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Exelon Nuclear

RA08-070

10 CFR 50.55a

December 17, 2008

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

LaSalle County Station, Units 1 and 2
Facility Operating License Nos. NPF-11 and NPF-18
NRC Docket Nos. 50-373 and 50-374

Subject: Submittal of Third 10-Year Inservice Testing (IST) Interval Program Plan

In accordance with the American Society of Mechanical Engineers (ASME) Code for Operation and Maintenance of Nuclear Power Plants (OM Code), Subsection ISTA-3200 (a), "Administrative Requirements," attached for your information is a copy of the Third 10-Year Interval Inservice Testing (IST) Program Plan for LaSalle County Station (LSCS), Units 1 and 2. The third interval of the LSCS, Units 1 and 2 IST Program complies with the 2001 Edition through 2003 Addenda of the ASME OM Code.

Should you have any questions concerning this letter, please contact Mr. Terrence Simpkin at (815) 415-2800.

Daniel J. Enright
Site Vice President
LaSalle County Station

Attachment: LaSalle County Station (LSCS), Units 1 and 2 Third Inservice Testing (IST) Interval Program Plan

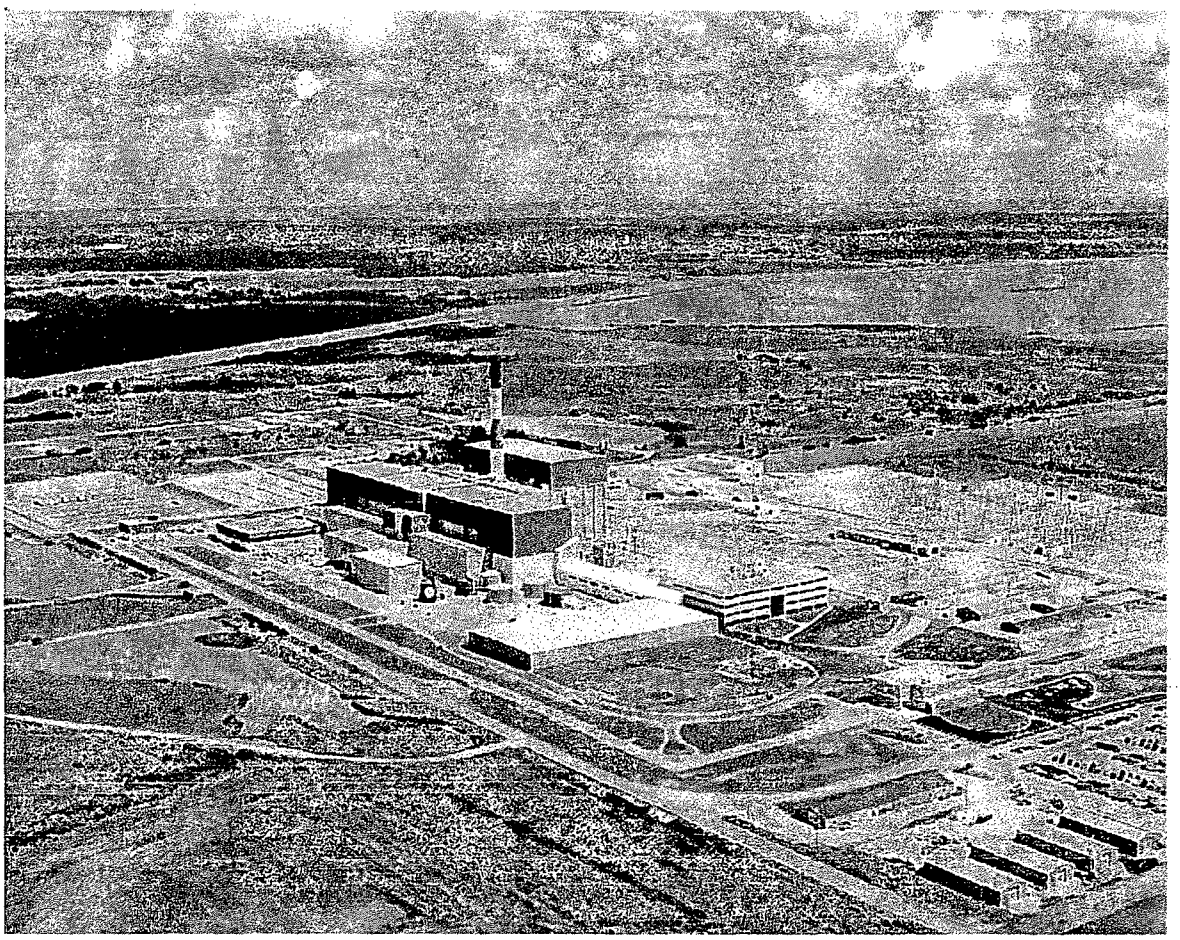
cc: Regional Administrator – NRC Region III
NRC Senior Resident Inspector – LaSalle County Station

