NINE MILE POINT, UNIT 2

SECTION 4.7.7.1.2(c) FIRE SUPPRESSION WATER SYSTEM

EXISTING

At least once per 18 months, during shutdown, by subjecting the diesel to an inspection in accordance with procedures prepared in conjunction with its manufacturer's recommendations for the class of service.

PROPOSED

At least once per 18 months, by subjecting the diesel .....

DISCUSSION

Based on industry operating experience, fires are more likely to occur during an outage when construction activity at the site is elevated. Therefore, the basis for limiting this activity during shutdown is undesireable. It is our intention to have available for service the diesel engine driven fire pump during the outage, if possible. Any necessary scheduled maintenance work would be performed either prior to, during, or after the outage in accordance with the surveillance interval specified.

During this period of maintenance, the provisions of Section 3.7.7.1 will be maintained. Two 100% back-up fire pumps could be readily available for service to supply Unit 2, if required, by cross connecting the existing underground distribution system between the two units.

NINE MILE POINT, UNIT 2

SECTION 4.7.7.4(b) HALON SYSTEMS

EXISTING

At least once per 6 months be verifying Halon storage tank weight and pressure.

PROPOSED

At least once per 6 months by verifying Halon storage tank weight or level and pressure.

DISCUSSION

Section 3.7.7.4(LCO) provides the option of using level to determine the current capacity of the storage tanks. In addition, Bases Section 3/4.7.7 identifies that level measurements are made by either a UL listed or FM approved method. The change identified above would be consistent with these references and enable the surveillance to be performed without physically disconnecting the storage tank from the discharge manifold. To satisfy an NRC concern, a footnote will be added where ever reference is made to level measurement for this system which will read as follows:

"Level determination for the purpose of verifying Halon System operability shall conform to NRC accepted UL or FM test procedures and/or equipment."

SURVEILLANCE REQUIREMENTS

4.7.7.1.1 (Continued)

c. At least once per 6 months by performance of a system flush.

d. At least once per 12 months by cycling each testable valve in the flow path through at least one complete cycle of full travel.

e. At least once per 18 months by performing a system functional test which includes simulated automatic actuation of the system throughout its operating sequence, and:

1. Verifying that each automatic valve in the flow path actuates to its correct position,

2. Verifying that each fire suppression pump develops at least 2500 gpm at a net discharge head of 113 psig,

3. Cycling each valve in the flow path that is not testable during plant operation through at least one complete cycle of full travel, and

4. Verifying that each fire suppression pump starts and maintains the fire suppression water system pressure of 125 psig or more.

f. At least once per 3 years by performing a flow test of the system in accordance with Chapter 6, Section 16, of the Fire Protection Handbook, 15th Edition, published by the National Fire Protection Association.

4.7.7.1.2 The diesel driven fire suppression pump shall be demonstrated OPERABLE:

a. At least once per 31 days by:

1. Verifying the fuel day tank contains at least 350 gallons of fuel.
2. Starting the diesel driven pump from ambient conditions and operating for greater than or equal to 30 minutes on recirculation flow.

b. At least once per 92 days by verifying that a sample of diesel fuel from the fuel storage tank, obtained in accordance with ASTM D4057-81, is within the acceptable limits specified in Table 1 of ASTM D975-81 when checked for viscosity, water, and sediment.

c. At least once per 18 months ~~during shutdown~~, by subjecting the diesel to an inspection in accordance with procedures prepared in conjunction with its manufacturer's recommendations for the class of service.

DRAFT

PLANT SYSTEMS

FIRE SUPPRESSION SYSTEMS

HALON SYSTEMS

LIMITING CONDITIONS FOR OPERATION

3.7.7.4 The following Halon systems shall be OPERABLE with the storage tanks having at least 95% of full charge weight or level* and 90% of full charge pressure:

ZONE NO.	BUILDING/ELEVATION
353 SG	Control/288' 6"
354 SG	Control/288' 6"
362 SG	Control/288' 6"
357 XG	Control/288' 6"
358 XG	Control/288' 6"
374 SG	Control/306' 0"
375 SG	Control/306' 0"
381 SG	Control/306' 0"
376 XG	Control/306' 0"

APPLICABILITY: Whenever equipment protected by the Halon systems is required to be OPERABLE.

ACTION:

a. With one or more of the above required Halon systems inoperable, within 1 hour establish a continuous fire watch with backup fire suppression equipment for those areas in which redundant systems or components could be damaged; for other areas, establish an hourly fire watch patrol.

b. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.7.7.4 Each of the above required Halon systems shall be demonstrated OPERABLE:

a. At least once per 31 days by verifying that each valve-manual, power-operated, or automatic in the flow path is in its correct position.

b. At least once per 6 months by verifying Halon storage tank weight ~~and pressure~~ or level* and pressure.

