

10 CFR 50.71(e)
10 CFR 54.37(b)
10 CFR 50.59(d)
10 CFR 72.48(d)

NMP2L 2633
October 24, 2016

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555-0001

Nine Mile Point Nuclear Power Station, Unit 2
Renewed Facility Operating License No. NPF-69
NRC Docket No. 50-410

Subject: Submittal of Revision 22 to the Nine Mile Point Unit 2 Updated Safety Analysis Report (USAR) and Reference Figures, 10 CFR 50.59 Evaluation Summary Report, Technical Specifications Bases Changes, and 10 CFR 54.37 Aging Management Review

Pursuant to the requirements of 10 CFR 50.71(e), 10 CFR 50.59(d)(2), 10 CFR 54.37(b), and the Nine Mile Point Unit 2 (NMP2) Technical Specifications Bases Control Program (TS 5.5.10), Exelon Generation Company, LLC, hereby submits the following information for NMP 2:

- NMP2 USAR Revision 22
- NMP2 USAR Reference Figures
- NMP2 Technical Specifications Bases, Revision 47
- NMP2 10 CFR 50.59 Evaluation Summary Report
- NMP2 Revised Technical Requirements Manual Pages
- NMP2 10 CFR 54.37(b) Aging Management Review

Two copies of the USAR, Revision 22, are provided electronically on Compact Disc, Read-Only-Memory (CD-ROM). One CD-ROM contains proprietary and sensitive information (Enclosure 1). A non-proprietary version of the CD-ROM is also provided (Enclosure 2). Proprietary status per 10 CFR 2.790 was granted by the Nuclear Regulatory Commission (NRC) for USAR Appendix 6D in your letter dated May 11, 1994 (Ascension No. 9405170218). For the reasons stated in Niagara Mohawk letters dated October 29, 1993, and April 28, 1994, and supporting affidavits, and as accepted by the NRC in its letter dated May 11, 1994, the material contained in the NMP2 USAR Appendix 6D should be withheld from public disclosure pursuant to 10 CFR 2.390. The NMP2 USAR Appendix 6D has not been changed, but is included in the submittal of the full USAR. In Addition, one copy of the Technical Specifications Bases, Revision 47 (Enclosure 3), is provided on CD-ROM and

incorporates changes made since September 2014. Also, one copy of the Reference Figures Files (Enclosure 4) is provided on CD-ROM.

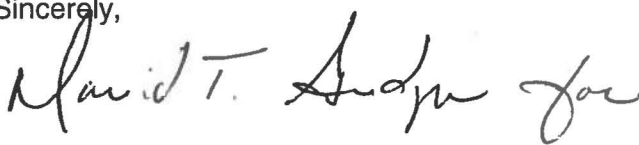
The USAR revision contains changes made since the 2014 refueling outage and through the 2016 refueling outage. Attachment 1 provides the Summary of Changes and Attachment 2 provides the Electronic File Directory for NMP2 USAR Revision 22. Attachment 3, NMP2 10 CFR 50.59 Evaluation Summary Report, which covers the same time interval as the USAR revision, contains a brief description of changes, tests, and experiments, included in a summary of each associated 50.59 evaluation. The NMP2 Revised Technical Requirements Manual Pages (Attachment 4) are enclosed for changes made since September 2014. There have been no 10 CFR 72.48 Evaluations performed since implementation of the Independent Spent Fuel Storage Installation license.

In addition, pursuant to the requirements of 10 CFR 54.37(b) and the guidance specified in Regulatory Issue Summary 2007-16, Revision 1, "Implementation of the Requirements of 10 CFR 54.37(b) for Holders of Renewed Licenses," the USAR update required by 10 CFR 50.71(e) must include any Structures, Systems, or Components (SSCs) newly identified that would have been subject to an aging management review or evaluation of time-limited aging analyses in accordance with 10 CFR 54.21. The USAR update must describe how the licensee will manage the effects of aging in order to effectively maintain the intended function(s) of newly-identified SSCs. An evaluation was completed to determine whether any newly-identified SSCs existed in support of submitting USAR Revision 22. This evaluation involved reviewing pertinent documentation for the period subsequent to the last NMP2 biennial USAR revision. As a result of this review, there were no newly-identified SSCs for which aging management reviews or time-limited aging analyses would apply.

If you have any questions or require further information, please contact Ron Reynolds at (610) 765-5247.

I declare under penalty of perjury that the foregoing is true and correct. Executed on the 24th day of October 2016.

Sincerely,



James Barstow
Director - Licensing & Regulatory Affairs
Exelon Generation Company, LLC

Enclosures: (1) CD-ROM, NMP2 USAR - Proprietary
(2) CD-ROM, NMP2 USAR - Non-Proprietary
(3) CD-ROM, NMP2 Technical Specification Bases, Revision 47
(4) CD-ROM, NMP2 USAR Reference Figure Files

Attachments: (1) Summary of Changes - NMP2 USAR Revision 22

Page 3

- (4) NMP2 Revised Technical Requirements Manual Pages

w/Enclosures 1, 3, 4, and Attachments

Enclosure 1

CD-ROM

NMP2 – Updated Safety Analysis Report - Proprietary

Enclosure 2

CD-ROM

NMP2 – Updated Safety Analysis Report – Non-Proprietary

Enclosure 3

CD-ROM

NMP2 – Technical Specifications Bases, Revision 47

Enclosure 4

CD-ROM

NMP2 – USAR Reference Figures

Attachment 1

Summary of Changes – NMP2 USAR Revision 22

Nine Mile Point Nuclear Station Unit 2

Facility Operating License No. NPF-69

Attachment 1

Summary of Changes – NMP2 USAR Revision 22

10 CFR 50.71(e)(2)(ii) requires that revisions to the USAR include changes made under the provisions of 10 CFR 50.59. Accordingly, the list below identifies plant changes and projects included in Revision 22 of the Updated Safety Analysis Report.

<u>Change Number</u>	<u>Brief Title</u>
2-10-UFS-045	Upgrade network communication systems to fiber optic cable for Unit 1 and 2 Control Room for desktop computer speed and picture quality during outage activities.
2-12-UFS-018	USAR Figure 10.1-7n is revised to remove strainer C. The strainer was replaced with piping.
2-12-UFS-032	Revise Figure 9.4-1a to show changes to system "HVK" (Control Building Chilled Water) including establish Class III boundary at valves 2HVK*V325 and 2HVK*V326; show valves 2HVK*V25 and V26 as "Normally Closed."
2-12-UFS-033	Revise USAR to reflect upgrade to NMP1 and 2 wireless radio system to remain in compliance with FCC requirements of a radio bandwidth of 12.5KHz and increase portable radio coverage.
2-13-UFS-001	Replace the circulating water system make up valves 2SWP*V47A/B and 2SWP*FV54A/B due to the unreliability of the electrohydraulic actuators.
2-13-UFS-010	Incorporate MELLLA+ changes.
2-13-UFS-011	Revise various figures to reflect the removal of various manual CO2 hose reels and associated actuators and indication lights.
2-13-UFS-015	Revise figures 5.4-16c and 5.4-16d to remove existing ball valves and install new plug valves for components 2WCS-V77, -V78, -V87, -V88, -V97, -V98, -V107, and -V108.
2-13-UFS-020	Revise applicable figures to reflect changes to Local Fire Control Panel (LFCP) 2FPM-PNL119 from XL3 and local relay control to full MXL control.
2-13-UFS-024	Replace Borg-Warner Electro-Hydraulic Operators on 2HVK*TV21A/B and 2HVK*TV22A/B with air operators
2-14-UFS-006	Modification to install redundant spent fuel pool wide range level monitoring in accordance with NRC Order EA-12-051.

Attachment 1

Summary of Changes – NMP2 USAR Revision 22

<u>Change Number</u>	<u>Brief Title</u>
2-14-UFS-012	Revise applicable figures to reflect changes to Local Fire Control Panel (LFCP) 2FPM-PNL104 from XL3 and local relay control to full MXL control.
2-14-UFS-018	Revise Figure 9.3-1b to add continuation arrows.
2-14-UFS-020	Revise Figure 10.1-4d to reflect modified SOV configuration.
2-15-UFS-001	Revise Figure 10.1-8f as an editorial change to add two reducers to valve 2TME-RV135 that already exist in plant.
2-15-UFS-002	Revise Figure 10.1-5a as an editorial change to correct drawing reference flag.
2-15-UFS-003	Revise Section 8.3, last paragraph under Periodic Inspection to change word from “manufacturer’s” to “station’s.”
2-15-UFS-004	Incorporate modification description to allow the standby exhaust fan to start when in the Normal-After-Start position when the DG starts.
2-15-UFS-005	Revise Figure 8.3-2 to reflect means for connecting the FLEX portable DG set to the selected safety related Division I, 600VAC Emergency Load Center or Division II Emergency Load Center.
2-15-UFS-006	Incorporate Hardened Containment Vent modification.
2-15-UFS-008	Revise Figures 1.2-19, 9.4-10e and 12.3-47 to incorporate the new air conditioning unit added to the Chemistry Lab Annex.
2-15-UFS-009	Revise applicable figures to reflect changes to fire panel 2FPM-PNL131.
2-15-UFS-010	Revise Figure 10.1-8f to add Spectacle Flange
2-15-UFS-011	Change the turbine building maximum allowable leakage from 25 gpm to 45 gpm.
2-15-UFS-012	Added discussion to Section 6.3.3.7.8 incorporating the station 10 CFR 50.46 report by reference.
2-15-UFS-015	Revised Figure 10.1-5c to add new component 2CNM-V213C.