A047
NRR

LaSalle County Station

COMBINED UNITS 1 & 2 INSERVICE TESTING PROGRAM
FOR PUMPS AND VALVES

3rd 10-Year IST Interval



Exelon

Nuclear

HSB Global Standards

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Lisle, IL 60532

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Re: Authorized Nuclear Inservice Concrete (ANIC) Inspector detailed review of the Third Ten-Year Interval InService Testing (IST) Program, Revision Zero - LaSalle County Station (LSCS) Units 1 and 2.

September 28, 2007

Byron Ginter, Engineering Programs Manager

Per the requirements of the "American Society of Mechanical Engineers" (ASME) Code, Section XI of the 2001 Edition with 2003 Addendum, Paragraph IWA-2110 (a) (b); the Inspector shall do a detailed review of the Program Plan.

The IST Program details the requirements for the examination and testing of ASME Code Class pumps and valves. The Program provides the requirements for the performance and administration of assessing the operational readiness of pumps and valves whose specific functions are required in the shutting down the reactor to cold shut down condition, in maintaining the cold shut down condition, or in mitigating the consequences of an accident condition. The Program was developed in accordance with the requirements of 10 CFR 50.55a and the ASME Code.

Note: The transition of the IST Program to the Third 120-Month Interval of the requirements of the ASME Code, the Authorized Inspection Agency is removed from verification of IST. Third party inspection services are no longer mandated.

Respectively submitted,

Rocky W. White

Rocky W. White, LaSalle County Station - ANIC

Cc: Rodney Vickers, IST Engineering Programs
JoAnn M. Shields, IVVI Engineering Programs

LaSalle County Station
Units 1 & 2

Inservice Testing Program Plan
Third Ten-Year Interval
Revision 2

Commercial Service Dates:

Unit 1 – January 1, 1984
Unit 2 – October 17, 1984

LaSalle County Station
2601 N. 21st Rd
Marseilles, Illinois 61341

APPROVALS:

Prepared By: Rodney Vickers **Date:** 10/24/08
Station IST Coordinator

Reviewed By: _____ **Date:** 10/24/08
Corporate IST Engineer

Approved By: _____ **Date:** 10/24/08
Station Engineering Programs Manager

REVISION LOG

Effective Date	Revision Description	Prepared; IST Program Engineer	Date	Approved; Engr. Programs Manager	Date
10/12/07	Revision 0 – Original Issue for Third Ten-Year IST Interval	Rodney Vickers	10/11/07	Andrew Kochis for Byron Ginter	10/11/07
06/12/08	Revision 1 – Revised Attachment 2 and Pump Relief Request RP-02 to add NRC Approval Date	Rodney Vickers	06/12/08	Byron Ginter	06/12/08
10/24/08	Revision 2 – Revised Technical Position TP-06 and Attachment 15 to reflect change in pump category (from Group A to Group B) for 1(2)E12-C002C. Revised Technical Position TP-08 and Attachment 17 to reflect changes made to valve categories under EC 363056.	Rodney Vickers	10/24/08	Byron Ginter	10/24/08

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SECTION

1.0 INTRODUCTION

1.1 Purpose

To provide requirements for the performance and administration of assessing the operational readiness of those pumps and valves with specific functions that are required to:

- Shutdown the reactor to the safe shutdown condition,
- Maintaining the safe shutdown condition, or
- To mitigate the consequences of an accident.

The LaSalle County Station was designed and licensed to operate with the Cold Shutdown condition defined as the "safe" shutdown condition.