* Level determination for the purpose of verifying Halon system OPERABILITY shall conform to NRC accepted UL or FM test procedures and/or equipment.

Subject: Change to Technical Specification Definition 1.42, "Source Check"

The requested change and justification for the change were submitted to you in a letter dated July 24, 1986. That letter is enclosed for your information.

CHANGE REQUESTED FOR CERTIFICATION

OK

W. Brinkman

(See attached)

SHUTDOWN MARGIN

1.39 (Continued)

assumed to be fully withdrawn and the reactor is in the shutdown condition, cold (i.e., 68°F), and xenon free.

SITE BOUNDARY

1.40 The SITE BOUNDARY shall be that line around the Nine Mile Point Nuclear Station beyond which the land is not owned, leased, or otherwise controlled by the Niagara Mohawk Power Corporation or the New York State Power Authority.

SOLIDIFICATION

1.41 SOLIDIFICATION shall be the conversion of wet wastes into a form that meets shipping and burial ground requirements.

SOURCE CHECK

1.42 A SOURCE CHECK shall be the qualitative assessment of channel response ~~to verify alarm and/or trip functions and channel failure trips~~ when the channel sensor is exposed to a source of increased ~~activity~~ radioactivity.

8/21/86 OK with correction as indicated WW Mundy

STAGGERED TEST BASIS

1.43 A STAGGERED TEST BASIS shall consist of:

a. A test schedule for n systems, subsystems, trains, or other designated components obtained by dividing the specified test interval into n equal subintervals.

b. The testing of one system, subsystem, train, or other designated component at the beginning of each subinterval.

THERMAL POWER

1.44 THERMAL POWER shall be the total reactor core heat transfer rate to the reactor coolant.

TURBINE BYPASS SYSTEM RESPONSE TIME

1.45 The TURBINE BYPASS SYSTEM RESPONSE TIME consists of two time intervals:

a. Time from initial movement of the main turbine stop valve or control valve until 80% of turbine bypass capacity is established, and

b. the time from initial movement of the main turbine stop valve or control valve until initial movement of the turbine bypass valve.

Either response time may be measured by any series of sequential, overlapping, or total steps, so that both entire response time components are measured.

Subject: Justification for changes to Technical Specification Table 3.6.3-1, "Primary Containment Isolation Valves"

The requested changes are enclosed. The changes are consistent to our letter dated July 3, 1986 which requested three relief valves to be tested under reverse flow condition and 13 relief valves to be exempt from Type C testing. Our letter dated July 3, 1986 is also enclosed for your information. Subsequent discussion with Mr. J. Kudrick and Ms. M. Haughey, of your staff, resolved their review concerns.

CHANGE REQUIRED FOR CERTIFICATION

SER attached

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO APPENDIX J TO 10 CFR 50 TESTING

NINE MILE POINT UNIT 2

DOCKET NO. 50-410

INTRODUCTION

By letter dated July 3, 1986, the applicant withdrew a request for exemption from Section III C of Appendix J to 10 CFR 50 for 16 relief valves. The exemption request was to eliminate the need to locally leak rate test these valves per the requirements identified under the type C test program. The withdrawal was based on several factors. Three of the valves were determined to be capable of reverse flow testing. As a result, these valves will be type C air tested in accordance with Appendix J. The remaining 13 valves will have their discharge lines modified, prior to fuel load, so that they do not represent a containment atmospheric leak path. Specifically, the vacuum breakers will be seal welded closed. This modification eliminates the pathway to the containment atmosphere since the discharge pipes end within the suppression pool and below the minimum post-Loca drawdown water level.

EVALUATION

The staff has reviewed the requested exemption withdrawal for 16 relief valves from Section III C of Appendix J to 10 CFR 50. The applicant has reevaluated the potential of reverse testing. The results have enabled him to include that for three valves, the reverse test is as conservative as a forward test. Therefore, these three valve will be tested in the reverse direction, which is in compliance with the requirements of Appendix J.

The remaining 13 valves with their associated piping will be modified, prior to fuel load, to eliminate them as potential containment atmosphere leak pathways. This will be accomplished by seal welding closed the discharge line vacuum breakers. The weld will be continuous and leak checked to assure a leak tight barrier. In addition, discussions with the applicant have indicated the elimination of the vacuum breaker function will not cause steam condensation loads to exceed design. After these modifications have been made, the 13 relief valve can be assumed to qualify for hydrostatic rather than pneumatic testing. As a result, Appendix J requirements are not applicable. Therefore, an exemption from the Type C testing requirements is not required.

