

UNITED STATES NUCLEAR REGULATORY COMMISSION WASHINGTON, D. C. 20555

POWER AUTHORITY OF THE STATE OF NEW YORK

DOCKET NO. 50-333

JAMES A. FITZPATRICK NUCLEAR POWER PLANT

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 40 License No. DPR-59

- The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by the Power Authority of the State of New York (the licensee) dated February 23, 1976 as supplemented July 5, 1978 (date of NRC receipt), and application dated August 1, 1978, comply with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

- Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. DPR-59 is hereby amended to read as follows:
 - (2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 40, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

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Thomas A. Ippolito, Chief Operating Reactors Branch #3 Division of Operating Reactors

Attachment: Changes to the Technical Specifications

Date of Issuance: November 9, 1978

ATTACHMENT TO LICENSE AMENDMENT NO. 40

FACILITY OPERATING LICENSE NO. DPR-59

DOCKET NO. 50-333

Replace the following pages of the Appendix "A" Technical Specifications with the enclosed pages. The revised pages are identified by Amendment number and contain vertical lines indicating the area of change.

Remove	Insert
113	113
114	114
117 .	117
	121a
171	171
172	172
-	172a
174	174
175	175
199	199
200	200
201	201
202	202
209	209
211	211
212	212
213	213

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υ.	Flow Rate Test - Core	Once/3 months
	spray pumps shall deliver	
	at least	
	4,625 gpm	
	against a sys-	
	tem head cor-	
	responding to	
	a total pump	
	developed head	
	of 2113 psig	
с.	Pump Opera-	Once/month
	bility	
	이 가지 않는 것이다.	
d.	Motor Oper-	Once/month
	ated Valve	
е.	Core Spray	
	Header Δp	
	Instrumenta-	
	tion	
	Check	Once/day
	Calibrate	Once/3 months
	Test	Once/3 months
f.	Logic System	Once/each
	Functional	operating
	Test	cycle ,
~	Testable	Tested for
g.	Check Valves	operability
	check first	any time the
		reactor is in
		the cold con-
		dition exceed-
		ing 48 hours,
		if operability
		tests have not
		been performed
		during the pre-
		ceding 31 days.

1.5 (cont'd)

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4.5 (cont'd)

- Prom and after the date that one of the Core Spray Systems is made or found inoperable for any reason, continued reactor operation is permissible during the succeeding 7 days unless the system is made operable earlier, provided that during the 7 days all active components of the other Core Spray System and the LPCI System and the emergency diesel generators shall be operable.
- I. The LPCI mode of the RHR System shall be operable whenever irradiated fuel is in the reactor and prior to reactor startup from a cold condition, except as specified below.
 - a. From the time that one of the RHR pumps is made or found to be inoperable for any reason, continued reactor operation is permissible during the succeeding 7 days unless the pump is made operable earlier provided that during such 7 days the remaining active components of the LPCI, containment spray mode, all active components of both Core Spray Systems, and the emergency diesel generators are operable.

- 2. I in it is determined that one Core Spray System is inoperable the operable Core Spray System, the LPCI System, and the emergency diesel generators shall be demonstrated to be operable immediately. The remaining Core Spray System shall be demonstrated to be operable demonstrated to be operable demonstrated to be operable daily thereafter.
- 3. LPCI System testing shall be as specified in 4.5.A.l.a, b, c, d, f and g except that three RHR pumps shall deliver at least 23,100 gpm against a system head corresponding to a reactor vessel pressure of 20 psig.
 - a. When it is determined that one of the RHR pumps is inoperable, the remaining active components of the LPCI, containment spray subsystem, both Core Spray Systems, and the emergency diesel generators required for operation shall be demonstrated to be operable immediately, and the remaining RHR pumps shall be demonstrated to be operable daily thereafter.