1.2 Scope

The IST program plan has been prepared to meet the requirements of the American Society of Mechanical Engineers (ASME) OM Code 2001 Edition through 2003 Addenda (ASME OM Code 2001/2003a). Mandatory Appendix I of the ASME OM Code 2001 Edition through 2003 Addenda will be used for pressure relief device testing activities. Mandatory Appendix II of the ASME OM Code 2001 Edition through 2003 Addenda (as modified by 10CFR50.55a(b)(3)(iv)(A), (B) and (C)) will be used for check valve condition monitoring activities. Motor operated valve testing is based on the requirements of ASME Code Case OMN-1 for selected valves (as modified by 10CFR50.55a(b)(3)(ii) and Relief Request RV-02).

- ASME OM Code 2001/2003a, Subsection ISTA, "*General Requirements*"

  ISTA contains the requirements directly applicable to inservice testing including the Owner's Responsibility and Records Requirements.

- ASME OM Code 2001/2003a, Subsection ISTB, "*Inservice Testing of Pumps in Light-Water Reactor Nuclear Power Plants*"

  ISTB establishes the requirements for inservice testing of pumps in light-water reactor nuclear power plants. The pumps covered are those provided with an emergency power source that are required in shutting down of the reactor to a safe shutdown condition, in maintaining the safe shutdown condition, or in mitigating the consequences of an accident.

- ASME OM Code 2001/2003a, Subsection ISTC, "*Inservice Testing of Valves in Light-Water Reactor Nuclear Power Plants*"

  ISTC establishes the requirements for inservice testing of valves in light-water reactor nuclear power plants. The valves covered include those which provide overpressure protection and are required to perform a specific function, either actively through the changing of valve obturator position or passively by effectively maintaining required obturator position in shutting down a reactor to the safe shutdown condition, in maintaining the safe shutdown condition, or in mitigating the consequences of an accident.

- ASME OM Code 2001/2003a, Mandatory Appendix I, "*Inservice Testing of Pressure Relief Devices in Light-Water Reactor Nuclear Power Plants*"

  Provides the requirements for performance testing and monitoring of nuclear plant pressure relief devices. Methods, intervals, and record requirements for monitoring and testing are established, as well as guidelines for the evaluation of results. The Appendix applies to safety valves, safety relief valves, pilot-operated pressure relief valves, power-actuated pressure relief valves, non-reclosing pressure relief devices and vacuum relief devices, including all accessories and appurtenances.

- ASME OM Code 2001/2003a, Mandatory Appendix II, "*Check Valve Condition Monitoring Program*"

  Provides an alternative to the testing or examination requirements of ISTC-3510 through ISTC-5221. The purpose of this program is both to improve valve performance and to optimize testing, examination, and preventive maintenance activities in order to maintain the continued acceptable performance of a select group of check valves.

- ASME OM Code Case OMN-1, Rev. 0, "*Alternative Rules for Preservice and Inservice Testing of Certain Electric Motor-Operated Valve Assemblies in Light-Water Reactor Power Plants*"

  Provides an alternative to the valve testing requirements of subsection ISTC for certain electric motor operated valves. The purpose of these alternative requirements are to provide a program to both improve valve performance and to optimize testing and examination activities, thus eliminating unnecessary testing that provides minimal information about the MOV's operational readiness.

The LaSalle County Nuclear Power Station Third Ten-Year Pump and Valve Inservice Testing Plan will be in effect as follows:

- Unit One: **Start** [(1)]: October 12, 2007 **End:** October 11, 2017
- Unit Two: **Start** [(1)]: October 12, 2007 **End:** October 11, 2017

(1) The start date for the Third Ten-Year IST Interval reflects a one (1) year extension of the Second Ten-Year IST Interval on Unit 1 and an extension of less than one (1) year of the Second Ten-Year IST Interval on Unit 2 as allowed by paragraph IWA-2430(d) of ASME Code Section XI (1989 Edition). This extension is discussed in the letter dated October 16, 2006 from LaSalle County Station to the U.S. Nuclear Regulatory Commission (ref. Regulatory Assurance Letter RA06-063). This extension shall not cause successive intervals to be altered by more than one (1) year from the original pattern of intervals.

2.0 INSERVICE TESTING PLAN FOR PUMPS

2.1 Pump Inservice Testing Plan Description

This testing program for pumps meets the requirements of the ASME OM Code 2001 edition through 2003a, Section ISTB *"Inservice Testing of Pumps in Light-Water Reactor Nuclear Power Plants"*. Where these requirements have been determined to be impractical, specific requests for relief were written and are included in Attachment 3. NRC Generic Letter 89-04 and NUREG 1482, Revision 1 have been used as guidance in the development of the IST Program.

