note V36 has been withdrawn.	Determined that valve can be tested quarterly.
95,112, 184	29AOV-80A,B,C,D	Deleted these valves from CS12 and added Relief Request Note V59.	SER requires a relief request for conditional cold shutdown testing.
101,111 129	39IAS-22, 29	Revised Relief Request Note V14 to discuss forward flow testing. Reverse flow testing to be done quarterly. Deleted CS11.	Determined that valve can be reverse flow tested quarterly and SER requires a relief request for conditional cold shutdown testing.
104,175	46(70)SWS-13, 14 70WAC-12A,B	Relief Request Note V52 has been withdrawn and valves will be full stroke exercised quarterly.	Determined that these valves can be tested quarterly.
104,105	70WAC-5A,B	These valves have been added to the Program.	Valves required for pressure boundary.
106,166	46ESW-15A,B, 16A,B	Relief Request Note V45 has been withdrawn and valves will be reverse flow tested quarterly.	Determined that valves can be tested quarterly.
106	46ESW-40A,B	These valves have been added to the Program.	Valves installed by modification and perform a pressure boundary function.
106	46ESW-6A,B	These valves have been deleted from the Program.	Removed during the 1992 RFO.

APPENDIX C

PAGE(s)	VALVE ID(s)	CHANGE	REASON
120,121	13RCIC-4,5	Revised Relief Request Note V6 to provide additional justification for refuel testing.	NRC SER denied original Relief Request.
127	34FWS-28A,B	Revised Relief Request Note V12 to provide additional justification for refuel testing.	NRC SER denied original Relief Request.
154,155	23HPI-12,65	Revised Relief Request Note V34 to provide additional justification for refuel testing.	NRC SER denied original Relief Request.
168,170	27VB-1 thru 5	Deleted reference to these valves from Relief Request Note V46 and revised Note V48 to include trending exemption.	Clarification
171	46(70)ESW-101 thru 104	Revised Relief Request Note V49 to test each refuel vice 2 years.	NRC SER requirement

ATTACHMENT II TO JPN-92-026

NYPA RESPONSE TO "ANOMALIES" IN REVISION 4 OF THE FITZPATRICK INSERVICE TEST PROGRAM

New York Power Authority

JAMES A. FITZPATRICK NUCLEAR POWER PLANT
Docket No. 50-333

INTRODUCTION

The following summarizes NRC identified Relief Request "anomalies" as defined in the TER and outlines the Authority's reponse to each. The anomalies have been divided into three groups; (1) Resubmit with Additional Justification, (2) Comply with TER, (3) Withdraw Relief Request. The actions stated in each NYPA response have been incorporated into Revision 5 of the IST Program.

The anomalies classified as "Resubmit with Additional Justification" require NRC review and approval. Relief requests that have revised to meet the guidance of the Technical Evaluation Report (Comply with TER) are considered by the Authority to be approved. Testing of equipment identified in withdrawn relief requests will meet the requirements of the Code.

RESUBMIT WITH ADDITIONAL JUSTIFICATION

Anomaly No. 4 - Relief Request P9

The relief request proposed taking RHRSW & ESW pump vibration readings on the lower motor bearing housing. The pump bearings are submerged (inaccessible) and the bearing housing near the upper coupling is in a confined space in close proximity to the rotating shaft (safety hazard). The NRC stated that the upper motor thrust bearing is the best available location to measure vibration to assess the mechanical condition of submerged pumps.

Interim relief is granted provided compliance with the following short term and long term actions.

1. For the short term (next 6 months) JAF must do one of the following: (1) justify the proposed measurement, (2) measure vibration on the upper motor thrust bearing in compliance with OM-6, or (3) justify some other alternative.

2. For the long term (within 1 year) JAF should investigate alternate methods, such as installed vibration monitoring. Before the end of the year provide the NRC with the results of the evaluation and an implementation schedule.

NYPA's Response:

P9 has been revised to comply with the SER position for measuring service water pump vibration in accordance with the requirements of ASME/ANSI OM-1988a, Part 6.

Additional pump instrumentation is beyond the scope and intent of the Code. This type of on-line vibration monitoring for submerged vertical pumps is unproven and requires additional research and development before it can be demonstrated to be of value in meeting Code requirements.