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- 4. Should one of the containment cooling sybsystems become inoperable, continued reactor operation is permissible for a period not to exceed 7 days, unless such subsystem is sooner made operable provided that during such 7 days all active components of the other containment cooling sybsystem, including its associated diesel generator, are operable.
- 5. If the requirements of 3.5.B cannot be met, the reactor shall be placed in a cold condition within 24 hr.
- Low power physics testing and reactor operator training shall be permitted with reactor coolant temperature # 212^oF with an inoperable component(s) as specified in 3.5.B above.

High Pressure Coolant Injection (HPCI) System

2.

 The HPCI System shall be operable whenever the reactor pressure is greater than 150 psig and irradiated fuel is in the reactor vessel and prior to reactor startup from a cold condition, except as specified below:

C. High Pressure Coolant Injection (HPCI) System

Surveillance of HPCI System shall be performed as follows provided a reactor steam supply is available. If steam is not available at the time the surveillance test is scheduled to be performed, the test shall be performed within ten days of continuous operation from the time steam becomes available.

 HPCI System testing shall be as specified in 4.5.A.1.a,b, c, d, f, and g except that the HPCI pump shall deliver at least 4,250 gpm against a system head corresponding to a reactor vessel pressure of 1,120 pric to 150 pric.

3.5 (cont'd)

E. <u>Reactor Core Isolation Cooling</u> (RCIC) System

- 1. The RCIC System shall be operable whenever there is irradiated fuel in the reactor vessel and the reactor pressure is greater than 150 psig and prior to a reactor startup from a cold condition, except from the time that the RCIC System is made or found to be inoperable for any reason, continued reactor power operation is permissible during the succeeding 7 days unless the system is made operable earlier provided that during these 7 days the HPCI System is operable.
- If the requirements of 3.5.E cannot be met, the reactor shall be placed in the cold condition and pressure less than 150 psig within 24 hours.
- 3. Low power physics testing and reactor operator training shall be permitted with inoperable components as specified in 3.5.E.2 above, provided that reactor coolant temperature is $\neq 212^{\circ}F$.

- 4.5 (cont'd)
- E. Reactor Core Isolation Cooling (RCIC) System
 - RCIC System testing shall be performed as follows provided a reactor steam supply is available. If steam is not available at the time the surveillance test is scheduled to be performed, the test shall be performed within ten days of continuous operation from the time steam becomes available

Frequency Item Once/operating a. Simulated cycle Automatic Actuation Test Once/month b. Pump Operability c. Motor Oper-Once/month ated Valve Operability d. Flow Rate Once/3 months Tested for e. Testable Check Valves operability any time the reactor is in the cold condi tion exceeding 48 hours, if operability

tests have not been performed during the preceding 31 days

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The RCIC pump shall deliver at least 400 gpm for a system head corresponding to a reactor pressure of 1,120 psig to 150 psig.

2. When it is determined that the RCIC System is inoperable at a time when it is required to be operable, the HPCI System shall be demonstrated to be operable immediately and daily thereafter.

c. Type C tests

- (1.) Type C tests shall be performed by local The pressurization. shall be pressure applied in the same direction as that when the valve would be required to perform its safety function, except as listed in Table 3.7-1 unless it can be determined that the results from the tests for a pressure applied in a different direction will provide equivalent or more conservative results. Each valve to be tested shall be closed by normal operation and without preliminary any exercising or adjustments.
- (2.) Valves, unless pressurized with fluid from a seal system, shall be pressurized with air or nitrogen at a pressure of Fa, and the gas flow to maintain Pa shall be measured.
- (3.) Valves, which are sealed with fluid from a seal system, such as the liquid in the suppression chamber shall not be tested.

(4.) See table 3.7-2 for exceptions.

(5.) Acceptance criterion combined leakage The a11 rate for penetrations and valves subject to Type B and C tests shall be less than 0.60 La. Leakage from containment isolation valves that are sealed with fluid from a seal system may be excluded the when determining leakage rate combined that the provided isolation installed valve seal-water system inventory is fluid sufficient to assure the sealing function for at least 30 days.

Other leak rate tests

d.