2.2 Pump Plan Table Description

The pumps included in the LaSalle County Nuclear Power Station IST Plan are listed in Attachment 15. The information contained in these tables identifies those pumps that are required to be tested to the requirements of Subsection ISTB of the ASME OM Code 2001 Edition through 2003 Addenda, along with their applicable tests, and test frequencies. The Pump Plan Table is divided into sections based upon Plant System. The headings for the pump tables are delineated below.

Pump EPN — The unique Equipment Part Number (EPN) for the pump. Each EPN is preceded with a Unit designator for the pump:

0	Common Unit
1	Unit 1
2	Unit 2

Pump Name — The descriptive name for the pump.

P&ID — The Piping and Instrumentation Drawing on which the pump is represented.

P&ID Coor. — The P&ID Coordinate location of the pump.

IST Group — Pump Group as defined in ISTB-2000

Group A	Continuous or routinely operated pumps
Group B	Standby pumps not operated routinely
N/A	Not Applicable (Skid-mounted)

2.2 Pump Plan Table Description (Cont'd)

Safety Class — The ASME Code classification of the pump.

1	Class 1
2	Class 2
3	Class 3
NC	Non-Code, Safety Related
NS	Non-Safety Related

Pump Type — The type of pump.

C	Centrifugal
PD	Positive Displacement
VLS	Vertical Line Shaft

Pump Driver — The type of pump driver.

Motor	Motor driven
Turbine	Steam turbine driven
Engine	Combustion Engine

2.2 Pump Plan Table Description (Cont'd)

Test Type — Measured test parameters.

$S^{(1)}$	Pump Speed (Measured only for variable speed pumps).
$dP^{(1)}$	Differential Pressure as calculated by subtracting the suction from the discharge pressures or obtained by direct measurement.
$DIS\text{-}P^{(1)}$	Discharge Pressure (Measured only for positive displacement pumps).
$Q^{(1)}$	Flow Rate as measured using a rate or quantity meter installed in the pump test circuit.
$V^{(1)}$	Vibration (Pump bearing).
SKID	Parameter(s) as determined by LaSalle County Station are verified through the testing of the item's parent/major component.

(1) Following the specification of each 'Test Type', within parenthesis will be noted which of the following test criteria will be applied:

a – Denotes a Group A Pump Test
b – Denotes a Group B Pump Test
c – Denotes a Comprehensive Pump Test

Test Freq. — The frequency for performing the specified inservice test.

M3	Quarterly (92 Days)
CS	Cold Shutdown
RF	Refueling
Y2	Two Years (Biennially)
OP	Operating Parameter

2.2 Pump Plan Table Description (Cont'd)

Relief Request — A relief request number is listed when a specific Code requirement is determined to be impractical.

Deferred Just. — Reference either a Cold Shutdown or Refueling Justification Evaluation by its specific justification number.

Tech. Pos. — Reference a Technical Position by its specific number. A Technical Position is written to document how Code requirements are being implemented at the station when the requirement(s) of the Code are not easily interpreted.

3.0 INSERVICE TESTING PLAN FOR VALVES

3.1 Valve Inservice Testing Plan Description

This testing program for valves meets the requirements of the ASME OM Code 2001 edition through 2003a, Section ISTC *"Inservice Testing of Valves in Light-Water Reactor Nuclear Power Plants"*; Mandatory Appendix I *"Inservice Testing of Pressure Relief Devices in Light-Water Reactor Nuclear Power Plants"*; Mandatory Appendix II *Check Valve Condition Monitoring Program"* with the limitations imposed by 10 CFR 50.55a(b)(3)(iv)(A), (B) and (C); and ASME Code Case OMN-1 with the limitations imposed by 10 CFR 50.55a(b)(3)(ii). Where these requirements are determined to be impractical, specific requests for relief have been written and are included in Attachment 4.

Where the frequency requirements for valve testing have been determined to be impractical, Cold Shutdown or Refuel Outage Justifications have been identified and written. These justifications are provided in Attachments 7 and 9 respectively.

3.2 Valve Plan Table Description

The valves in Attachment 17 list all ASME Class 1, 2, 3 and NC Valves that have been scoped in the IST Program and have been assigned Valve Categories. Valves exempt per ASME OM Code ISTC-1200 are not listed. The Valve Plan Table is divided into sections by Plant System. The following information is included for each valve:

Valve EPN — A unique identifier for the valve. Each EPN is preceded with a Unit designator for the valve:

0	Common Unit
1	Unit 1
2	Unit 2

Valve Name — The description of the valve.