RESUBMIT WITH ADDITIONAL JUSTIFICATION

Anomaly No. 5 - Relief Request P13

Interim relief is granted for a 1 year period to monitor SLC pump vibration using instrumentation which falls outside Code required frequency response range requirements provided acceptance criteria is made more conservative. The NRC believes that this not a valid long term solution and request that instrumentation having the Code accuracy be procured within 1 year.

NYPA's Response:

P13 has been revised to provide additional information and justification supporting the use of existing instrumentation.

Anomaly No. 6 - Relief Request P15

Provisional relief is granted for taking vibration velocity readings as opposed to displacement provided the program follows all OM-6 stipulations relative to vibration. Additional information is needed to evaluate JAF's proposed program and its differences from OM-6.

NYPA's Response:

P15 has been revised to provide additional information and justification for complying with Code vibration requirements and enhancing the program by taking additional velocity readings.

Anomaly No. 8 - Relief Request V6

Relief is denied for reverse flow testing RCIC turbine exhaust check valves once per RFO. The NRC believes that exercising these valves closed quarterly is not impractical or burdensome.

NYPA's Response:

V6 has been revised to provide additional information and justification supporting a once per refuel outage reverse flow test.

RESUBMIT WITH ADDITIONAL JUSTIFICATION

Anomaly No. 10 - Relief Request V12

Provisional relief is granted from reverse flow exercising the feedwater checks quarterly, provided the valves are tested during cold shutdown when feedwater flow is secured, and drywell is deinerted. The NRC believes back leakage testing of these valves during cold shutdown is not impractical or burdensome.

NYPA's Response:

V12 has been revised to provide additional information and justification supporting a once per refuel outage reverse flow test.

Anomaly No. 12 - Relief Request V17

Provisional relief is granted from reverse flow exercising HPCI vacuum breakers individually, provided the valves are forward flow exercised and the pair is verified closed, quarterly or at cold shutdowns, as practical. Disassembly and inspection should still be performed as proposed.

NYPA's Response:

V17 has been revised to provide for reverse flow testing of check valve pair during cold shutdowns. Valves will be forward flow exercised during cold shutdowns. The Authority takes exception to the augmented disassembly and inspection requirements.

Anomaly 17 - Relief Request V34

Relief is denied to exercise closed HPCI turbine exhaust check valves (23HPI-12 & 65) each RFO during leak rate testing. The NRC believes local test connections permit back leakage testing to verify closure during Cold Shutdowns without being impractical or burdensome.

NYPA's Response:

V34 has been revised to provide additional information and justification supporting a once per refuel outage reverse flow test.

RESUBMIT WITH ADDITIONAL JUSTIFICATION

Anomaly 21 - Relief Request V55

Interim relief is granted for 1 year or until the next RFO, which ever is longer, from exercising, 14CSP-62A&B and 76A&B quarterly, provided the valves are disassembled and inspected per GL 89-04, Position 2. During the interim period alternate test methods shall be evaluated.

NYPA's Response:

V55 has been revised to remove 14CSP-76A&B from the relief request. Due to a modification being installed during the 1992 refuel outage 14CSP-76A&B can be tested quarterly. V55 is resubmitted to include only the 14CSP-62A&B.

Anomaly 25 - Relief Request V19 & V46

Provisional relief has been granted for V46 exempting trending of seat leakage. IWV-3427(a), for CIV testing only (per GL 89-04 Position 10). The NRC finds Relief Request V19 to be in conflict with V46 and did not address V19.

NYPA's Response:

V19 addresses the plant's original design which does not support individual CIV valve testing and has been resubmitted. V46 requests relief from trending seat leakage in accordance with Generic Letter 89-04, Postion 10. V46 has been revised to address only CIV valves. References to pressure isolation valve testing have been removed.

COMPLY WITH TER

Anomaly No. 1 - Relief Request P2

Provisional relief is granted from IWP-3100 and Table IWP-3100-1 for obtaining ESW and RHR Service Water pump differential pressures. The suction pressure of these vertical submerged open line shaft design pumps may be obtained by measuring the forebay water level provided the suction and discharge pressure instrumentation meets the accuracy requirements of IWP-4110.

NYPA's Response:

P2 has been revised to eliminate measurement of forebay water level to the nearest foot. The accuracy requirements of Table IWP-4110-1 will be met.

Anomaly No. 2 and 3 - Relief Request P7

Relief is granted to run SLC pumps for a minimum of 2 minutes. Provisional relief is granted to calculate flow rate based on the test tank water level change provided the calculation meets the accuracy requirements of IWP-4110 for direct measurement.