CONCLUSION

The staff concurs with the approach taken by the applicant to withdraw the exemption request for 16 relief valves. For three valves, the reverse direction tests puts these valves in complete compliance with Appendix J requirements. Therefore no exemption is needed. For the remaining 13 relief valves, the committed to modifications would make Appendix J requirements inapplicable. Therefore, the exemption request is not necessary.

TABLE 3.6.3-1 (Continued)

PRIMARY CONTAINMENT ISOLATION VALVES

ISOLATION VALVE NO.	VALVE FUNCTION	VALVE GROUP	ISOLATION SIGNAL(a)	MAXIMUM CLOSING TIME (SECONDS)
D. Other				
Safety Relief				
2RHS*RV20 A,B,C~~(o)~~ (d)	RHS Rv disch. to SP Outside IVs			
2RHS*RV61 A,B,C~~(o)~~ (d)	RHS Rv disch. to SP Outside IVs			
2RHS*RV108~~(o)~~ (d)	RHS Rv disch. to SP Outside IVs			
2RHS*RV110~~(o)~~ (d)	SDC to RHR Pump suction Rv			
2RHS*RV139~~(o)~~ (d)	RHR Hdr. Flush to Radwaste RV			
2RHS*RV152~~(o)~~ (n)	SDC Supply from RCS RV Inside IV			
2RHS*RV56 A,B(d)	RHS HX shell side RVs			
2RHS*SV34 A,B(d)	RHS HX steam supply Safety valves			
2RHS*SV62 A,B(d)	RHS HX steam supply Safety valves			
2RHS*RVV35 A,B(d)	RHS Vacuum Breakers			
2CSL*RV105~~(o)~~ (d)	CSL RV Disch. to SP Outside IV			
2CSL*RV123~~(o)~~ (d)	CSL RV Disch. to SP Outside IV			
2RHS*RVV36 A,B(d)	RHS Vacuum Breakers			
2CCP*RV170~~(o)~~ (n)	CCP RV Discharge Inside IV			
2CCP*RV171~~(o)~~ (n)	CCP RV Discharge Inside IV			
2CSH*RV113~~(o)~~ (d)	CSH RV Disch. to SP Outside IV			
2CSH*RV114~~(o)~~ (d)	CSH RV Disch. to SP Outside IV			

TABLE 3.6.3-1 (Continued)

PRIMARY CONTAINMENT ISOLATION VALVES

ISOLATION VALVE NO.	VALVE FUNCTION	VALVE GROUP	ISOLATION SIGNAL(a)	MAXIMUM CLOSING TIME (SECONDS)
Check Valves				
2RHS*AOV16 A,B,C(h)	RHS/LPCI to RPV Inside IVs			
2RHS*AOV39 A,B(h)	SDC to RCS Inside IVs			
2CPS*V50	Nitrogen Supply to 2CPS*AOV107 Inside IV			
2CPS*V51	Nitrogen Supply to 2CPS*AOV109 Inside IV			
2CSH*AOV108(h)	CSH to RPV Inside IV			
2CSL*AOV101(h)	CSL to RPV Inside IV			
2ICS*AOV156(h)	ICS to RPV Outside IV			
2ICS*AOV157(h)	ICS to RPV Inside IV			
2SLS*V10	SLS to RPV Inside IV			
2GSN*V170	N_2 Purge to Tip Index Mech. Inside IV			
2IAS*V448	IAS to ADS Accumulators Inside IV			
2IAS*V449	IAS to ADS Accumulators Inside IV			
2RCS*V59 A,B	RDS to RCS Pump A Seal Outside IVs			
2RCS*V60 A,B	RDS to RCS Pump A Seal Inside IVs			
2RCS*V90 A,B	RDS to RCS Pump A Seal Outside IVs			
2RHS*V19(d)(f)	Discharge Check from RCIC to Supp. Pool			
2RHS*V20(d)(f)	Discharge Check from RCIC to Supp. Pool			
2RHS*V117(d)(f)	Check Valve from RCIC Drain to Supp. Pool			
2RHS*V118(d)(f)	Check Valve from RCIC Drain to Supp. Pool			
2FWS*AOV23 A,B(h)	Feedwater to RPV Outside IV's			
2FWS*V12 A,B	Feedwater to RPV Inside IV's			

TABLE 3.6.3-1 (Continued)