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Summary of Changes – NMP2 USAR Revision 22

<u>Change Number</u>	<u>Brief Title</u>
2-15-UFS-016	Revise applicable figures to reflect changes to Local Fire Control Panel (LFCP) 2FPM-PNL128 from XL3 and local relay control to full MXL control.
2-15-UFS-017	Revise figures to show installation of two missile protected FLEX hydrants outside the northwest side of the screen well building.
2-15-UFS-019	Incorporate changes from the Reactor Building Polar Crane Upgrade.
2-15-UFS-021	Revise applicable figures to reflect changes to Local Fire Control Panel (LFCP) 2FPM-PNL120 from XL3 and local relay control to full MXL control.
2-15-UFS-024	Revise Tables 2.2-7 and 2.2-8 to update chemicals stored at NMP1.
2-15-UFS-025	Editorial change to Figure 8.3-3.
2-15-UFS-026	Revise Figure 4.6-05a to add root isolation valve for automatic air for two control rod drive flow control M/A stations.
2-15-UFS-027	Revise Section 9B.8.2.2 to revise Pseudo LPCI initiation time for operators to 10 minutes.
2-15-UFS-028	Add discussion regarding the station's response to NRC GL 2008-01.
2-15-UFS-029	Provide editorial change to 9C to include ASME B30.9-2010.
2-15-UFS-030	Revised OPRM description with the addition of the Detect and Suppress Solution-Confirmation Density (DSS-CD).
2-15-UFS-031	Revise Section 9.1.4.3 to include description of new grapple head.
2-15-UFS-032	Revise applicable figures to show added switches in series to existing trip switches to achieve 2-out-of-2 trip logic for feedwater pumps, condensate booster pumps, and 1 st and 2 nd point heater drains.
2-15-UFS-033	Add "MELLLA+" to Chapter 15 and Appendix A
2-15-UFS-035	Remove position indication from check valve 21CS-V157.
2-16-UFS-004	GNF2 fuel transition for NMP2

Attachment 1

Summary of Changes – NMP2 USAR Revision 22

<u>Change Number</u>	<u>Brief Title</u>
2-16-UFS-009	Containment isolation logic improvements
2-16-UFS-010	Separate NMP2 instrument air supply to the main steam SRFs and the MSIVs.
2-16-UFS-011	Revise TME control set points for the main condenser air removal system.
2-16-UFS-012	Replace Riley Temperature Switch in the leak detection system with Yokogawa digital recorders.
2-16-UFS-013	Revise Figure 10.1-5b to show installation of remote digital positioners.
2-16-UFS-014	Revise Figure 10.1-6a to show installation of remote digital positioners.
2-16-UFS-016	Revise Figures 8.2-1 and 8.2-7 to show installation of jumper across Unit 2 main output disconnect switch.
2-16-UFS-017	Revise Figure 9.3-12g to correct typo.
2-16-UFS-018	Revise Figure 9.3-1b to reflect correct configuration
2-16-UFS-019	Revise applicable figures to incorporate the Fukushima offsite communication, satellite phone installation.
2-16-UFS-020	Appendix J LLRT scope reduction to exclude from Appendix J testing those penetrations that are water filled and do not constitute a potential primary containment atmospheric pathway.
2-16-UFS-022	Revise applicable figures to show replacement of Pyrotronics XL3 hardware with Siemens MXL system hardware.
2-16-UFS-023	Revise applicable figures to reflect changes to Local Fire Control Panel (LFCP) 2FPM-PNL129 from XL3 and local relay control to full MXL control.
2-16-UFS-024	Revise applicable figures to reflect changes to Local Fire Control Panel (LFCP) 2FPM-PNL117 from XL3 and local relay control to full MXL control.

Attachment 1

Summary of Changes – NMP2 USAR Revision 22

<u>Change Number</u>	<u>Brief Title</u>
2-16-UFS-029	Document changes associated with clos-out of NMP2 fire panel replacement project.
2-16-UFS-031	Update Chapter 9 with updates for spent fuel pool design bases decay heat loads and descriptions.
2-16-UFS-034	Revise Chapter 13 to remove obsolete and redundant information.

Attachment 2

Electronic File Directory – NMP2 USAR Revision 22

Nine Mile Point Nuclear Station Unit 2

Facility Operating License No. NPF-69

Attachment 2

Electronic File Directory – NMP2 USAR Revision 22

Directory Path	File Name	File size
d:\	NMP2 Appendix A (001).pdf	320,305
d:\	NMP2 Appendix A Figures (002).pdf	57,101
d:\	NMP2 Appendix B (001).docx.pdf	77,145
d:\	NMP2 Appendix C (001).pdf	235,306
d:\	NMP2 Chapter 01 (001).pdf	1,628,202
d:\	NMP2 Chapter 01 (002) Figures 1.1-1 thru 1.2-10 Sht 2.pdf	10,681,662
d:\	NMP2 Chapter 01 (003) Figures 1.2-20 Sht 1 thru 1.2-32.pdf	22,155,671
d:\	NMP2 Chapter 01 (004) Figures 1.2-33 thru End.pdf	6,112,658
d:\	NMP2 Chapter 02 (001) Table of Contents.pdf	187,315
d:\	NMP2 Chapter 02 (002) Sections 2.1 thru 2.4.pdf	848,707
d:\	NMP2 Chapter 02 (003) Section 2.5.pdf	1,526,730
d:\	NMP2 Chapter 02 (004) Figures 2.1-1 thru 2.5-109.pdf.pdf	15,355,361
d:\	NMP2 Chapter 02 (005) Figures 2.5-110 thru 2H-42.pdf.pdf	17,680,834
d:\	NMP2 Chapter 02 (006) Figures 2H.43 thru 2K-27F.pdf	9,814,784
d:\	NMP2 Chapter 02 (007) Figures 2K.28A thru End.pdf	8,059,745
d:\	NMP2 Chapter 02 (008) Appendix 2A thru 2B Table 2B-7.docx.pdf	5,175,713
d:\	NMP2 Chapter 02 (009) Appendix 2B Table 2B-8 thru 2B-34.pdf	4,363,319
d:\	NMP2 Chapter 02 (010) Appendix 2B Table 2B-35 thru 2B-37.pdf	2,535,777
d:\	NMP2 Chapter 02 (011) Appendix 2B Table 2B-38.pdf	4,062,367
d:\	NMP2 Chapter 02 (012) Appendix 2B Table 2B-39.pdf	7,988,717
d:\	NMP2 Chapter 02 (013) Appendix 2B Table 2B-40 thru 2B-55.pdf	544,330
d:\	NMP2 Chapter 02 (014) Appendix 2C thru 2I.pdf	843,578
d:\	NMP2 Chapter 02 (015) Appendix 2J thru 2Q.pdf	1,013,764
d:\	NMP2 Chapter 03 (001) Table of Contents.pdf	201,246
d:\	NMP2 Chapter 03 (002) Sections 3.1 thru 3.5.pdf	1,000,697
d:\	NMP2 Chapter 03 (003) Sections 3.6A thru 3.8.pdf	1,020,800
d:\	NMP2 Chapter 03 (004) Sections 3.9A thru 3.11.pdf	1,538,260
d:\	NMP2 Chapter 03 (005) Appendix 3A thru 3E.pdf	1,119,459
d:\	NMP2 Chapter 03 (006) Figures.pdf	19,604,208
d:\	NMP2 Chapter 04 (001).pdf	406,277
d:\	NMP2 Chapter 04 Figures (002).pdf	10,571,866
d:\	NMP2 Chapter 05 (001).pdf	1,468,505

Attachment 2

Electronic File Directory – NMP2 USAR Revision 22

Directory Path	File Name	File size
d:\	NMP2 Chapter 05 Figures (002).pdf	33,076,594
d:\	NMP2 Chapter 06 (001) Table of Contents.pdf	198,854
d:\	NMP2 Chapter 06 (002) Section 6.1 thru 6.2.pdf	1,666,098
d:\	NMP2 Chapter 06 (003) Section 6.3 thru 6.6.pdf	344,493
d:\	NMP2 Chapter 06 (004) Appendix 6A thru 6C.pdf	1,035,248
d:\	NMP2 Chapter 06 (005) Appendix 6D NON-PROPRIETARY.docx.pdf	38,884
d:\	NMP2 Chapter 06 (005) Appendix 6D PROPRIETARY.pdf	153,400
d:\	NMP2 Chapter 06 (006) Figures.pdf	33,748,240
d:\	NMP2 Chapter 07 (001) Table of Contents.pdf	111,203
d:\	NMP2 Chapter 07 (002) Sections 7.1 thru 7.3.pdf	741,058
d:\	NMP2 Chapter 07 (003) Sections 7.4 thru 7.7.pdf	593,269
d:\	NMP2 Chapter 07 (004) Appendices 7A thru 7B.pdf	265,652
d:\	NMP2 Chapter 07 (005) Figures.pdf	13,356,092
d:\	NMP2 Chapter 08 (001) Table of Contents.pdf	99,408
d:\	NMP2 Chapter 08 (002) Section 8.1 thru 8.2.pdf	217,649
d:\	NMP2 Chapter 08 (003) Section 8.3 thru Appendix 8A.pdf	2,021,033
d:\	NMP2 Chapter 08 (004) Figures.pdf	9,062,827
d:\	NMP2 Chapter 09 (001) Table of Contents.pdf	163,742
d:\	NMP2 Chapter 09 (002) Sections 9.1 thru 9.3.pdf	713,551
d:\	NMP2 Chapter 09 (003) Sections 9.4 thru 9.5.pdf	864,027
d:\	NMP2 Chapter 09 (004) Figures 9.1-1A thru 9.4-2d.pdf	21,142,156
d:\	NMP2 Chapter 09 (005) Figures 9.4-2e thru end.pdf	34,367,725
d:\	NMP2 Chapter 09 (006) Appendix 9A.pdf	1,213,306
d:\	NMP2 Chapter 09 (007) Appendices 9B thru 9C.pdf	705,780
d:\	NMP2 Chapter 10 (001).pdf	310,370
d:\	NMP2 Chapter 10 Figures (002).pdf	14,757,761
d:\	NMP2 Chapter 11 (001).pdf	695,173
d:\	NMP2 Chapter 11 Figures (002).pdf	3,739,430
d:\	NMP2 Chapter 12 (001).pdf	758,550
d:\	NMP2 Chapter 12 Figures (002).pdf	30,718,111
d:\	NMP2 Chapter 13 (001).pdf	121,172
d:\	NMP2 Chapter 13 Figures (002).pdf	671,904

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Electronic File Directory – NMP2 USAR Revision 22