Relief is denied to expand Code allowable ranges for SLC pump flow rates. The NRC believes there is insufficient information to show the proposed ranges will require corrective action when necessary.

NYPA's Response:

P7 has been revised to eliminate exceptions taken to the Code accuracy requirements for flow rate. The accuracy of SLC pump flow measurements and their evaluation will comply with appropriate code requirements.

Anomaly No. 11 - Relief Request V14

Provisional relief is granted from reverse flow exercising air system containment isolation check valves 39IAS-22 & 29 quarterly, provided the valves are tested during cold shutdown when the drywell is deinerted. The NRC believes back leakage testing of these valves during cold shutdowns is not impractical or burdensome.

NYPA's Response:

V14 has been revised to forward flow test these valves during cold shutdowns when the containment is de-inerted. The valves will be reverse flow tested on a quarterly basis.

COMPLY WITH TER

Anomaly 19 - Relief Request V49

Provisional relief is granted to exercise manually operated ESW valves 101 thru 104 as close to the Code frequency as practicable but not to exceed once per RFO.

NYPA's Response:

V49 has been revised to require valve exercising at least once each refueling outage instead of every two years as suggested by the TER.

Anomaly 22 - Relief Request V53

Interim relief is granted for performing a modified test on the RHR Service Water Pump upper lubricating oil coolers as stated in Relief Request V53. Interim relief is granted for 1 year or unitl the next RFO, which ever is longer. During this period an evaluation shall be performed assessing, the effectiveness of this method, as well as alternate methods for determining stoke times.

NYPA's Response:

The Authority will comply with the interm measures defined in the TER. The Authority's final position concerning this relief request will be submitted by January 8, 1993.

COMPLY WITH TER

Anomaly 23 - Cold Shutdown Justification 8 & 12

Relief is granted to test SRV vacuum breakers and MSIVs during cold shutdowns when the containment is deinerted. The requests presented as cold shutdown justifications would be more appropriate as relief requests because of the requirement that the drywell be deinerted.

FitzPatrick's Response:

V58 and V59 are submitted to satisfy this item.

Anomaly 24 - Starting Point for Time Period in TS Action Statements

The Authority stated in its final response to GL 89-04 dated March 30, 1990 that exception is taken to Position 8. The NRC requests that if the position is deemed unreasonable a detailed relief request should be submitted to the NRC for evaluation.

FitzPatrick's Response:

The Authority no longer takes exception to GL 89-04, Postion 8 regarding starting point for time periods associated with Technical Specification Action Statements.

WITHDRAW RELIEF REQUEST

Anomaly No. 7 - Relief Request P18

Interim relief is granted to use existing ESW flow instrumentation with an accuracy of approximately + or - 3% of full scale. Additional information is needed to assess long term relief. Interim relief is granted for 1 year or the next refueling outage whichever is longer.

NYPA's Response:

The issue related to P18 has been re-evaluated and the relief request withdrawn. The accuracy of ESW flow measurements will comply with the appropriate Code requirements.

Anomaly No. 9 - Relief Request V7

Interim relief is granted for 1 year or until the next RFO, which ever is longer, from exercising closed the RBCLC '35', '38', and '61' check valves provided the valves are inspected per GL 89-04, Position 2. The NRC believes reverse flow exercising may be possible during outages and does not recommend inspection in place of testing.

NYPA's Response:

V7 has been withdrawn. Due to a modification being installed during the 1992 refuel outage the above valves can be reverse flow tested on a quarterly basis.

Anomaly 13 - Relief Request V24

JAF requested that credit be given for PIV testing after a successful LLRT test. The basis being if the valve was tight at the lower LLRT pressure with an air medium, the valve would also be tight at a higher pressure using water.

Provisional relief is granted to test in accordance with Appendix J for CIV testing only per GL 89-04 Postion 10. If a valve is also a pressure boundary PIV testing per Code still needs to be performed.

NYPA's Response:

The issue related to V24 has been re-evaluated and the relief request has been withdrawn.

WITHDRAW RELIEF REQUEST

Anomaly 14 - Relief Request V30

Provisional relief is granted from verifing closure capability of individual RHR keep fill check valves provided the closure capability of the pair of series check valves is verified by back leakage testing quarterly or during cold shutdowns as practicable. Disassembly and inspection per GL 89-04, Position 2, should be done for PM purposes.

NYPA's Response:

V30 has been withdrawn. Due to modifications being installed during the 1992 refuel outage the RHR keep fill check valves can now be tested quarterly in accordance with the Code.