PRIMARY CONTAINMENT ISOLATION VALVES

ISOLATION VALVE NO.	VALVE FUNCTION	VALVE GROUP	ISOLATION SIGNAL(a)	MAXIMUM CLOSING TIME (SECONDS)
Excess Flow Check(e) Reactor Instrumentation Lines				
2ISC*EFV1	Inst. Line from MSS			
2ISC*EFV2	Inst. Line from N14,200°			
2ISC*EFV3	Inst. Line from N14,160°			
2ISC*EFV4	Inst. Line from N13,190°			
2ISC*EFV5	Inst. Line from N14,20°			
2ISC*EFV6	Inst. Line from N14,340°			
2ISC*EFV7	Inst. Line from N13,10°			
2ISC*EFV8	Inst. Line from N12,160°			
2ISC*EFV10	Inst. Line from N12,200°			
2ISC*EFV11	To 2ISC*FT47K,FT48B			
2ISC*EFV13	To 2ISC*FT47H			
2ISC*EFV14	Vessel Bottom tap, loop A Jet Pump			
2ISC*EFV15	Inst. Line from N12,340°			
2ISC*EFV17	Inst. Line from N12,20°			
2ISC*EFV18	To 2ISC*FT47J,FT48A			
2ISC*EFV20	To 2ISC*FT47E			
2ISC*EFV21	Vessel Bottom tap for CSH, RDS			
2ISC*EFV22	Vessel Bottom Tap for WCS and Loop B J.P.			
2ISC*EFV23	To 2ISC*FT48C and Postaccident Sampling			
2ISC*EFV24	To 2ISC*FT48D and Postaccident Sampling			
2ISC*EFV25	To 2ISC*FT47L			
2ISC*EFV26	To 2ISC*FT47C			
2ISC*EFV27	To 2ISC*FT47A			
2ISC*EFV28	To 2ISC*FT47R			
2ISC*EFV29	To 2ISC*FT47G			
2ISC*EFV30	To 2ISC*FT47N			
2ISC*EFV31	To 2ISC*FT48A			
2ISC*EFV32	To 2ISC*FT47T			
2ISC*EFV33	To 2ISC*FT47V,FT48C			

TABLE 3.6.3-1 (Continued)

PRIMARY CONTAINMENT ISOLATION VALVES

ISOLATION VALVE NO.	VALVE FUNCTION	VALVE GROUP	ISOLATION SIGNAL(a)	MAXIMUM CLOSING TIME (SECONDS)
2ISC*EFV34	To 2ISC*FT47B			
2ISC*EFV35	To 2ISC*FT47D			
2ISC*EFV36	TO 2ISC*FT47F			
2ISC*EFV37	To 2ISC*FT47S			
2ISC*EFV38	To 2ISC*FT47M			
2ISC*EFV39	To 2ISC*FT47P			
2ISC*EFV40	To 2ISC*FT48B			
2ISC*EFV41	To 2ISC*FT47U			
2ISC*EFV42	To 2ISC*FT47W,FT48D			
2ISC*EFV9	Containment Pressure 2ISC*PT15C, 16B, 16D			
2ISC*EFV12	Containment Pressure 2ISC*PT15B, 17B, 17D			
2ISC*EFV16	Containment Pressure 2ISC*PT15A, 16A, 16C			
2ISC*EFV19	Containment Pressure 2ISC*PT15D, 17A, 17C			
2CMS*EFV1A	To CMS*PT1A			
2CMS*EFV1B	To CMS*PT1B			
2CMS*EFV3A	To CMS*PT2A			
2CMS*EFV3B	To CMS*PT2B			
2CMS*EFV5A	To CMS*PT7A			
2CMS*EFV5B	To CMS*PT7B			
2CMS*EFV6	To CMS-PT168			
2CMS*EFV8A	To CMS*LT9A, 11A, 114			
2CMS*EFV8B	To CMS*LT9B, 11B, 105			
2CMS*EFV9A	To CMS*LT9A, 11A, 114			
2CMS*EFV9B	To CMS*LT9B, 11B, 105			
2CMS*EFV10	To CMS-PI173			
2ICS*EFV1	To 2ICS*PDT167			
2ICS*EFV2	To 2ICS*PDT167			
2DER*EFV31	To DER*PT134			

TABLE 3.6.3-1 (Continued)