Directory Path	File Name	File size
d:\	NMP2 Chapter 14 (001) Table of Contents.pdf	127,041
d:\	NMP2 Chapter 14 (002) Sections 14.1 thru 14.4.pdf	1,156,871
d:\	NMP2 Chapter 14 (003) Figures.pdf	2,576,803
d:\	NMP2 Chapter 15 (001) Table of Contents.pdf	140,173
d:\	NMP2 Chapter 15 (002).pdf	986,580
d:\	NMP2 Chapter 15 (003) Figures.pdf	10,805,177
d:\	NMP2 Chapter 15 (004) Appendices.pdf	667,463
d:\	NMP2 Chapter 16 001).pdf	73,095
d:\	NMP2 Chapter 17 (001).pdf	300,588
d:\	NMP2 Chapter 17 Figures (002).pdf	777,201
d:\	NMP2 Chapter 18 (001).pdf	208,292
d:\	NMP2 Chapter 18 Figures (002).pdf	854,679

Attachment 3

NMP2 10 CFR 50.59 Evaluation Summary Report

Nine Mile Point Nuclear Station Unit 2

Facility Operating License No. NPF-69

Attachment 3

NMP2 10 CFR 50.59 Evaluation Summary Report

Nine Mile Point Nuclear Power Station, Unit 2

Renewed Facility Operating License No. NPF-69

NRC Docket No. 50-410

This report is issued pursuant to reporting requirements of 10 CFR 50.59(d)(2)

Title: NMP2 Riley Temperature Switch Replacement

Units Affected: Unit 2

Brief Description: The purpose of this modification is to replace the Riley Model 86 Temp-Matic temperature switches in the Leak Detection System (LDS) at Nine Mile Point Unit 2 (NMP2) with Yokogawa model DX1012N digital recorders. There are fifty-two Riley temperature switches in the LDS that monitor both ambient and differential temperatures to detect and isolate leaks from the Main Steam (MSS), Residual Heat Removal (RHS), Isolation Core Spray (ICS), and Reactor Water Cleanup (WCS) systems.

The Riley temperature switches and associated meter modules and indicators are installed in panel inserts bolted to the front of panels 2CEC*PNL632, 2CEC*PNL642, 2CEC*PNL609 and 2CEC*PNL611. The inserts will be removed and replaced with new inserts on which the Yokogawa recorders are installed.

Panels 2CEC*PNL632 and 2CEC*PNL642 each have five isolation logic relays and panels 2CEC*PNL609 and 2CEC*PNL611 each have one isolation logic relay. Five recorders will be installed in 2CEC*PNL632, five recorders will be installed in 2CEC*PNL642, one recorder will be installed in 2CEC*PNL609, and one recorder will be installed in 2CEC*PNL611. Thermocouples will be assigned to each recorder and the relay output contacts of each recorder will be wired to maintain the existing isolation logic and alarms.

The nuclear boiler LDS consists of temperature, pressure, level, flow, airborne gaseous and particulate fission product sensors, and process radiation sensors with associated instrumentation used to indicate and alarm leakage from the Reactor Coolant Pressure Boundary. The LDS in certain cases is used to initiate signals used for automatic closure of isolation valves to shut off leakage external to the containment.

As part of the LDS at NMP2, the Riley Model 86 Temp-Matic temperature switches are used to detect steam leaks. The Riley temperature switches are used to perform both ambient and differential temperature monitoring.

Attachment 3

NMP2 10 CFR 50.59 Evaluation Summary Report

Riley temperature switches drive both system trips/isolations and annunciators.

The new Yokogawa recorders are more accurate which permits the existing set points and allowable values to be maintained. In addition, the temperatures are read directly on the record display. Recorders will be installed in the existing panels to maintain channel separation and redundancy. A separate recorder will be used for each isolation function within each channel. The existing LDS thermocouples will be assigned to each recorder and the relay output contacts of each recorder will be wired to maintain the existing isolation logic and alarms.

The response time of the Yokogawa recorder is slower than the Riley temperature switch. In addition, a moving-average filter is applied in the Yokogawa recorder to reduce the noise on the input signals. Calculations include consideration of response time.

The proposed activity maintains the existing TS Allowable Values and functions. Therefore; no change is required to the Technical Specifications or the Facility Operating License.

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Title: Control Rod Drop Accident revision as a result of GNF2 Fuel introduction

Units Affected: Unit 2

Brief Description: The introduction of GNF2 fuel at NMP2 has the potential to affect the radiological safety analyses of USAR Chapter 15. The GNF2 fuel bundle was evaluated and determined to affect the core inventory, radial peaking factors and fuel rod damage parameters assumed in the USAR Chapter 15 design basis accidents. Of these parameters, only the fuel rod damage as a result of the Control Rod Drop Accident (CRDA) was adversely affected. The other parameters were evaluated and found to be bounded by the current design basis radiological analyses – i.e. those current analyses remain bounding over the GNF2 operation.

As a result of the CRDA, some of the fuel rods experience cladding failure and release their gaseous radioactivity. This defines the magnitude of the CRDA release/source term. The release is defined by the fraction of fuel rods in the reactor core that are damaged. For the GNF2, this fraction increased slightly from the current analysis of record value of 1.63% to 1.77%. This increase proportionally increases the activity released to the environment and hence the dose consequences. This change is an

Attachment 3

NMP2 10 CFR 50.59 Evaluation Summary Report

adverse change and the proposed activity was evaluated under 10 CFR 50.59.

The increase in dose consequences were evaluated and found to be minimal per the guidance of the 50.59 Resource Manual. Therefore, the proposed activity is acceptable per 10 CFR 50.59 and can be implemented without prior NRC review.

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Title: Appendix J LLRT Scope Reduction

Units Affected: Unit 2

Brief Description: The purpose of this modification is to evaluate the following valves for exclusion from 10 CFR 50, Appendix J, Local Leak Rate Testing (LLRT):

2CSL*MOVI04, CSL to RPV Outside Remote Manual Isolation Valve,
2CSH*MOV107, CSH to RPV Outside Remote Manual Isolation Valve,
2RHS*MOV40A, Shutdown Cooling Return Outside Auto Isolation Valve,
2RHS*MOV40B, Shutdown Cooling Return Outside Auto Isolation Valve,
2RHS*MOVI 12 (Z-11), Shutdown Cooling Supply Inside Auto Isolation Valve, and
2RHS*RV152 (Z-11), SOC Supply From RCS Safety Relief Valve Inside Isolation Valve

The safety function of the Primary Containment Isolation System as stated in the USAR Section 6.2.4 is to provide protection against release of radioactive materials to the environment from accidents occurring to the Reactor Coolant Pressure Boundary (RCPB) or lines connecting to the RCPB or penetrating primary containment. This is accomplished by automatic isolation valve closure of appropriate lines that penetrate the primary containment system.

The cited penetrations were previously evaluated and certified to satisfy ANSI/ANS 56.2 requirements for Closed Loop Outside Containment under Design Change Package N2-05-142 and 50.59 Evaluation 2006-01. Under Design Change Package N2-05-142, instead of impacted containment penetrations having two (2) 10CFR50 Appendix J air tested Containment Isolation Valves (CIVs), the two containment boundaries were provided by a single tested CIV and a closed system outside containment.

The Primary Containment Isolation Valves (PCIVs) will continue to be tested in accordance with the In-Service Testing (IST) Program and station testing procedures. IST testing will include stroke timing,

Attachment 3

NMP2 10 CFR 50.59 Evaluation Summary Report

exercising, and/or leakage checks. This testing will remain to ensure that a malfunction of the affected valves does not occur. No modifications are implemented with this change, and no new failure modes of the PCIVs were identified. The cited valves and associated penetrations will continue to be monitored for leakage under TS 5.5.2, "Primary Coolant Sources Outside Containment." This monitoring provides controls to minimize leakage from those portions of systems outside the containment that could contain highly radioactive fluids during a serious transient or accident to levels as low as practicable. This water leakage, also referred to as Emergency Safety Feature leakage is procedurally monitored periodically during system operation to identify external leaks from the piping, valves, packing, seal leak offs, etc.

The subject valves are excluded from the LLRT on the basis they form primary containment boundaries that do not constitute potential primary containment atmospheric pathways during and following a Design Basis Accident. Therefore, this activity cannot, and does not, result in an increase in more than a minimal increase in the consequences of a malfunction of a Structure, System, and Component important to safety previously evaluated in the Updated Safety Analysis Report.

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Attachment 4

NMP2 Revised Technical Requirements Manual Pages

Nine Mile Point Nuclear Station Unit 2

Facility Operating License No. NPF-69

Attachment 4

NMP2 Revised Technical Requirements Manual Pages

NMP2 TRM Revisions 33 through 35

Page Replacement Instructions

Remove Page

Title Page
i (first page i after title page)

TRM LEP-i
TRM LEP-ii
TRM LEP-iii

3.6-2

3.6-7 through 3.6-23

3.6-30
5.5-4
5.5-7
5.5-8

Insert Page

Title Page
DCP-i

TRM LEP-i
TRM LEP-ii
TRM LEP-iii

3.6-2

3.6-7 through 3.6-23
Includes new page 3.6-22a
3.6-23a (new page)
3.6-23b (new page)

3.6-30
5.5-4
5.5-7
5.5-8

NINE MILE POINT UNIT 2 TECHNICAL REQUIREMENTS MANUAL

DOCUMENT CONTROL PROCESSES

The Nine Mile Point Unit 2 (NMP2) Technical Requirements Manual is established to house in a single location a variety of information to which ready access is needed in the daily routine operation of the plant. This manual contains a wide variety of information and requirements for various systems and processes, most of which existed in the NMP2 Technical Specifications (TS) at some previous point in time.

The TRM is intended to be used by Operations and other station personnel as an aid used in conjunction with the TS and to provide operating guidance for certain non-TS plant equipment. The same rules and conventions as in the TS apply to the use of the information in the TRM unless specifically stated in the TRM.

Noncompliance with TRM requirement requires the generation of an Issue Report (IR) per procedure PI-AA-125. This noncompliance is not a condition prohibited by TS, however, the noncompliance needs to be evaluated for other reportability requirements depending on the seriousness of the noncompliance.