P&ID — The Piping and Instrumentation Drawing (P&ID) number on which the valve appears. (If the valve appears on multiple P&IDs, the primary P&ID will be listed.)

P&ID Coor. — The drawing coordinate location on the P&ID for the valve.

3.2 Valve Plan Table Description (Cont'd)

Code Class

The ASME Classification of the valve.

1	ASME Code Class 1
2	ASME Code Class 2
3	ASME Code Class 3
NC	Non-Code, Safety Related
NS	Non-Safety Related

IST Category

The category(s) assigned to the valve based on the definitions per ASME OM Code ISTC-1300. The following categories are defined in the Code:

Category A – Valves for which seat leakage is limited to a specific maximum amount in the closed position for fulfillment of their function(s).

Category B – Valves for which seat leakage in the closed position is inconsequential for fulfillment of their function(s).

Category C – Valves that are self-actuating in response to some system characteristic, such as pressure (relief valves) or flow direction (check valves) for fulfillment of their function(s).

Category D – Valves that are actuated by an energy source capable of only one operation, such as rupture disks or explosive-actuated valves.

N/A – Valves that have been included into the IST Program as the result of a commitment.

More than on Category may be specified if more than one distinguishing Category characteristic is applicable.

Valve Size

The nominal size of the valve, in inches.

3.2 Valve Plan Table Description (Cont'd)

Valve Type — The valve body design as indicated by the following abbreviation.

3W	3-Way Valve
4W	4-Way Valve
ANG	Angle
BAL	Ball Valve
BTF	Butterfly Valve
CK	Check Valve
DAM	Damper
DIA	Diaphragm Valve
GA	Gate Valve
GL	Globe Valve
PCV	Pressure Control Valve
PLG	Plug Valve
PLT	Pilot Valve
PPT	Poppet Valve
RPD	Rupture Disk
RV	Relief Valve
SCK	Stop Check Valve
SHR	Shear Valve/SQUIB Valve
SV	Safety
XFC	Excess Flow Check Valve

ACT. Type — The actuator type abbreviation.

AO	Air Operator
EXP	Explosive Actuator
HO	Hydraulic Operator
M	Manual
MO	Motor Operator
SA	Self-Actuating
SAP	Self-Actuated Pilot
SO	Solenoid Operator

Active/Passive — Active or Passive function determination for the valve in accordance with ISTA-2000.

A	Active
P	Passive
N/A	Not Applicable (Non-Safety Related Valves)

3.2 Valve Plan Table Description (Cont'd)

Normal Position

The normal position of the valve during normal power operation. If the valve's system does not operate during power operation, then the normal position is the position of the valve when the system is not operating.

C	Closed
LC	Locked Closed
D	De-energized (3-way and 4-way valves)
E	Energized (3-way and 4-way valves)
O	Open
LO	Locked Open
SYS	System Condition Dependent

Safety Position

The valve's safety function position(s). For valves that perform safety functions in the open and closed positions more than one safety function position may be specified.

C	Closed
D	De-energized (3-way and 4-way valves)
E	Energized (3-way and 4-way valves)
D/E	De-energized or Energized
O	Open
O/C	Open or Closed
N/A	Valve has no Safety Related Position (Augmented)

3.2 Valve Plan Table Description (Cont'd)

Test Rqmt

The test(s) that will be performed to fulfill the requirements of ASME OM Code ISTC. The definitions and abbreviations are identified below:

CC	Exercised Closed – Check Valve[1]
CO	Exercise Open – Check Valve[1]
CP	Partial Exercise Open– Check Valve[1]
DT	Rupture Disk / Explosive Valves
ET	Full Exercise without stroke timing
FS-C	Fail Safe Test Closed
FS-O	Fail Safe Test Open
LT-J	Leakage Rate Test (Appendix J)
LT-S	Leakage Rate Test (Seat, ISTC-3630)ME
	Manual Exercise
OPR	Operator Rounds (condition monitoring)
OMN-O	Open Test per OMN-1 Criteria
OMN-C	Closed Test per OMN-1 Criteria
PIT	Position Indication Test
RVT	Relief Valve Test
ST-C	Stroke Time Closed
SD	Solenoid De-energize
SE	Solenoid Energize
ST-O	Stroke Time Open

[1] Three letter designations are used for Check Valve Condition Monitoring tests to differentiate between the various methods of exercising check valves. The letter following "CC" or "CO", or "CP" is "A" for acoustics, "D" for disassembly and examination, "F" for flow indication, "M" for magnetic, "R" for radiography, "T" for break away torque, "U" for ultrasonic, or "X" for manual exercise.