(1) The leakage rate for containment isolation valves 10-AOV-68A, B (penetration X-13A,B) for Low Pressure Coolant Injection System and 14-AOV-13A,B (penetration X-16A,B) for Core Spray System shall be less than 11 cubic feet per minute per valve (pneumatically tested at 45 psig with ambient temperature) or 10 gallons per minute per valve (hydrostatically) tested at 1000 psig with ambient temperature.

4.7 (cont'd)

e. Periodic retest schedule.

(1.) Type A test.

After the preoperational leakage rate tests, a set of three Type A tests shall be performed, at approximately equal intervals during each 10-year service period.

The third test of each set shall be conducted when the plant is shut down for the 10-year plant inservice inspections.

Permissible periods for testing. The performance of Type A tests shall be limited to periods when the plant facility is nonoperational and secured in the shutdown condition under the administrative control and in accordance with the plant safety procedures.

(2.) Type B tests.

Type B tests, (except tests for air locks), shall be performed during each reactor shutdown for refueling, or other convenient intervals, but in no case intervals at greater than 2 years. Air locks shall be tested at 6-month intervals. However, air locks which are opened and closed during such intervals shall be tested within 24 hours except when primary containment integrity is not required.

(3.) Type C test.

Type C tests shall be performed during each reactor shutdown for refueling but in no case at intervals greater than two years.

- (4) Other leak rate tests specified in Section 4.7d shall be performed during each reactor shutdown for refueling but in no case at intervals greater than two years.
- f. Containment modification

major modification, Any replacement of a component which is part of the primary containment reactor boundary, or resealing a seal-welded door, performed after the preoperational leakage rate test shall be followed by either a Type A, Type B, or Type C test, as applicable, for the area affected by the modification. The measured leakage from this test shall be included in the test The acceptance report. appropriate, criteria as met. Minor shall be modifications, replacements, or resealing on seal-welded doors, performed directly prior to the conduct of a scheduled Type A test do not require a separate test.

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TABLE 3.7-1 (LONE 'd)

PROCESS PIPELINE PERETRATING PRIMARY CUNTRIALENT (Lumbers in parentheses are keyed to numbers on following pages; signal codes are listed on following pages.)

the second second second second second second	the state of the s		Power		Location	Power	Cital Contract	Closing		the constant of the second
Line Isolated	Drowell Fenetration	Valve lype (6)	(5) (6)	Group	brywell	to Close	Isolation Signal	11me (7)		Remarks and Exceptions
ectic trut	X-316C A-318C	Check	Process	с	Outside	Process	kev. tlow	Not app- licable	Open	
ectre purp	λ-31AC λ-31bC	Uneck	Process	С	Inside	Procesa	Rev. ilow	Not app- l'icable	Open	
ne supply	a-12	NU Gate	Dc	*	Octaide	be	A, U, F, MM	38 sec	Closed	
In neactor hutdown cool- ne, supply	x-12	HD Gate	Ac	•	Inside	AC .	A,U,F, M	38 sec	Closed	
ir to suppres- ton spirit	2-2116,8	MO Globe	Ac		uut sioe	AC	G, S, 1M	10 sec	Closed	Throttling type valve Note (2)
wh - contain-	Х-39А,В	PO Gate	Ac	в	Outside	Ac	G,S,RM	10 sec	Closed	Note (2)
wht - contain-	х-39/,в	MO Gate	Ac	ь	Outside	Ac	G,S,HM	10 sec	Closed	Note (2)
ulk - reactor May Stray	x-17 .	MO Gate	Ac	*	Inside	AC	A, U, F, 114	20 sec	Closed	
hin - Luactor Way Spray	x-17	NU Gate	De	•	Outside	De	A,U,F,RM	20 sec	Closed	
to suppres-	х-2104,6	MU Globe	Ac	b	Outside	Ac	G,RM	70 sec	Closed	Throttling type valve - Note (2)
HH - LFCI to eactor	х-13А, ь	HD Gate	AC	*	Outside	Ac	RM,H	120 sec	Closed	
HR - SPCI to	X-136,8	HU Globe	Ac		Outside	hc	RM, H	90 sec	Open	Throttling type valve - Note (10
HA - LFCI to	X-13A,B	AU Check	-	*	Inside	Process	Rev. flow	Not app- licable	Closed	Testable check valve(3,16)

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TABLE 3.7-1 (Cont'd)

(Numbers in parentheses are keyed to numbers on following pages: signal codes are listed on following pages.)