The TRM pages will be controlled as a procedure per AD-AA-101, but with formatting consistent with TS. In accordance with NEI 98-03, Revision 1, a TRM can be treated in a manner consistent with procedures fully or partially described in the UFSAR, and therefore, are controlled as procedures in accordance with the applicable established procedure process. For the purposes of 10 CFR 50.59, information presented in the TRM is considered to be information described in the UFSAR, as updated, and therefore, is to be treated at the same level as information presented in the UFSAR.

The technical content of the TRM is the responsibility of the appropriate Engineering, Chemistry, or Radiation Protection organization, with input as necessary from Operations. The responsibility for the administrative control of the manual is assigned to Regulatory Assurance.

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Primary Containment Isolation Manual Valves and Blind Flanges Required to be Closed
During Accident Conditions

Manual Valves for Technical Specifications SR 3.6.1.3.2

2AAS*HCV134 ^(a)	2CMS*V80A	2CSL*V29	2IAS*V1507
2AAS*HCV135 ^(a)	2CMS*V80B	2CSL*V30	2IAS*V1508
2CCP*V943	2CMS*V81A	2CSL*V54	2IAS*V1509
2CMS*V40A	2CMS*V81B	2DER*V321	2IAS*V1510
2CMS*V40B	2CPS*V10	2DER*V322	2IAS*V1512
2CMS*V42A	2CPS*V16	2FPW*V546	2IAS*V1513
2CMS*V42B	2CPS*V20	2FPW*V547	2IAS*V192
2CMS*V44A	2CPS*V3	2FPW*V599	2IAS*V198
2CMS*V44B	2CPS*V4	2FPW*V600	2IAS*V199
2CMS*V46A	2CPS*V41	2FWS*V10A	2IAS*V406
2CMS*V46B	Deleted	2FWS*V10B	2IAS*V407
2CMS*V48A	2CPS*V8	2FWS*V11A	2IAS*V507
2CMS*V48B	2CSH*V100	2FWS*V11B	2IAS*V508
2CMS*V50A	2CSH*V101	2FWS*V14A	2IAS*V509
2CMS*V50B	2CSH*V102	2FWS*V14B	2IAS*V510
2CMS*V68	2CSH*V121	2FWS*V15A	2IAS*V511
2CMS*V69	2CSH*V122	2FWS*V15B	2ICS*V105
2CMS*V70	2CSH*V128	2FWS*V50A	2ICS*V106
2CMS*V71	2CSH*V129	2FWS*V50B	2ICS*V17
2CMS*V72A	2CSH*V133	2FWS*V51A	2ICS*V18
2CMS*V72B	2CSH*V134	2FWS*V51B	2ICS*V19
2CMS*V73A	2CSH*V135	2GSN*V167	2ICS*V20
2CMS*V73B	2CSH*V136	2HCS*V13	2ICS*V21
2CMS*V74A	2CSH*V137	2HCS*V14	2ICS*V210
2CMS*V74B	2CSH*V138	2HCS*V15	2ICS*V212
2CMS*V75A	2CSH*V150	2HCS*V16	2ICS*V241
2CMS*V75B	2CSH*V250	2HCS*V17	2ICS*V243
2CMS*V76A	2CSH*V251	2HCS*V18	2ICS*V248
2CMS*V76B	2CSH*V257	2IAS*V1500	2ICS*V250
2CMS*V77A	2CSH*V28	2IAS*V1501	2ICS*V251
2CMS*V77B	2CSH*V29	2IAS*V1502	2ICS*V253
2CMS*V78A	2CSH*V99	2IAS*V1503	2ICS*V254
2CMS*V78B	2CSL*V120	2IAS*V1504	2ICS*V255
2CMS*V79A	2CSL*V123	2IAS*V1505	2ICS*V256
2CMS*V79B	2CSL*V124	2IAS*V1506	2ICS*V257

(a) Normally locked closed.

Table T3.6.1-2 (Page 1 of 18)
Primary Containment Isolation Valves

ISOLATION VALVE NO.	VALVE FUNCTION	VALVE GROUP	ISOLATION SIGNAL (a)	ISOLATION TIME (SECONDS) (p)
<u>A. AUTOMATIC</u>				
2MSS*AOV6 A,B,C,D(n)	Inside MSIV	1	Z,X,D,E,P,T,R,RM,AA	See Technical Specification SR 3.6.1.3.7
2MSS*AOV7 A,B,C,D	Outside MSIV	1	Z,X,D,E,P,T,R,RM,AA	See Technical Specification SR 3.6.1.3.7
2MSS*MOV208	MSL Drain Line Outside IV	1	Z,X,D,E,P,T,R,RM,AA	≤18
2MSS*MOV111	Main Steam Drain Line Inside IV	1	Z,X,D,E,P,T,R,RM,AA	≤60
2MSS*MOV112	Main Steam Drain Line Outside IV	1	Z,X,D,E,P,T,R,RM,AA	≤60
2RHS*MOV33 A,B	RHS Cont. Spray Outside IVs	NA	RM and *	≤35
2RHS*MOV104(s)	RHS Reactor Head Spray Outside IV	5	A,L,M,Z,RM,CC,DD	≤50
2RHS*MOV40 A,B(s)(v)	Shutdown Cooling Return Outside IVs	5	A,L,M,Z,RM,CC,DD	≤29
2RHS*MOV67 A,B(s)	SDC Inboard IV Bypass Valves	5	A,L,M,Z,RM,CC,DD	≤18
2RHS*MOV112(s)(v)	SDC Supply Inside IV	5	A,L,M,Z,RM,CC,DD	≤29
2RHS*MOV113(s)(v)	SDC Supply Outside IV	5	A,L,M,Z,RM,CC,DD	≤29
2CSH*MOV111	CSH Test Return to Suppression Pool Outside IV	NA	RM and *	≤60
2ICS*MOV164	RCIC Vacuum Breaker Outside IV	11	H & F, RM	≤21 (u)
2CCP*MOV94 A,B	CCP Supply to RCS Inside IVs	8	B,F,Z,RM	≤38
2CCP*MOV17 A,B	CCP Supply to RCS Outside IVs	8	B,F,Z,RM	≤38
2CCP*MOV16 A,B	CCP Return from RCS Pumps Inside IVs	8	B,F,Z,RM	≤38
2CCP*MOV15 A,B	CCP Return from RCS Pumps Outside IVs	8	B,F,Z,RM	≤38

Table T3.6.1-2 (Page 2 of 18)
Primary Containment Isolation Valves

ISOLATION VALVE NO.	VALVE FUNCTION	VALVE GROUP	ISOLATION SIGNAL (a)	ISOLATION TIME (SECONDS) (p)
A. <u>AUTOMATIC</u> (continued)				
2DFR*MOV120	DFR Drain Tank Line Outside IV	8	B, F, Z, RM	≤45
2DFR*MOV121	DFR Drain Tank Line Inside IV	8	B, F, Z, RM	≤54
2DER*MOV119	DER Line from Drywell Inside IV	8	B, F, Z, RM	≤35
2DER*MOV120	DER Line from Drywell Outside IV	8	B, F, Z, RM	≤35
2RCS*SOV104	RCS Sample Inside IV	2	B, Z, RM	≤5
2RCS*SOV105	RCS Sample Outside IV	2	B, Z, RM	≤5
2FPW*SOV218(i)	RCS A Water Spray Outside IV	NA	NA	NA
2FPW*SOV219(i)	RCS A Water Spray Inside IV	NA	NA	NA
2FPW*SOV220(i)	RCS B Water Spray Outside IV	NA	NA	NA
2FPW*SOV221(i)	RCS B Water Spray Inside IV	NA	NA	NA
2DFR*MOV139	DFR Vent Line Outside IV	8	B, F, Z, RM	≤20
2DFR*MOV140	DFR Vent Line Inside IV	8	B, F, Z, RM	≤20
2DER*MOV130	DER Vent Line Inside IV	8	B, F, Z, RM	≤18
2DER*MOV131	DER Vent Line Outside IV	8	B, F, Z, RM	≤18
2CCP*MOV265	Sply to Drywell Space Cooler Outside IV	8	B, F, Z, RM	≤60
2CCP*MOV273	Sply to Drywell Space Cooler Inside IV	8	B, F, Z, RM	≤60
2CCP*MOV122	Return from Drywell Space Cooler Inside IV	8	B, F, Z, RM	≤60
2CCP*MOV124	Return from Drywell Space Cooler Outside IV	8	B, F, Z, RM	≤60

Table T3.6.1-2 (Page 3 of 18)
Primary Containment Isolation Valves

ISOLATION VALVE NO.	VALVE FUNCTION	VALVE GROUP	ISOLATION SIGNAL (a)	ISOLATION TIME (SECONDS) (p)
A. <u>AUTOMATIC</u> (continued)				
2CPS*AOV104	Purge Inlet to Drywell Outside IV	9	B, F, Y, Z, RM	≤5
2CPS*AOV105	Purge Inlet to Sup. Chamber Outside IV	9	B, F, Y, Z, RM	≤5
2CPS*AOV106(n)	Purge Inlet to Drywell Inside IV	9	B, F, Y, Z, RM	≤5
2CPS*AOV107(n)	Purge Inlet to Sup. Chamber Inside IV	9	B, F, Y, Z, RM	≤5
2CPS*AOV108(n)	Purge Exhaust from Drywell Inside IV	9	B, F, Y, Z, RM	≤5
2CSP*AOV109(n)	Purge Exhaust from Sup. Chamber Inside IV	9	B, F, Y, Z, RM	≤5
2CPS*AOV110	Purge Exhaust from Drywell Outside IV	9	B, F, Y, Z, RM	≤5
2CPS*AOV111	Purge Exhaust from Sup. Chamber Outside IV	9	B, F, Y, Z, RM	≤5
2IAS*SOV164	ADS Hdr A N ₂ Supply Outside IV	8	B, F, Z, RM	≤5
2IAS*SOV165	ADS Hdr B N ₂ Supply Outside IV	8	B, F, Z, RM	≤5
2IAS*SOV166	IAS to MSS Safety Relief Valve Outside IV	8	B, F, Z, RM	≤5
2IAS*SOV184	IAS to MSS Safety Relief Valve Inside IV	8	B, F, Z, RM	≤5
2IAS*SOV168	Inst. Air to Testable Check Outside IV	8	B, F, Z, RM	≤5
2IAS*SOV180	Inst. Air to Testable Check Inside IV	8	B, F, Z, RM	≤5
2IAS*SOV167	IAS to test Ck. & Vac. Bkrs. Outside IV	8	B, F, Z, RM	≤5
2IAS*SOV185	IAS to test Ck. & Vac. Bkrs. Inside IV	8	B, F, Z, RM	≤5