Anomaly 15 - Relief Request V31

Relief is denied for exercising RBCLC drywell return lines manual CIVs (15RBC-22A&B, 26A&B, and 33) at an extended frequency of once per operating cycle. The NRC believes cycling these valves quarterly will not cause a significant change in drywell pressure.

NYPA's Response:

The issue related to V31 has been re-evaluated and the relief request has been withdrawn. Valves 15RBC-22A&B and 26A&B will be exercised in accordance with Cold Shutdown Justifications CS14 & CS15. Valve 15RBC-33 will be exercised quarterly.

Anomaly No. 16 - Relief Request V32

Interim relief is granted for 1 year or until the next refueling outage, whichever is longer, provided the RHR min flow line check valves are disassembled and inspected per GL 89-04, Position 2 as well as quarterly exercising during pump testing. By the end of this period implement testing per GL 89-04, Position 1 and/or 3, as applicable and consider disassemble and inspection under a PM program.

NYPA's Response:

The issue related to V32 has been re-evaluated and the relief request has been withdrawn.

WITHDRAW RELIEF REQUEST

Anomaly 17 - Relief Request V33

Relief is denied to exercise closed RBCLC Drywell Supply CIV check valves (15RBC-21A&B, and 24A&B) each RFO during leak rate testing. The NRC believes local test connections permit back leakage testing to verify closure during Cold Shutdowns without being impractical or burdensome.

NYPA's Response:

The issue related to V33 has been re-evaluated and the relief request has been withdrawn. The above valves will be tested in accordance with Cold Shutdown Justifcations CS14 and CS15.

Anomaly 17 - Relief Request V45

Relief is denied to exercise closed ESW Drywell Supply CIV check valves (46ESW-15A&B and 16A&B) each RFO during leak rate testing. The NRC believes local test connections permit back leakage testing to verify closure during Cold Shutdowns without being impractical or burdensome.

NYPA's Response:

The issue related to V45 has been re-evaluated and the relief request has been withdrawn. These valves will be tested quarterly.

Anomaly 18 - Relief Request V36

Relief is denied to exercise CAD system CIVs check valves (27CAD-67 thru 70) each RFO during leak rate testing. The NRC believes local test connections permit reverse flow testing without being impractical or burdensome.

NYPA's Response:

The issue related to V36 has been re-evaluated and the relief request has been withdrawn. These valves will be tested quarterly.

WITHDRAW RELIEF REQUEST

Anomaly 20 - Relief Request V52

Relief is denied to extend the frequency for exercising manual valves associated with control room chiller, 46(70)SSW-13, -14, and 70(WAC)-12A, -12B .

NYPA's Response:

The issue related to V52 has been re-evaluated and the relief request has been withdrawn. These valves will be exercised quarterly.

ATTACHMENT III TO JPN-92-026

REVISION 5 OF IST PROGRAM
STATUS OF RELIEF REQUESTS

New York Power Authority

JAMES A. FITZPATRICK NUCLEAR POWER PLANT
Docket No. 50-333

ATTACHMENT III TO JPN-92-026

REVISION 5 OF IST PROGRAM
STATUS OF RELIEF REQUESTS

OPEN RELIEF REQUESTS NOTES REQUIRING NRC REVIEW (STILL PENDING)

P9	V6
P13	V12
P15	V17
	V19
	V34
	V55

OPEN RELIEF REQUESTS NOTES REQUIRING NRC REVIEW (NEW)

	V48
	V57
	V60

APPROVED RELIEF REQUESTS NOTES

P2	V1
P7	V14
P10	V27
P11	V28
P12	V49
P14	V50
P16	V51
P17	V53 (Interim Approval until 1/8/93)
	V56
	V58
	V59

PRE-APPROVED RELIEF REQUESTS NOTES

P5	V2
	V5
	V9
	V22
	V29
	V35
	V46
	V47
	V54

WITHDRAWN RELIEF REQUEST NOTES (OLD)

P1	V3
P3	V4
P4	V8
P6	V10
P8	V11
	V13
	V15
	V16
	V18
	V20
	V21
	V23
	V25
	V26
	V37
	V38
	V39
	V40
	V41
	V42
	V43
	V44

WITHDRAWN RELIEF REQUESTS NOTES (NEW)

P18	V7
	V24
	V30
	V31
	V32
	V33
	V36
	V45
	V52

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