UR pupp suc-				Group	Ref. to Drywell	to Close (5) (6)	Isolation Signal	Time 	Status	Remarks and Exceptions
tion from sup-	X-225A,B	MO Gate	Ac	в	Outside	Ac	RM	Not appli- cable	Open	
pression pool Standby liquid	X-42	Check		۸	Outside	Process	Rev. flow	Not appli- cable	Closed	
control Standby liquid control	X-42	Check		٨	Inside	Process	Rev. flow	Not appli- cable	Closed	
Reactor water	X-14	MO Gate	Ac,	٨	Inside	Ac	A,J,RM	30 sec	Open	
reactor Reactor water cleanup from reactor	X-14	MO Gate	Dc	٨	Outside	Dc	A,V,J,RM	30 sec	Open	
Reactor water from reactor warm-up	X-1 4	MO Gate	Dc	*	Outside	Dc	A,V,Y,J,RM ·	10 sec	Closed	
Reactor water cleanup return	X-9A	Check	-	۸	Outside o	Process	Rev. flow	Not appli- cable	Open	
RCIC - turbine steam supply	X-10	MO Gate	Ac	A	Inside •	Ac	K,RM	15 sec	Open)))	Opens on Sig B: line break Sig K overrides to
RCIC - turbine steam supply	X-10	MO Gate	Dc	٨	Outside	Dc	K,RM	15 sec	Open)	close valves
RCIC - turbine exhaust	X-212	Check	Fwd. flow	В	Outside	Process	Rev. flow	-	Closed	
RCIC - minimum pump flow	X-210A	MO Globe	Dc	в	Outside	Dc	K,RM	5 sec	Closed	
					Outeldo	De	RM	Not appli-	- Close	

RCIC - pump	X-9A	MO Gate	Dc	B	Outside	Dc	RM	cable	
discharge									

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TABLE 3.7-1 (Cont 'd)

PROCESS PIPELIME PENETRATING PELIMAPY CONTAINSTEMT (numbers in parentheses are keyed to numbers on following pages; signal codes are listed on following pages.)

ine Isolatod	Urywell Fenetration	Valve Type (6)	Power to Open (5) (6)	Group	Location kef. to Drywell	Power to Close (5) (6)	Isolation Signal	Closing Time (7)		Remarks and Exceptions
41. to radwaste	X-2256	NU Gate	AC	в	Outside	Ac	A,F,RM	24 sec	Closed	
Wh to requeste	X-2256	1.D Gate	Dc	٥	Outside	Dc	A,F,RM	24 sec	Closed	
CIC - vacuum ump discharge	X-226	Check	Fwd. flow	h,	Outside	Process	kev. flow	-	Closed	
uction	x-224	MO Gate	De	ь	Outside	De	КМ.	Not app- licable	Closed	
CIC - Funt	X-224	:10 Gate	Dc '	в	Outside	Dc	RM	Not app- licable	Closed	
ore spray - unimum pump low	X-210A, b	MO Gate	AC	в	Outside	Ac	RM	Not app- licable	Closed	
bre spray to eactor	X-16A,b	MO Gate	Ac	*	Outside	AC	RM	Not app- licable	Open	
ore spray to mactor	X-lon,B	MO Gate	Ac	×	Outsiae	Ac	RM	Not app- licable	Closed	
bre spray to reactor	X-16A,8	NO Check	(3)	*	Inside	Note (3)	Rev. tlow	Not app- licable	Closed	Testable check valve - Note (3,1
bre spray test to suppression cool	X-210A,B	ND Globe	Ac	в	Outside	AC	G,RM	45 sec	Closed	
Core spray pump suction	X-227A, 6	ND Gate	Ac	B	Outside	Ac	RM	Not app- licable	Open	
erywell equip- ent drain sump inscharge	X-19	NO Plug	Ac	в	Inside	NC .	A, F, RM	30 sec	Open	
whith the second	X-19	AD Plug	Air/ac	в	Qutside	Spring	A, P, RM	Not app- licable	Open	

TABLE 3.7-1 (Cont'd)

PROCESS PIPELINE PENETRATING PRIMARY CONTAINMENT (Numbers in parentheses are keyed to numbers on following pages: signal codes are listed on following pages.)