Table T3.6.1-2 (Page 4 of 18)
Primary Containment Isolation Valves

ISOLATION VALVE NO.	VALVE FUNCTION	VALVE GROUP	ISOLATION SIGNAL (a)	ISOLATION TIME (SECONDS) (p)
A. <u>AUTOMATIC</u> (continued)				
2HCS*MOV1 A,B	H ₂ Recombiners Sply to Supp. Chamber Outside IVs	8	B, F, Z, RM	≤30
2HCS*MOV2 A,B	H ₂ Recomb. Ret. from Supp. Chamber Outside IVs	8	B, F, Z, RM	≤30
2HCS*MOV3 A,B	H ₂ Recomb. Return from Drywell Outside IVs	8	B, F, Z, RM	≤30
2HCS*MOV4 A,B(q)	H ₂ Recomb. Sply. To Supp. Chamber Inside IVs	8	B, F, Z, RM	≤30
2HCS*MOV5 A,B(n)	H ₂ Recomb. Ret. from Supp. Chamber Inside IVs	8	B, F, Z, RM	≤30
2HCS*MOV6 A,B(q)	H ₂ Recomb. Ret. from Drywell Inside IVs	8	B, F, Z, RM	≤30
2CPS*SOV119	Containment Purge to Supp. Chamber Outside IV	9	B, F, Y, Z, RM	≤2
2CPS*SOV120	Containment Purge to Drywell Outside IV	9	B, F, Y, Z, RM	≤2
2CPS*SOV121(n)	Containment Purge to Supp. Chamber Inside IV	9	B, F, Y, Z, RM	≤2
2CPS*SOV122(n)	Containment Purge to Drywell Inside IV	9	B, F, Y, Z, RM	≤2
2CMS*SOV24A,B,C,D	CMS from Drywell Inside & Outside IVs	8	B, F, Z, RM	≤5
2CMS*SOV26A,B,C,D	CMS from SP Inside & Outside IVs	8	B, F, Z, RM	≤5
2CMS*SOV32 A,B	CMS to Drywell Outside IVs	8	B, F, Z, RM	≤5
2CMS*SOV33 A,B(n)	CMS to Drywell Inside IVs	8	B, F, Z, RM	≤5
2CMS*SOV34 A,B(n)	CMS to SP Inside IVs	8	B, F, Z, RM	≤5
2CMS*SOV35 A,B	CMS to SP Outside IVs	8	B, F, Z, RM	≤5
2CMS*SOV60 A,B	CMS from Drywell Outside IVs	8	B, F, Z, RM	≤5
2CMS*SOV61 A,B(n)	CMS from Drywell Inside IVs	8	B, F, Z, RM	≤5
2CMS*SOV62 A,B	CMS to Drywell Outside IVs	8	B, F, Z, RM	≤5
2CMS*SOV63 A,B(n)	CMS to Drywell Inside IVs	8	B, F, Z, RM	≤5

Table T3.6.1-2 (Page 5 of 18)
Primary Containment Isolation Valves

ISOLATION VALVE NO.	VALVE FUNCTION	VALVE GROUP	ISOLATION SIGNAL (a)	ISOLATION TIME (SECONDS) (p)
A. <u>AUTOMATIC</u> (continued)				
2CPS*SOV132	Nitrogen to 2CPS*AOV107 Outside IV	9	B, F, Y, Z, RM	≤5
2LMS*SOV152 (i)	LMS from Drywell Inside IV	8	B, F, Z, RM	≤5
2LMS*SOV153 (i)	LMS from Drywell Outside IV	8	B, F, Z, RM	≤5
2LMS*SOV156 (i)	LMS from SP Inside IV	8	B, F, Z, RM	≤5
2LMS*SOV157 (i)	LMS from SP Outside IV	8	B, F, Z, RM	≤5
2RCS*SOV65 A,B(1)	Hyd. Unit to RCS FCVs Outside IVs	8	B, F, Z, RM	≤20
2RCS*SOV66 A,B(1)	Hyd. Unit to RCS FCVs Outside IVs	8	B, F, Z, RM	≤20
2RCS*SOV67 A,B(1)	Hyd. Unit to RCS FCVs Outside IVs	8	B, F, Z, RM	≤20
2RCS*SOV68 A,B(1)	Hyd. Unit from RCS FCVs Outside IVs	8	B, F, Z, RM	≤20
2RCS*SOV79 A,B(1)	Hyd. Unit to RCS FCVs Inside IVs	8	B, F, Z, RM	≤20
2RCS*SOV80 A,B(1)	Hyd. Unit to RCS FCVs Inside IVs	8	B, F, Z, RM	≤20
2RCS*SOV81 A,B(1)	Hyd. Unit to RCS FCVs Inside IVs	8	B, F, Z, RM	≤20
2RCS*SOV82 A,B(1)	Hyd. Unit from RCS FCVs Inside IVs	8	B, F, Z, RM	≤20
2ICS*MOV121	RCIC Steam Supply Outside IV	10	K, M, H, Z, RM, BB, CC, DD	≤25
2ICS*MOV128 (q)	RCIC Steam Supply Inside IV	10	K, M, H, RM, BB, CC, DD	≤25
2ICS*MOV170	RCIC Warmup Valve Inside IV	10	K, M, H, RM, BB, CC, DD	≤18
2WCS*MOV102	WCS Supply from RCS & RPV Inside IV	7	B, J, U, S, Z, RM, DD	≤14
2WCS*MOV112	WCS Supply from RCS & RPV Outside IV	6	B, J, U, S, Z, RM, DD	≤14
2ICS*MOV148	RCIC Vacuum Breaker Outside IV	11	H & F, RM	≤21 (u)
2NMS*SOV1A,B,C,D,E	Traversing Incore Probe Ball Outside IVs	3	B, F, Z, RM	≤5

Table T3.6.1-2 (Page 6 of 18)
Primary Containment Isolation Valves

ISOLATION VALVE NO.	VALVE FUNCTION	VALVE GROUP	ISOLATION SIGNAL (a)	ISOLATION TIME (SECONDS) (p)
A. <u>AUTOMATIC</u> (continued)				
2GSN*SOV166	Nitrogen Purge to TIP Indexing Mechanism Outside IV	3	B,F,Z,RM	≤5
2RDS*AOV124(k)	SCRAM Discharge Volume Vent	NA		NA
2RDS*AOV132(k)	SCRAM Discharge Volume Vent	NA		NA
2RDS*AOV123(k)	SCRAM Discharge Volume Drain	NA		NA
2RDS*AOV130(k)	SCRAM Discharge Volume Drain	NA		NA

Table T3.6.1-2 (Page 7 of 18)
Primary Containment Isolation Valves

ISOLATION VALVE NO.	VALVE FUNCTION	VALVE GROUP	ISOLATION SIGNAL (a)	ISOLATION TIME (SECONDS) (p)
B. REMOTE MANUAL				
2RHS*MOV15 A,B(s)	Containment Spray to Drywell Outside IVs	12	RM	NA
2RHS*MOV1 A,B,C	RHS Pump Suction Outside IVs	12	RM	NA
2RHS*MOV30 A,B	RHS Test Line to SP Outside IVs	12	RM	NA
2RHS*MOV25 A,B(q) (s)	Containment Spray to Drywell Outside IVs	12	RM	NA
2RHS*MOV24 A,B,C(s)	RHS/LPCI to RPV Outside IVs	12	RM	NA
2CSH*MOV118	CSH Suction from SP Outside IV	12	RM	NA
2CSH*MOV105	HPCS Min Flow Bypass Outside IV	12	RM	NA
2CSH*MOV107(s) (v)	CSH to RPV Outside IV	12	RM	NA
2CSL*MOV112	CSL Suction from SP Outside IV	12	RM	NA
2CSL*MOV104(s) (v)	CSL to RPV Outside IV	12	RM	NA
2ICS*MOV136	ICS Suction from SP Outside IV	12	RM	NA
2ICS*MOV143(n)	ICS Min Flow to SP Outside IV	12	RM	NA
2ICS*MOV122(q)	ICS Turbine Exhaust to SP Outside IV	12	RM	NA
2ICS*MOV126(q) (s)	ICS to RPV Outside IV	12	RM	NA
2NMS*VEX1 A,B,C,D,E(d)	Traversing Incore Probe Shear Outside IVs	12	RM	NA
2FWS*MOV21 A,B	Feedwater to RPV Outside IVs	12	RM	NA
2WCS*MOV200	WCS to RPV Outside IV	12	RM	NA
2RHS*MOV26 A,B(c)	RHS HX Vent Inboard IVs	12	RM	NA
2RHS*MOV27 A,B(c)	RHS HX Vent Outboard IVs	12	RM	NA
2SLS*MOV5 A,B(g)	SLS to RPV Outside IV	12	RM	NA

Table T3.6.1-2 (Page 8 of 18)
Primary Containment Isolation Valves

ISOLATION VALVE NO.	VALVE FUNCTION	VALVE GROUP	ISOLATION SIGNAL (a)	ISOLATION TIME (SECONDS) (p)
C. <u>MANUAL</u>				
2SAS*HCV160	SAS to Drywell Outside IV	NA	NA	NA
2SAS*HCV161	SAS to Drywell Outside IV	NA	NA	NA
2SAS*HCV162	SAS to Drywell Inside IV	NA	NA	NA
2SAS*HCV163	SAS to Drywell Inside IV	NA	NA	NA
2AAS*HCV134	AAS to Drywell Outside IV	NA	NA	NA
2AAS*HCV135	AAS to Drywell Outside IV	NA	NA	NA
2AAS*HCV136	AAS to Drywell Inside IV	NA	NA	NA
2AAS*HCV137	AAS to Drywell Inside IV	NA	NA	NA
2RHS*V192	RCIC/RHS Vacuum Breaker Outside IV	NA	NA	NA
2SFC*V203	Inner Refuel Seal Leakoff Outboard IV	NA	NA	NA
2SFC*V204	Inner Refuel Seal Leakoff Inboard IV	NA	NA	NA
2ICS*V288(s)	Keep-Fill Between 2ICS*MOV126 and 2ICS*V157	NA	NA	NA