PRIMARY CONTAINMENT ISOLATION VALVES

ISOLATION VALVE NO.	VALVE FUNCTION	VALVE GROUP	ISOLATION SIGNAL(a)	MAXIMUM CLOSING TIME (SECONDS)
2ICS*EFV3	To 2ICS*PDT168			
2ICS*EFV4	To 2ICS*PDT168			
2IAS*EFV200	To 2IAS*PT230 off ADS Accum.			
2IAS*EFV201	To 2IAS*PT231 off ADS Accum.			
2IAS*EFV202	To 2IAS*PT232 off ADS Accum.			
2IAS*EFV203	To 2IAS*PT233 off ADS Accum.			
2IAS*EFV204	To 2IAS*PT234 off ADS Accum.			
2IAS*EFV205	To 2IAS*PT235 off ADS Accum.			
2IAS*EFV206	To 2IAS*PT236 off ADS Accum.			
2RHS*EFV 5, 6	To 2RHS*PDT18B			
2RHS*EFV7	To 2RHS*PDT18A			
2MSS*EFV 1A,B,C,D	To Flow elements A,B,C,D steamlines			
2MSS*EFV 2A,B,C,D	To Flow elements A,B,C,D steamlines			
2MSS*EFV 3A,B,C,D	To Flow elements A,B,C,D steamlines			
2MSS*EFV 4A,B,C,D	To Flow elements A,B,C,D steamlines			
2RCS*EFV44 A,B	To 2RCS*PT 84 A/B			
2RCS*EFV45 A,B	To 2RCS*FT 7 A/B, FT 9 A/B			
2RCS*EFV46 A,B	To 2RCS*FT 7 A/B, FT 9 A/B			
2RCS*EFV47 A,B	To 2RCS*FT 6 A/B, FT 8 A/B			
2RCS*EFV48 A,B	To 2RCS*FT 6 A/B, FT 8 A/B			
2RCS*EFV52 A,B	To 2RCS*PDT 15 A/B			
2RCS*EFV53 A,B	To 2RCS*PDT 15 A/B			
2RCS*EFV62 A,B	To 2RCS*PT44 A/B			
2RCS*EFV63 A,B	To 2RCS*PT42 A/B			

TABLE 3.6.3-1 (Continued)

PRIMARY CONTAINMENT ISOLATION VALVES

ISOLATION VALVE NO.	VALVE FUNCTION	VALVE GROUP	ISOLATION SIGNAL(a)	MAXIMUM CLOSING TIME. (SECONDS)
2WCS*EFV221	To 2WCS-FT 134			
2WCS*EFV222	To 2WCS*FT67X, PDS 115			
2WCS*EFV223	To 2WCS*FT67Y			
2WCS*EFV224	To 2WCS*FT67Y			
2WCS*EFV300	To 2WCS*FT67X, PDS 115			
2CSH*EFV1	To 2CSH*LT123, LT124			
2CSH*EFV2	To 2CSH*LT123, LT124			
2CSH*EFV3	To 2CSH*PDT109			
2CSL*EFV1	To 2CSL*PDT132 and 2RHS*PDT18A			

TABLE 3.6.3-1 (Continued)

PRIMARY CONTAINMENT ISOLATION VALVES

TABLE NOTATION

* Isolates on injection signal, not primary containment isolation signal.

(a) See Specification 3.3.2, Table 3.3.2-4, for valve groups operated by isolation signal(s).

(b) Deleted.

(c) These valves are the RHR heat exchangers vent lines isolation valves. The vent line connects to the RHR safety relief valves (SRVs) Discharge Header before it penetrates the primary containment. The position indicators for these valves are provided in the Control Room for remote manual isolation.

(d) Type C leakage tests not required.

(e) The associated instrument lines shall not be isolated during Type A testing. Type C testing is not required. These valves shall be tested in accordance with Surveillance Requirement 4.6.3.4.

(f) These valves are check valves, located on the vacuum breaker lines for RHR SRVs discharge headers. The SRV discharge header terminates under pool water and therefore has no containment isolation valves other than those on lines feeding into it.

(g) 2SLS*MOV5A and B are globe stop check valves. These valves close upon reverse flow. The motor operator is provided to remote manually close the valve from the control room.

(h) These valves are testable check valves. They close upon reverse flow. The air operator on each valve is provided only for periodic testing of the valve. These valves can only be tested against a zero d/p.

(i) Valves are maintained closed and the lines are capped. Valves are Type C tested.

(j) Not primary containment penetration isolation valves. These valves close on an isolation signal to provide integrity of "A" and "B" LPCI loops.

(k) Valves close on a SCRAM signal; not part of primary containment isolation system but are included here for Type C testing per Specification 3.6.1.2. These valves are not required to be OPERABLE per this specification but are required to be OPERABLE per Specification 3.1.3.1.

(l) Not subject to Type A or Type C leak test because of constant 1800 psig pressure and the possible detrimental effects of shutdown.

(m) Not subject to Type C test per 10 CFR 50, Appendix J. A hydrostatic test is performed in accordance with Specification 4.6.1.2.d.3.

(n) These valves are Type C tested in the reverse direction.

SALP INPUT FROM THE PLANT SYSTEM BRANCH FOR NINE MILE POINT UNIT 2 PROPOSED TECHNICAL SPECIFICATION CHANGES

A. Licensing Activities

1. Management Involvement in Assuring Quality

During the review process the licensee's activities exhibited little evidence of prior planning.