Line Isolated	Drywell Penetration	Valve Type	Power to Open (5) (6)	Group	Location Ref. to Drywell	Power to Close (5) (6)	Isolation Signal	Closing Time (7)	Normal Remarks and Status Exceptions
Drywell floor drain sump discharge	X-18	MO Plug	Ac	В	Inside	Ac	A,F,RM	30 sec	Open
Drywell floor drain sump dis- charge	X-18	AO Plug	Air/Ac	в	Outside	Spring	A,F,RM	Not appli- cable	Open
Traveling in- core probe	X-35A, B, C, D	Explosive	De	۸	Outside	Dc	RM .	Not appli- cable	Open One valve on each line
Traveling in- core probe	X-35A, B, C, D	SO Ball	Ac	۸	Outside	Ac	A,F,RM	Not appli- cable	Open One valve on each line Note (14)
Traveling in- core probe purge	X-35B	Check	Fwd. flow		Outside	Process	Rev. flow	Not appli- cable	Closed
HPCI - turbine steam supply	X-11	MO Gate	Ac	۸	Inside	Ac	L,RM	20 sec	Open)Signal "G" opens)valve. Signal "L")overrides and)closes valve.
HFCI - turbine steam supply	X-11	MO Gate	Dc	۸	Outside	Dc	L,RM	20 sec	Closed)
HPCI - turbine exhaust	X-214	Check	Fwd. flow	в	Outside	Process	Rev. flow	Not appli- cable	Open Closes on rev. flow or low exhaust pressure.
HPCI - turbine exhaust	X-214	Check	Fwd. flow	В	Outside	Process	Rev. flow	Not appli- cable	Open
HPCI Pump suction	X-226	MO Gate	Dc	В	Outside	Dc	L,RM	60 sec	Closed .
HPCI - pump discharge	X-98	MO Gate	Dc	в	Outside	Dc	RM	Not appli- cable	Closed
HPCI - turbine exhaust drain	X-222	Stop Check	Fwd. flow	В	Outside	Process	Rev. flow	Not appli- cable	Closed
HPCI - minimum pump flow	X-210B	Check	Fwd. flow	B	Outside	Process	Rev. flow	Not appli- cable	Closed

NOTES FOR TABLE 3.7-1 (CONT D)

- 9. Coincident low reactor water level signal "G" and low reactor pressure signal "T" open LPCI valves, except that recirculation line break signal "H" overrides to close LPCI valves on borken side and automatically opens the LPCI valves in the opposite loop. Special interlocks permit testing these valves with manual switch during any mode of reactor operation except when coincident signals "G" and "T" are present.
- 10. Coincident signals "G" and "T" open valves. Special interlocks permit testing these valves by manual switch except when automatic signals are present.
- 11. Normal status position of valve (open or closed) is the position during normal power operation of the reactor (see "Normal Status" column).
- 12. The specified . closure rates are as required for containment isolation only.
- 13. Minimum closing time is based on valve and line size.
- 14. Signal "A" or "F" causes automatic withdrawal of TIP probe. When probe is withdrawn, the valve automatically closes by mechanical action.
- 15. Reactor building ventilation exhaust high radiation signal "2" is generated by two trip units. This required one unit at high trip or both units at down scale (instrument failure) trip, in order to initiate isolation.
- Leak testing shall be accomplished in accordance with section 4.7.A.2.d.