Table T3.6.1-2 (Page 9 of 18)
Primary Containment Isolation Valves

ISOLATION VALVE NO.	VALVE FUNCTION	VALVE GROUP	ISOLATION SIGNAL (a)	ISOLATION TIME (SECONDS) (p)
D. <u>OTHER</u>				
<u>Safety Relief</u>				
2RHS*RV20 A,B,C(d)	RHS RV Disch. to SP Outside IVs	NA	NA	NA
2RHS*RV61 A,B,C(d)	RHS RV Disch. to SP Outside IVs	NA	NA	NA
2RHS*RV108(d) (t)	RHS RV Disch. to SP Outside IVs	NA	NA	NA
2RHS*RV110(d)	SDC to RHS Pump Suction RV	NA	NA	NA
2RHS*RV139(d)	RHR Hdr. Flush to Radwaste RV	NA	NA	NA
2RHS*RV152(n) (s) (v)	SDC Supply from RCS RV Inside IV	NA	NA	NA
2RHS*RV56 A,B(d)	RHS HX Shell Side RVs	NA	NA	NA
2RHS*SV34 A,B(d) (t)	RHS HX Steam Supply Safety Valves	NA	NA	NA
2RHS*SV62 A,B(d) (t)	RHS HX Steam Supply Safety Valves	NA	NA	NA
2RHS*RVV35 A,B(d)	RHS Vacuum Breakers	NA	NA	NA
2CSL*RV105(d)	CSL RV Disch. to SP Outside IV	NA	NA	NA
2CSL*RV123(d)	CSL RV Disch. to SP Outside IV	NA	NA	NA
2RHS*RVV36 A,B(d)	RHS Vacuum Breakers	NA	NA	NA
2CCP*RV170(n)	CCP RV Discharge Inside IV	NA	NA	NA
2CCP*RV171(n)	CCP RV Discharge Inside IV	NA	NA	NA
2CCP*RV1019A(n)	CCP RV Discharge Inside IV	NA	NA	NA
2CCP*RV1020A(n)	CCP RV Discharge Inside IV	NA	NA	NA
2CCP*RV1021A(n)	CCP RV Discharge Inside IV	NA	NA	NA
2CCP*RV1022A(n)	CCP RV Discharge Inside IV	NA	NA	NA
2CSH*RV113(d)	CSH RV Disch. to SP Outside IV	NA	NA	NA
2CSH*RV114(d)	CSH RV Disch. to SP Outside IV	NA	NA	NA
2DFR*RV228(n)	DFR RV Discharge Inside IV	NA	NA	NA
2DER*RV344(n)	DER RV Discharge Inside IV	NA	NA	NA
2RHS*RV57A,B(r)	Outside IV Bonnet Pressure Relief	NA	NA	NA

Table T3.6.1-2 (Page 10 of 18)
Primary Containment Isolation Valves

ISOLATION VALVE NO.	VALVE FUNCTION	VALVE GROUP	ISOLATION SIGNAL (a)	ISOLATION TIME (SECONDS) (p)
D. <u>OTHER</u> (continued)				
<u>Check Valves</u>				
2RHS*V16 A,B,C(h) (s)	RHS/LPCI to RPV Inside IVs	NA	NA	NA
2RHS*V39 A,B(s)	SDC to RCS Inside IVs	NA	NA	NA
2CPS*V50	Nitrogen Supply to CPS*AOV107 Inside IV	NA	NA	NA
2CSH*V108(h) (s)	CSH to RPV Inside IV	NA	NA	NA
2CSL*V101(h) (s)	CSL to RPV Inside IV	NA	NA	NA
2ICS*V156(s)	ICS to RPV Outside IV	NA	NA	NA
2ICS*V157(s)	ICS to RPV Inside IV	NA	NA	NA
2SLS*V10	SLS to RPV Inside IV	NA	NA	NA
2GSN*V170	N ₂ Purge to Tip Index Mech. Inside IV	NA	NA	NA
2IAS*V448	IAS to ADS Accumulators Inside IV	NA	NA	NA
2IAS*V449	IAS to ADS Accumulators Inside IV	NA	NA	NA
2RCS*V59 A,B	RDS to RCS Pumps A and B Seals Outside IVs	NA	NA	NA
2RCS*V60 A,B	RDS to RCS Pumps A and B Seals Inside IVs	NA	NA	NA
2RCS*V90 A,B	RDS to RCS Pumps A and B Seals Outside IVs	NA	NA	NA

Table T3.6.1-2 (Page 11 of 18)
Primary Containment Isolation Valves

ISOLATION VALVE NO.	VALVE FUNCTION	VALVE GROUP	ISOLATION SIGNAL (a)	ISOLATION TIME (SECONDS) (p)
D. <u>OTHER</u> (continued)				
2RHS*V19(d) (f)	Discharge Check from RCIC to Supp. Pool	NA	NA	NA
2RHS*V20(d) (f)	Discharge Check from RCIC to Supp. Pool	NA	NA	NA
2RHS*V117(d) (f)	Check Valve from RCIC Drain to Supp. Pool	NA	NA	NA
2RHS*V118(d) (f)	Check Valve from RCIC Drain to Supp. Pool	NA	NA	NA
2FWS*V23 A,B	Feedwater to RPV Outside IVs	NA	NA	NA
2FWS*V12 A,B	Feedwater to RPV Inside IVs	NA	NA	NA
<u>Excess Flow Check(e)</u> <u>Reactor</u> <u>Instrumentation</u> <u>Lines</u>				
2ISC*EFV1	Inst. Line from MSS	NA	NA	NA
2ISC*EFV2	Inst. Line from N14, 200°	NA	NA	NA
2ISC*EFV3	Inst. Line from N14, 160°	NA	NA	NA
2ISC*EFV4	Inst. Line from N13, 190°	NA	NA	NA
2ISC*EFV5	Inst. Line from N14, 20°	NA	NA	NA
2ISC*EFV6	Inst. Line from N14, 340°	NA	NA	NA
2ISC*EFV7	Inst. Line from N13, 10°	NA	NA	NA
2ISC*EFV8	Inst. Line from N12, 160°	NA	NA	NA
2ISC*EFV10	Inst. Line from N12, 200°	NA	NA	NA
2ISC*EFV11	To 2ISC*FT47K, FT48B	NA	NA	NA
2ISC*EFV13	To 2ISC*FT47H	NA	NA	NA
2ISC*EFV14	Vessel Bottom Tap, Loop A Jet Pump	NA	NA	NA
2ISC*EFV15	Inst. Line from N12, 340°	NA	NA	NA

Table T3.6.1-2 (Page 12 of 18)
Primary Containment Isolation Valves

ISOLATION VALVE NO.	VALVE FUNCTION	VALVE GROUP	ISOLATION SIGNAL (a)	ISOLATION TIME (SECONDS) (p)
D. <u>OTHER</u> (continued)				
2ISC*EFV17	Inst. Line from N12, 20°	NA	NA	NA
2ISC*EFV18	To 2ISC*FT47J, FT48A	NA	NA	NA
2ISC*EFV20	To 2ISC*FT47E	NA	NA	NA
2ISC*EFV21	Vessel Bottom Tap for CSH, RDS	NA	NA	NA
2ISC*EFV22	Vessel Bottom Tap for WCS and Loop B J.P.	NA	NA	NA
2ISC*EFV23	To 2ISC*FT48C and Postaccident Sampling	NA	NA	NA
2ISC*EFV24	To 2ISC*FT48D and Postaccident Sampling	NA	NA	NA
2ISC*EFV25	To 2ISC*FT47L	NA	NA	NA
2ISC*EFV26	To 2ISC*FT47C	NA	NA	NA
2ISC*EFV27	To 2ISC*FT47A	NA	NA	NA
2ISC*EFV28	To 2ISC*FT47R	NA	NA	NA
2ISC*EFV29	To 2ISC*FT47G	NA	NA	NA
2ISC*EFV30	To 2ISC*FT47N	NA	NA	NA
2ISC*EFV31	To 2ISC*FT48A	NA	NA	NA
2ISC*EFV32	To 2ISC*FT47T	NA	NA	NA
2ISC*EFV33	To 2ISC*FT47V, FT48C	NA	NA	NA
2ISC*EFV34	To 2ISC*FT47B	NA	NA	NA
2ISC*EFV35	To 2ISC*FT47D	NA	NA	NA
2ISC*EFV36	To 2ISC*FT47F	NA	NA	NA
2ISC*EFV37	To 2ISC*FT47S	NA	NA	NA
2ISC*EFV38	To 2ISC*FT47M	NA	NA	NA
2ISC*EFV39	To 2ISC*FT47P	NA	NA	NA
2ISC*EFV40	To 2ISC*FT48B	NA	NA	NA
2ISC*EFV41	To 2ISC*FT47U	NA	NA	NA
2ISC*EFV42	To 2ISC*FT47W, FT48D	NA	NA	NA
2ICS*EFV1	To 2ICS*PDT167	NA	NA	NA
2ICS*EFV2	To 2ICS*PDT167	NA	NA	NA
2ICS*EFV3	To 2ICS*PDT168	NA	NA	NA
2ICS*EFV4	To 2ICS*PDT168	NA	NA	NA
2ICS*EFV5	To 2ICS*PT142, 143	NA	NA	NA