Rating: 3

2. Approach to Resolution of Technical Issues from a Safety Standpoint.

During the review some issues were not resolved in a timely manner

Rating: 3

3. Responsive to NRC Initiatives

Rating: N/A

4. Staffing (including Management)

Rating: N/A

5. Reporting and Analysis of Reportable Events.

Rating: N/A

6. Training and Qualification Effectiveness.

Rating: N/A

7. Overall rating for Licensing Activity Functioal Area:

Rating: 3

Changes to Technical Specification

Table 3.6.3-1

"Primary Containment Isolation Valves"

Subject: Justification for changes to Technical Specification Table 3.6.3-1, "Primary Containment Isolation Valves"

The requested changes are enclosed. The changes are consistent to our letter dated July 3, 1986 which requested three relief valves to be tested under reverse flow condition and 13 relief valves to be exempt from Type C testing. Our letter dated July 3, 1986 is also enclosed for your information. Subsequent discussion with Mr. J. Kudrick and Ms. M. Haughey, of your staff, resolved their review concerns.

CHANGE REQUIRED FOR CERTIFICATION

TABLE 3.6.3-1 (Continued)

PRIMARY CONTAINMENT ISOLATION VALVES

ISOLATION VALVE NO.	VALVE FUNCTION	VALVE GROUP	ISOLATION SIGNAL(a)	MAXIMUM CLOSING TIME (SECONDS)
D. Other				
Safety Relief				
2RHS*RV20 A,B,C~~(o)~~ (d)	RHS Rv disch. to SP Outside IVs			
2RHS*RV61 A,B,C~~(o)~~ (d)	RHS Rv disch. to SP Outside IVs			
2RHS*RV108~~(o)~~ (d)	RHS Rv disch. to SP Outside IVs			
2RHS*RV110~~(o)~~ (d)	SDC to RHR Pump suction Rv			
2RHS*RV139~~(o)~~ (d)	RHR Hdr. Flush to Radwaste RV			
2RHS*RV152~~(o)~~ (n)	SDC Supply from RCS RV Inside IV			
2RHS*RV56 A,B(d)	RHS HX shell side RVs			
2RHS*SV34 A,B(d)	RHS HX steam supply Safety valves			
2RHS*SV62 A,B(d)	RHS HX steam supply Safety valves			
2RHS*RVV35 A,B(d)	RHS Vacuum Breakers			
2CSL*RV105~~(o)~~ (d)	CSL RV Disch. to SP Outside IV			
2CSL*RV123~~(o)~~ (d)	CSL RV Disch. to SP Outside IV			
2RHS*RVV36 A,B(d)	RHS Vacuum Breakers			
2CCP*RV170~~(o)~~ (n)	CCP RV Discharge Inside IV			
2CCP*RV171~~(o)~~ (n)	CCP RV Discharge Inside IV			
2CSH*RV113~~(o)~~ (d)	CSH RV Disch. to SP Outside IV			
2CSH*RV114~~(o)~~ (d)	CSH RV Disch. to SP Outside IV			

TABLE 3.6.3-1 (Continued)

PRIMARY CONTAINMENT ISOLATION VALVES

ISOLATION VALVE NO.	VALVE FUNCTION	VALVE GROUP	ISOLATION SIGNAL(a)	MAXIMUM CLOSING TIME (SECONDS)
Check Valves				
2RHS*AOV16 A,B,C(h)	RHS/LPCI to RPV Inside IVs			
2RHS*AOV39 A,B(h)	SDC to RCS Inside IVs			
2CPS*V50	Nitrogen Supply to 2CPS*AOV107 Inside IV			
2CPS*V51	Nitrogen Supply to 2CPS*AOV109 Inside IV			
2CSH*AOV108(h)	CSH to RPV Inside IV			
2CSL*AOV101(h)	CSL to RPV Inside IV			
2ICS*AOV156(h)	ICS to RPV Outside IV			
2ICS*AOV157(h)	ICS to RPV Inside IV			
2SLS*V10	SLS to RPV Inside IV			
2GSN*V170	N_2 Purge to Tip Index Mech. Inside IV			
2IAS*V448	IAS to ADS Accumulators Inside IV			
2IAS*V449	IAS to ADS Accumulators Inside IV			
2RCS*V59 A,B	RDS to RCS Pump A Seal Outside IVs			
2RCS*V60 A,B	RDS to RCS Pump A Seal Inside IVs			
2RCS*V90 A,B	RDS to RCS Pump A Seal Outside IVs			
2RHS*V19(d)(f)	Discharge Check from RCIC to Supp. Pool			
2RHS*V20(d)(f)	Discharge Check from RCIC to Supp. Pool			
2RHS*V117(d)(f)	Check Valve from RCIC Drain to Supp. Pool			
2RHS*V118(d)(f)	Check Valve from RCIC Drain to Supp. Pool			
2FWS*AOV23 A,B(h)	Feedwater to RPV Outside IV's			
2FWS*V12 A,B	Feedwater to RPV Inside IV's			