TABLE 3.7-2

EXCEPTION TO TYPE C TESTS

Certain Type C tests will be performed or omitted as follows:

Penetration	System	Valve	Local Leak Rate Test Performed
X-7A, B, C, and D	Main Steam	29-AOV-80A, B, C, and D 29-AOV-86A, B, C, and D	These values are air-operated globe values - pressurized in reverse direction and meas- urement of leakage will be equivalent to results from pressure applied in the same direction as when the values would be required to perform its safety function. Therefore, pressure will be applied between the isolation values and leakage measured. A water seal of 25 psig will be used on the inhoard value to determine the outboard value's leak rate. (limit 11.5 scfh at 25 psig)
x-10	RCIC	13-MOV-15	See X-25 (27-AOV-131A, B)
X-11	HPCI	23-MOV-15	See X-25 (27-AOV-131A, B)
X-25	Dry Well Inerting CAD and Purge	27-809-112	This valve is a butterfly valve - pressur- ization in reverse direction and measure- ment of leakage will be equivalent to results from pressure applied in the same
			direction as that when the valve would be required to perform its safety function.
x-25	Dry Well Inerting CAD and Purge	27-AOV-131A 27-AOV-131B	These values will be tested in the reverse direction, since the system was not de- signed for pressure to be applied in the same direction as that when the value would be required to perform its safety function.
			Basis - The pressurization direction was not a requirement at the time of plant design; to redesign the system to permit this is not feasible as it would delay plant operation.
X-26 A/B	Dry Well Inerting CAD and Purge	27-AOV-113 27-MOV-113	See X-25 (27-AOV-112) This globe valve will be tested in the reverse direction. See X-25 (27-AOV-131A, B)

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TABLE 3.7-2 (CONT .D)

Penetration	System	Valve	Local Leak Rate Test Performed
		27-SOV-1208 17-SOV-1218 27-SOV-1228	See X-25 (27-AOV-131A, B)
2-31 Bd	Dry Well Inerting CAD and Purge	27-SOV-125B	See X-25 (27-AOV-131A)
X-39A	Cont. Spray	10-MOV-31A	This valve will be pressurized in the reverse direction and leakage measured. See X-25 (27-SOV-131A, 8)
X-39B X-45 X-59	Cont. Spray ILRT Dry Well Inerting	10-MOV-3 %A VSM-100T 27-SOV-123A	See X-39A See X-25 (27-AOV-131A, B) See X-25 (27-AOV-131A, B)
x-202	Cad and Purge Torus Vacuum	AOV-101A/B	See X-25 (27-AOV-112)
X-203A	Breakers Dry Well Inerting CAD and Purge	27-SOV-1198	See X-25 (27-AOV-131A, B)
X-203B	Dry Well Inerting CAD and Purge	27-SOV-124A	See X-25 (27-AOV-131A)
X-205	Dry Well Inerting CAD and Purge	27-AOV-117 27-MOV-117	See X-25 (27-A0V-112) See X-25 (27-H0V-113)
X-210 N/B	RCIC, RHR		Will not be tested as lines are water sealed by suppression chamber water See X-25 (27-AOV-131A, B)
X-211A	RHR	10-MOV-38A	This valve will be tested in the reverse direction. See X-25 (27-AOV-131A, B)
X-211B	RHR	10-MOV-38B	This valve will be tested in the reverse direction.
X-212	RCIC	13-MOV-130	See X-25 (27-AUV-131A/B)
X-218 ·	ILRT	VSM-100T	See X-25 (27-AUV-131A/3)
X-220	Dry Well Inerting CAD and Purge	27-A0V-116 27-SOV-132A 27-SOV-132B	See X-25 (27-AOV-112) See X-25 (27-AOV-131A/B)
X-222	HPC1		See X-210 A/B
X-224	RHR		See X-210 A/H
x-225	RHR		See X-210 A/B

TABLE 3.7-2 (CONT D)

.

Penetration	System	Valve	Local Leak Rate Test Performed
x-226	HPCI		See X-210 A/B
x-227	Core Spray		See X-210 A/B
X-228	Condensate		See X-210 A/B