Table T3.6.1-2 (Page 13 of 18)
Primary Containment Isolation Valves

ISOLATION VALVE NO.	VALVE FUNCTION	VALVE GROUP	ISOLATION SIGNAL (a)	ISOLATION TIME (SECONDS) (p)
D. <u>OTHER</u> (continued)				
2RHS*EFV 5, 6	To 2RHS*PDT18B	NA	NA	NA
2RHS*EFV7	To 2RHS*PDT18A	NA	NA	NA
2MSS*EFV 1A,B,C,D	To Flow Elements A,B,C,D Steamlines	NA	NA	NA
2MSS*EFV 2A,B,C,D	To Flow Elements A,B,C,D Steamlines	NA	NA	NA
2MSS*EFV 3A,B,C,D	To Flow Elements A,B,C,D Steamlines	NA	NA	NA
2MSS*EFV 4A,B,C,D	To Flow Elements A,B,C,D Steamlines	NA	NA	NA
2RCS*EFV45 A,B	To 2RCS*FT 7 A/B, FT 9 A/B	NA	NA	NA
2RCS*EFV46 A,B	To 2RCS*FT 7 A/B, FT 9 A/B	NA	NA	NA
2RCS*EFV47 A,B	To 2RCS*FT 6 A/B, FT 8 A/B	NA	NA	NA
2RCS*EFV48 A,B	To 2RCS*FT 6 A/B, FT 8 A/B	NA	NA	NA
2RCS*EFV52 A,B	To 2RCS*PDT 15 A/B	NA	NA	NA
2RCS*EFV53 A,B	To 2RCS*PDT 15 A/B	NA	NA	NA
2RCS*EFV62 A,B	To 2RCS*PT44 A/B	NA	NA	NA
2RCS*EFV63 A,B	To 2RCS*PT42 A/B	NA	NA	NA
2WCS*EFV221	To 2WCS-FT 134	NA	NA	NA
2WCS*EFV222	To 2WCS*FT67X, PDS 115	NA	NA	NA
2WCS*EFV223	To 2WCS*FT67Y	NA	NA	NA
2WCS*EFV224	To 2WCS*FT67Y	NA	NA	NA
2WCS*EFV300	To 2WCS*FT67X, PDS 115	NA	NA	NA
2CSH*EFV3	To 2CSH*PDT109	NA	NA	NA
2CSL*EFV1	To 2CSL*PDT132 and 2RHS*PDT18A	NA	NA	NA
<u>Excess Flow Check(e)</u> <u>Other Instrumentation</u> <u>Lines</u>				
2ISC*EFV9	Containment Pressure 2ISC*PT15C, 16B, 16D	NA	NA	NA

Table T3.6.1-2 (Page 14 of 18)
Primary Containment Isolation Valves

ISOLATION VALVE NO.	VALVE FUNCTION	VALVE GROUP	ISOLATION SIGNAL (a)	ISOLATION TIME (SECONDS) (p)
D. OTHER (continued)				
2ISC*EFV12	Containment Pressure 2ISC*PT15B,17B,17D	NA	NA	NA
2ISC*EFV16	Containment Pressure 2ISC*PT15A,16A,16C	NA	NA	NA
2ISC*EFV19	Containment Pressure 2ISC*PT15D,17A,17C	NA	NA	NA
2CMS*EFV1A	To CMS*PT1A	NA	NA	NA
2CMS*EFV1B	To CMS*PT1B	NA	NA	NA
2CMS*EFV3A	To CMS*PT2A	NA	NA	NA
2CMS*EFV3B	To CMS*PT2B	NA	NA	NA
2CMS*EFV5A	To CMS*PT7A	NA	NA	NA
2CMS*EFV5B	To CMS*PT7B	NA	NA	NA
2CMS*EFV6	To CMS-PT168	NA	NA	NA
2CMS*EFV8A	To CMS*LT9A,11A,114	NA	NA	NA
2CMS*EFV8B	To CMS*LT9B,11B,105	NA	NA	NA
2CMS*EFV9A	To CMS*LT9A,11A,114	NA	NA	NA
2CMS*EFV9B	To CMS*LT99B,11B,105	NA	NA	NA
2CMS*EFV10	To CMS-PI173	NA	NA	NA
2DER*EFV31	To DER*PT134	NA	NA	NA
2IAS*EFV200	To 2IAS*PT230 off ADS Accum.	NA	NA	NA
2IAS*EFV201	To 2IAS*PT231 off ADS Accum.	NA	NA	NA
2IAS*EFV202	To 2IAS*PT232 off ADS Accum.	NA	NA	NA
2IAS*EFV203	To 2IAS*PT235 off ADS Accum.	NA	NA	NA
2IAS*EFV204	To 2IAS*PT234 off ADS Accum.	NA	NA	NA
2IAS*EFV205	To 2IAS*PT233 off ADS Accum.	NA	NA	NA
2IAS*EFV206	To 2IAS*PT236 off ADS Accum.	NA	NA	NA
2RCS*EFV44 A,B	To 2RCS*PT84 A/B	NA	NA	NA
2CSH*EFV1	To 2CSH*LT123, LT124	NA	NA	NA
2CSH*EFV2	To 2CSH*LT123, LT124	NA	NA	NA

Table T3.6.1-2 (Page 15 of 18)
Primary Containment Isolation Valves

Table Notations

- * Isolates on injection signal, not primary containment isolation signal.
- (a) See page 17 in this Table for the key to the isolation signals.
- (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. The reactor instrumentation line excess flow check valves shall be tested in accordance with Technical Specification SR 3.6.1.3.9.
- (f) These valves are check valves, located in 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. These valves can only be tested against a zero d/p.
- (i) Valves are maintained closed. The FPW lines are capped. Valves are Type C tested.
- (j) Not used.
- (k) Valves close on a SCRAM signal; not part of primary containment isolation system but are included here for Type C testing per Technical Specification 3.6.1.1. These valves are not required to be OPERABLE per this specification but are required to be OPERABLE per Technical Specification 3.1.8.
- (l) Not subject to Type A or Type C leak test because of constant monitoring under constant 1800 psig pressure and the possible detrimental effects of shutdown.
- (m) Not used.
- (n) These valves are Type C tested and may be tested in the reverse direction.
- (o) Deleted

Table T3.6.1-2 (Page 16 of 18)
Primary Containment Isolation Valves

- (p) The maximum isolation times for primary containment automatic isolation valves listed in this Table are either the analytical times used in the accident analysis as described in the USAR; or times derived by applying margins to the vendor test data obtained in accordance with industry codes and standards or the GL 89-10 calculated time. For non-analytical automatic primary containment isolation valves, the maximum isolation time is derived as follows:
1. Valves with full stroke times less than or equal to 10 seconds, maximum isolation time approximately equals the vendor tested closure time or the GL 89-10 calculated time multiplied by 2.0.
 2. Valves with full stroke times greater than 10 seconds, maximum isolation time approximately equals the vendor tested closure time or the GL 89-10 calculated time multiplied by 1.5.
 3. Valve closing times do not include isolation instrumentation response time.
- (q) These valves are leak tested and may be tested by pressurizing between the seats. Reference USAR Table 6.2-65.
- (r) Relief Valves are Type C tested as part of 2RHS*MOV15A,B assembly.
- (s) Penetrations that are associated with a closed loop outside containment only require Appendix J Type C testing of a single isolation valve inside or outside containment, provided a closed system outside containment is maintained. The closed system boundary includes the main process lines from the suppression pool or process penetration on the suction side of the associated pumps through the containment penetration on the discharge side, out to and including the first normally closed isolation valves (i.e., drain valves, interface boundary valves, relief valves, etc.). The designated closed system penetration leak tested isolation valves credited in the Appendix J Program are:
- | | |
|-----------------|--|
| 2RHS*MOV104 | RHS Reactor Head Spray Outside IV (penetration Z-22) |
| 2RHS*MOV40A,B | Shutdown Cooling Return Outside IVs (penetrations Z-10A/10B) |
| 2RHS*MOV112 | SDC Supply Inside IV (penetration Z-11) |
| 2RHS*MOV15A,B | Containment Spray to Drywell Outside IVs
(penetrations Z-8A/8B) |
| 2RHS*MOV24A,B,C | RHS/LPCI to RPV Outside IVs (penetrations Z-9A/9B/9C) |
| 2CSH*MOV107 | CSH to RPV Outside IV (penetration Z-14) |
| 2CSL*MOV104 | CSL to RPV Outside IV (penetration Z-16) |
| 2ICS*MOV126 | ICS to RPV Outside IV (penetration Z-22) |
| 2ICS*V288 | Keep-fill between 2ICS*MOV126 and 2ICS*V157
(penetration Z-22) |
| 2RHS*RV152 | SDC Supply from RCS RV Inside IV (penetration Z-11) |
- Note that for penetration Z-22, valve 2ICS*V156 may not be credited as the only tested isolation valve in conjunction with a closed loop, since it is a simple check valve outside containment which does not meet the provisions of 10CFR50, Appendix A, GDC 55.
- (t) Valves are mechanically closed (gagged). Pressure source is eliminated by barrier installation as part of RHR system steam condensing mode retirement.

Table T3.6.1-2 (Page 17 of 18)
Primary Containment Isolation Valves

(u) Automatic isolation signals to RCIC Turbine Exhaust Vacuum Breaker Line Isolation Valves 2ICS*MOV148 and 2ICS*MOV164 energize a 70-sec time delay to slow closure of these valves. The time delay is provided to ensure the exhaust steam in the turbine exhaust line has fully condensed prior to isolating the vacuum breaker line.

(v) Penetrations that are associated with a closed loop outside containment and do not constitute a potential primary containment atmospheric pathway during and following a DBA do not require Appendix J Type C testing as stated above in note (S). Pressure Isolation Valve Leakage testing of the outside containment isolation valve in water filled systems may be substituted provided a closed system outside containment is maintained and PIV testing confirms zero leakage through the penetration. This ensures that the penetration will remain filled with water during and following a DBA and therefore does not constitute a potential primary containment atmospheric pathway.

The closed system boundary includes the main process lines from the suppression pool or process penetration on the suction side of the associated pumps through the containment penetration on the discharge side, out to and including the first normally closed isolation valves (i.e., drain valves, interface boundary valves, relief valves, etc.).