TABLE 3.6.3-1 (Continued)

PRIMARY CONTAINMENT ISOLATION VALVES

ISOLATION VALVE NO.	VALVE FUNCTION	VALVE GROUP	ISOLATION SIGNAL(a)	MAXIMUM CLOSING TIME (SECONDS)
Excess Flow Check(e) Reactor Instrumentation Lines				
2ISC*EFV1	Inst. Line from MSS			
2ISC*EFV2	Inst. Line from N14,200°			
2ISC*EFV3	Inst. Line from N14,160°			
2ISC*EFV4	Inst. Line from N13,190°			
2ISC*EFV5	Inst. Line from N14,20°			
2ISC*EFV6	Inst. Line from N14,340°			
2ISC*EFV7	Inst. Line from N13,10°			
2ISC*EFV8	Inst. Line from N12,160°			
2ISC*EFV10	Inst. Line from N12,200°			
2ISC*EFV11	To 2ISC*FT47K,FT48B			
2ISC*EFV13	To 2ISC*FT47H			
2ISC*EFV14	Vessel Bottom tap, loop A Jet Pump			
2ISC*EFV15	Inst. Line from N12,340°			
2ISC*EFV17	Inst. Line from N12,20°			
2ISC*EFV18	To 2ISC*FT47J,FT48A			
2ISC*EFV20	To 2ISC*FT47E			
2ISC*EFV21	Vessel Bottom tap for CSH, RDS			
2ISC*EFV22	Vessel Bottom Tap for WCS and Loop B J.P.			
2ISC*EFV23	To 2ISC*FT48C and Postaccident Sampling			
2ISC*EFV24	To 2ISC*FT48D and Postaccident Sampling			
2ISC*EFV25	To 2ISC*FT47L			
2ISC*EFV26	To 2ISC*FT47C			
2ISC*EFV27	To 2ISC*FT47A			
2ISC*EFV28	To 2ISC*FT47R			
2ISC*EFV29	To 2ISC*FT47G			
2ISC*EFV30	To 2ISC*FT47N			
2ISC*EFV31	To 2ISC*FT48A			
2ISC*EFV32	To 2ISC*FT47T			
2ISC*EFV33	To 2ISC*FT47V,FT48C			

TABLE 3.6.3-1 (Continued)

PRIMARY CONTAINMENT ISOLATION VALVES

ISOLATION VALVE NO.	VALVE FUNCTION	VALVE GROUP	ISOLATION SIGNAL(a)	MAXIMUM CLOSING TIME (SECONDS)
2ISC*EFV34	To 2ISC*FT47B			
2ISC*EFV35	To 2ISC*FT47D			
2ISC*EFV36	TO 2ISC*FT47F			
2ISC*EFV37	To 2ISC*FT47S			
2ISC*EFV38	To 2ISC*FT47M			
2ISC*EFV39	To 2ISC*FT47P			
2ISC*EFV40	To 2ISC*FT48B			
2ISC*EFV41	To 2ISC*FT47U			
2ISC*EFV42	To 2ISC*FT47W,FT48D			
2ISC*EFV9	Containment Pressure 2ISC*PT15C, 16B, 16D			
2ISC*EFV12	Containment Pressure 2ISC*PT15B, 17B, 17D			
2ISC*EFV16	Containment Pressure 2ISC*PT15A, 16A, 16C			
2ISC*EFV19	Containment Pressure 2ISC*PT15D, 17A, 17C			
2CMS*EFV1A	To CMS*PT1A			
2CMS*EFV1B	To CMS*PT1B			
2CMS*EFV3A	To CMS*PT2A			
2CMS*EFV3B	To CMS*PT2B			
2CMS*EFV5A	To CMS*PT7A			
2CMS*EFV5B	To CMS*PT7B			
2CMS*EFV6	To CMS-PT168			
2CMS*EFV8A	To CMS*LT9A, 11A, 114			
2CMS*EFV8B	To CMS*LT9B, 11B, 105			
2CMS*EFV9A	To CMS*LT9A, 11A, 114			
2CMS*EFV9B	To CMS*LT9B, 11B, 105			
2CMS*EFV10	To CMS-PI173			
2ICS*EFV1	To 2ICS*PDT167			
2ICS*EFV2	To 2ICS*PDT167			
2DER*EFV31	To DER*PT134			

TABLE 3.6.3-1 (Continued)