The following designated closed system penetration Pressure Isolation Valves are leak tested and credited for the Appendix J Program:

2RHS*MOV40A,B Shutdown Cooling Return Outside IVs (penetrations Z-10A/10B)
2RHS*MOV113 SDC Supply Outside IV (penetration Z-11)
2CSH*MOV107 CSH to RPV Outside IV (penetration Z-14)
2CSL*MOV104 CSL to RPV Outside IV (penetration Z-16)

Table T3.6.1-2 (Page 18 of 18)
Primary Containment Isolation Valves

Key to Isolation Signals

A = Low reactor vessel water, Level 3
B = Low reactor vessel water, Level 2
C = Not used
D = High main steam line flow
E = High main steam line tunnel ambient temperature
F = High drywell pressure
G = Not used
H = Low RCIC steam supply pressure
J = High reactor water cleanup system equipment area ambient temperature
K = Reactor core isolation cooling pipe routing area high temperature and RCIC equipment area high temperature, high steam line flow, high turbine exhaust diaphragm pressure
L = High reactor vessel pressure
M = High residual heat removal system equipment area ambient temperatures
N = Not used
P = Low main steam line turbine inlet pressure
R = Low main condenser vacuum
S = Standby liquid control system actuated
T = High main steam line tunnel differential temperatures
U = High reactor water cleanup system differential flow
W = Not used
X = Low reactor water level, Level 1
Y = Standby gas treatment exhaust high radiation
LC = Not used
RM = Remote manual switch from control room
LMC= Not used
Z = Manual isolation
AA = Main steam line lead enclosure high ambient temperature
BB = RCIC/RHR steamline flow - high
CC = Reactor building high ambient temperature
DD = Reactor building pipe chase high ambient temperature

Table 3.6.1-3 (page 1 of 2)
Secondary Containment Bypass Leakage Paths Leakage Rate Limits

VALVE NUMBER	VALVE DESCRIPTION	PER VALVE LEAK RATE (SCFH)
2MSS*MOV111 2MSS*MOV112	Main steam drain line (inboard)	1.875
2MSS*MOV208	Main steam drain line (outboard)	0.625
2CMS*SOV74A, B (d) 2CMS*SOV75A, B (d) 2CMS*SOV76A, B (d) 2CMS*SOV77A, B (d)	4 Post-accident sampling lines	0.2344
2DER*MOV119 2DER*RV344	Drywell equipment drain lines	(a)
2DER*MOV120		1.25
2DER*MOV130 2DER*MOV131	Drywell equipment vent line	0.625
2DFR*MOV120	Drywell floor drain line	1.875
2DFR*MOV121 2DFR*RV228		(b)
2DFR*MOV139 2DFR*MOV140		0.9375
2WCS*MOV102 2WCS*MOV112	RWCU line	2.5
2FWS*V23A, B 2FWS*V12A, B	Feedwater line	12.0
2CPS*AOV104 2CPS*AOV106	CPS supply line to drywell	4.38
2CPS*AOV105 2CPS*AOV107	CPS supply line to supp. chamber	3.75

(continued)

- (a) The combined leakage rate for these two valves shall be ≤ 1.25 SCFH.
- (b) The combined leakage rate for these two valves shall be ≤ 1.875 SCFH.

Table 3.6.1.3-1 (page 2 of 2)
Secondary Containment Bypass Leakage Paths Leakage Rate Limits

VALVE NUMBER	VALVE DESCRIPTION	PER VALVE LEAK RATE (SCFH)
2CPS*SOV119 2CPS*SOV120 2CPS*SOV121 2CPS*SOV122	CPS supply line to supp. chamber	0.625
2IAS*SOV164 2IAS*V448	Inst. air to ADS accumulators	0.9375
2IAS*SOV165 2IAS*V449	Inst. air to ADS accumulators	0.9375
2GSN*SOV166 2GSN*V170	Inst. air to SRV accumulators	(c)
2IAS*SOV166 2IAS*SOV184	Inst. air to drywell	(c)
2IAS*SOV167 2IAS*SOV185	Inst. air to drywell	(c)
2IAS*SOV168 2IAS*SOV180	Inst. air to CPS valve in supp. chamber	(c)
2CPS*SOV132 2CPS*V50	Inst. air to CPS valve in supp. chamber	(c)
Deleted		

- (c) The combined leak rate for these penetrations shall be ≤ 3.6 SCFH. The assigned leakage rate through a penetration shall be that of the valve with the highest leakage rate in that penetration. However, if a penetration is isolated by one closed and de-activated automatic valve, closed manual valve, or blind flange, the leakage through the penetration shall be the actual pathway leakage.
- (d) The LCO requirements and leakage rate limit shall apply until such time as a modification eliminates the potential secondary containment bypass leakage path

Secondary Containment Isolation Valves
TRM 3.6.4.2

TABLE T3.6.4.2-1 (Page 3 of 3)
Secondary Containment Manual Valves and Blind Flanges
Required to be Closed During Accident Conditions

Component ID	Reference Drawing	Comments
2WCS-V376	PID-37C	
2WCS-V382	PID-37C	
W-7521-C	EB-70M	Blind Flange ^(a)
W-7520-C	EB-70M	Blind Flange ^(a)
W-7522-C	EP-019R	Blind Flange ^(a)
W-7523-C	EP-019R	Blind Flange ^(a)
2CCP*V1005	PID-13C	
2CCP*V1007	PID-13C	
2GSN*V220A	DP-453BA	
2GSN*V220B	DP-453BA	
2GSN*V221A	DP-453BA	
2GSN*V221B	DP-453BA	
2ADH*V40	PID-115A	
2ADH*V53	PID-115A	
2CPS*V56	PID-61A	
2CPS*PSE55	PID-61A	Rupture Disc

(a) The component ID identifies the component associated with the actual item to be surveilled (the surveilled item does NOT have a Component ID). The comments identify the actual item to be surveilled.

TRM 5.5 PROGRAMS

TRM 5.5.7 Ventilation Filter Testing Program

Technical Specification 5.5.7, Ventilation Filter Testing Program, is established, implemented, and maintained by:

1. Technical Surveillance Procedure N2-MSP-GTS-R@001, Testing and Analysis of Unit 2 Standby Gas Treatment System,
 2. Technical Surveillance Procedure N2-TSP-HVC-R@001, Testing and Analysis of Unit 2 Control Room Outdoor Air Special Filter Train System, and
 3. Surveillance Test Procedure N2-OSP-GTS-R@001, Standby Gas Treatment System Functional Test.
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TRM 5.5 PROGRAMS

TRM 5.5.10 Technical Specifications Bases Control Program

Technical Specification 5.5.10, Technical Specifications Bases Control Program, is established, implemented, and maintained by:

- Procedure LS-AA-101-1000, License Amendment and Technical Specifications Change Request Process.
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TRM 5.5 PROGRAMS

TRM 5.5.11 Safety Function Determination Program

Technical Specification 5.5.11, Safety Function Determination Program, is established, implemented, and maintained by:

- Procedure OP-NM-108-115-1003, Safety Function Determination Program.
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Table 3.6.1-3 (page 1 of 2)
Secondary Containment Bypass Leakage Paths Leakage Rate Limits

VALVE NUMBER	VALVE DESCRIPTION	PER VALVE LEAK RATE (SCFH)
2MSS*MOV111 2MSS*MOV112	Main steam drain line (inboard)	1.875
2MSS*MOV208	Main steam drain line (outboard)	0.625
2CMS*SOV74A, B (d) 2CMS*SOV75A, B (d) 2CMS*SOV76A, B (d) 2CMS*SOV77A, B (d)	4 Post-accident sampling lines	0.2344
2DER*MOV119 2DER*RV344	Drywell equipment drain lines	(a)
2DER*MOV120		1.25
2DER*MOV130 2DER*MOV131	Drywell equipment vent line	0.625
2DFR*MOV120 2DFR*MOV121 2DFR*RV228	Drywell floor drain line	1.875
		(b)
2DFR*MOV139 2DFR*MOV140	Drywell floor vent line	0.9375
2WCS*MOV102 2WCS*MOV112	RWCU line	2.5
2FWS*V23A, B 2FWS*V12A, B	Feedwater line	12.0
2CPS*AOV104 2CPS*AOV106	CPS supply line to drywell	4.38
2CPS*AOV105 2CPS*AOV107	CPS supply line to supp. chamber	3.75
(continued)		

(a) The combined leakage rate for these two valves shall be ≤ 1.25 SCFH.

(b) The combined leakage rate for these two valves shall be ≤ 1.875 SCFH.

Table 3.6.1.3-1 (page 2 of 2)
Secondary Containment Bypass Leakage Paths Leakage Rate Limits

VALVE NUMBER	VALVE DESCRIPTION	PER VALVE LEAK RATE (SCFH)
2CPS*SOV119 2CPS*SOV120 2CPS*SOV121 2CPS*SOV122	CPS supply line to supp. chamber	0.625
2IAS*SOV164 2IAS*V448	Inst. air to ADS accumulators	0.9375
2IAS*SOV165 2IAS*V449	Inst. air to ADS accumulators	0.9375
2GSN*SOV166 2GSN*V170	Inst. air to SRV accumulators	(c)
2IAS*SOV166 2IAS*SOV184	Inst. air to drywell	(c)
2IAS*SOV167 2IAS*SOV185	Inst. air to drywell	(c)
2IAS*SOV168 2IAS*SOV180	Inst. air to CPS valve in supp. chamber	(c)
2CPS*SOV132 2CPS*V50	Inst. air to CPS valve in supp. chamber	(c)
Deleted		

- (c) The combined leak rate for these penetrations shall be ≤ 3.6 SCFH. The assigned leakage rate through a penetration shall be that of the valve with the highest leakage rate in that penetration. However, if a penetration is isolated by one closed and de-activated automatic valve, closed manual valve, or blind flange, the leakage through the penetration shall be the actual pathway leakage.
- (d) The LCO requirements and leakage rate limit shall apply until such time as a modification eliminates the potential secondary containment bypass leakage path

TRM 5.5 PROGRAMS

TRM 5.5.7 Ventilation Filter Testing Program

Technical Specification 5.5.7, Ventilation Filter Testing Program, is established, implemented, and maintained by:

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TRM 5.5 PROGRAMS

TRM 5.5.10 Technical Specifications Bases Control Program

Technical Specification 5.5.10, Technical Specifications Bases Control Program, is established, implemented, and maintained by:

- Procedure LS-AA-101-1000, License Amendment and Technical Specifications Change Request Process.
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TRM 5.5 PROGRAMS

TRM 5.5.11 Safety Function Determination Program

Technical Specification 5.5.11, Safety Function Determination Program, is established, implemented, and maintained by:

- Procedure OP-NM-108-115-1003, Safety Function Determination Program.
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