PRIMARY CONTAINMENT ISOLATION VALVES

ISOLATION VALVE NO.	VALVE FUNCTION	VALVE GROUP	ISOLATION SIGNAL(a)	MAXIMUM CLOSING TIME (SECONDS)
2ICS*EFV3	To 2ICS*PDT168			
2ICS*EFV4	To 2ICS*PDT168			
2IAS*EFV200	To 2IAS*PT230 off ADS Accum.			
2IAS*EFV201	To 2IAS*PT231 off ADS Accum.			
2IAS*EFV202	To 2IAS*PT232 off ADS Accum.			
2IAS*EFV203	To 2IAS*PT233 off ADS Accum.			
2IAS*EFV204	To 2IAS*PT234 off ADS Accum.			
2IAS*EFV205	To 2IAS*PT235 off ADS Accum.			
2IAS*EFV206	To 2IAS*PT236 off ADS Accum.			
2RHS*EFV 5, 6	To 2RHS*PDT18B			
2RHS*EFV7	To 2RHS*PDT18A			
2MSS*EFV 1A,B,C,D	To Flow elements A,B,C,D steamlines			
2MSS*EFV 2A,B,C,D	To Flow elements A,B,C,D steamlines			
2MSS*EFV 3A,B,C,D	To Flow elements A,B,C,D steamlines			
2MSS*EFV 4A,B,C,D	To Flow elements A,B,C,D steamlines			
2RCS*EFV44 A,B	To 2RCS*PT 84 A/B			
2RCS*EFV45 A,B	To 2RCS*FT 7 A/B, FT 9 A/B			
2RCS*EFV46 A,B	To 2RCS*FT 7 A/B, FT 9 A/B			
2RCS*EFV47 A,B	To 2RCS*FT 6 A/B, FT 8 A/B			
2RCS*EFV48 A,B	To 2RCS*FT 6 A/B, FT 8 A/B			
2RCS*EFV52 A,B	To 2RCS*PDT 15 A/B			
2RCS*EFV53 A,B	To 2RCS*PDT 15 A/B			
2RCS*EFV62 A,B	To 2RCS*PT44 A/B			
2RCS*EFV63 A,B	To 2RCS*PT42 A/B			

TABLE 3.6.3-1 (Continued)

PRIMARY CONTAINMENT ISOLATION VALVES

ISOLATION VALVE NO.	VALVE FUNCTION	VALVE GROUP	ISOLATION SIGNAL(a)	MAXIMUM CLOSING TIME. (SECONDS)
2WCS*EFV221	To 2WCS-FT 134			
2WCS*EFV222	To 2WCS*FT67X, PDS 115			
2WCS*EFV223	To 2WCS*FT67Y			
2WCS*EFV224	To 2WCS*FT67Y			
2WCS*EFV300	To 2WCS*FT67X, PDS 115			
2CSH*EFV1	To 2CSH*LT123, LT124			
2CSH*EFV2	To 2CSH*LT123, LT124			
2CSH*EFV3	To 2CSH*PDT109			
2CSL*EFV1	To 2CSL*PDT132 and 2RHS*PDT18A			

TABLE 3.6.3-1 (Continued)

PRIMARY CONTAINMENT ISOLATION VALVES

TABLE NOTATION

* Isolates on injection signal, not primary containment isolation signal.

(a) See Specification 3.3.2, Table 3.3.2-4, for valve groups operated by isolation signal(s).

(b) Deleted.

(c) These valves are the RHR heat exchangers vent lines isolation valves. The vent line connects to the RHR safety relief valves (SRVs) Discharge Header before it penetrates the primary containment. The position indicators for these valves are provided in the Control Room for remote manual isolation.

(d) Type C leakage tests not required.

(e) The associated instrument lines shall not be isolated during Type A testing. Type C testing is not required. These valves shall be tested in accordance with Surveillance Requirement 4.6.3.4.

(f) These valves are check valves, located on the vacuum breaker lines for RHR SRVs discharge headers. The SRV discharge header terminates under pool water and therefore has no containment isolation valves other than those on lines feeding into it.

(g) 2SLS*MOV5A and B are globe stop check valves. These valves close upon reverse flow. The motor operator is provided to remote manually close the valve from the control room.

(h) These valves are testable check valves. They close upon reverse flow. The air operator on each valve is provided only for periodic testing of the valve. These valves can only be tested against a zero d/p.

(i) Valves are maintained closed and the lines are capped. Valves are Type C tested.

(j) Not primary containment penetration isolation valves. These valves close on an isolation signal to provide integrity of "A" and "B" LPCI loops.

(k) Valves close on a SCRAM signal; not part of primary containment isolation system but are included here for Type C testing per Specification 3.6.1.2. These valves are not required to be OPERABLE per this specification but are required to be OPERABLE per Specification 3.1.3.1.

(l) Not subject to Type A or Type C leak test because of constant 1800 psig pressure and the possible detrimental effects of shutdown.

(m) Not subject to Type C test per 10 CFR 50, Appendix J. A hydrostatic test is performed in accordance with Specification 4.6.1.2.d.3.

(n) These valves are Type C tested in the reverse direction.

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