3.2 Valve Plan Table Description (Cont'd)

Test Freq. — The test frequency abbreviation.

AppJ	Appendix J
CM	Condition Monitoring[1]
CS	Cold Shutdown
M3	Quarterly
OP	Operating Activities[2]
RR	Refuel Outage
S2	Explosive Charge Sample
SA	Check Valve Disassembly Sample[3]
Y2	2 years
Y5	5 years
Y10	10 years
JOG	Per the MOV Program, not to exceed 10 years

Relief Request — The applicable Relief Request as it applies to the subject test.

Deferred Just. — Deferred Test Justification. This field provides reference to either an applicable Cold Shutdown Justification or Refuel Outage Justification.

A Cold Shutdown Justification is a document that provides a justification as allowed by ISTC-3510 to extend the applicable testing frequency to that which coincides with the plant's "Cold Shutdown" frequency. A Cold Shutdown Justification is identified by its unique number identifier which has a "CS" prefix. Cold Shutdown Justifications are contained in Attachment 7 of this document.

A Refuel Outage Justification is a document that provides a justification as allowed by ISTC-3510 to extend the applicable testing frequency to that which coincides with the plant's "Refuel Outage" frequency. A Refuel Outage Justification is identified by its unique number identifier that has a "RJ" prefix. Refueling Outage Justifications are contained in Attachment 9 of this document.

[1] Frequency is as indicated in respective Condition Monitoring Plan for that valve group.
[2] Satisfied i.a.w. Exelon IST Program Technical Position, TP-05, "Check Valves in Regular Use."
[3] Used for check valve disassembly/inspection per ISTC requirements or to indicate Condition Monitoring frequency (refer to respective Condition Monitoring Plan for that valve group).

Tech. Pos.

A Technical Position is a document that is used by the utility/Owner to clarify their interpretation of Code requirements when it is felt by the utility or Owner that either the requirements of the code are not easily interpreted or when they simply want to document how a Code requirement is being implemented at the station. Technical Positions are identified by their unique number identifier that contains a "TP" prefix. Technical Positions are contained in Attachment 13 of this document.

This column also identifies the applicable Check Valve Condition Monitoring Program group as contained in Attachment 11, where applicable.

4.0 ATTACHMENTS:

Attachment 1
System and P&ID Listing

Attachment 2
Pump Relief Request Index

Attachment 3
Pump Relief Requests

Attachment 4
Valve Relief Request Index

Attachment 5
Valve Relief Requests

Attachment 6
Cold Shutdown Justification Index

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Cold Shutdown Justifications

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Station Technical Positions

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Inservice Testing Pump Table Index

Attachment 15
Inservice Testing Pump Table

Attachment 16
Inservice Testing Valve Table Index

Attachment 17
Inservice Testing Valve Table

ATTACHMENT 1

SYSTEM AND P&ID LISTING

System	System Name	P&ID
CM	Containment Monitoring	M-156-1, -2, -3, -4, M-158-1, -2, -3, -4
DG	Diesel Generator	M-83-1, -2, -3, -4
DO	Diesel Fuel Oil	M-85-1, M-132
FC	Fuel Pool Cooling	M-98-1, M-144-1
FW	Feedwater	M-57-1, M-118-1
HG	Containment Combustible Gas Control	M-130-1, -2
HP	High Pressure Core Spray	M-95, M-141, M-2095-1, M-2141-1
IA	Instrument Air	M-81-2, M-81-17
IN	Instrument Nitrogen	M-66-1, -2, -3, -4, -7, -8
LP	Low Pressure Core Spray	M-94, M-140, M-2094-1, M-2140-1
MC	Clean Condensate Storage	M-75-2, -4
MS	Main Steam	M-55-1, -2, -3, -7, -8, M-116-1, -2, -3, -7, -8, M-2055-4, -5, -6, -7, M-2116-4, -5, -6, -7
NB	Nuclear Boiler	M-139-1, -2, -3, -4, -5
NR	Neutron Monitoring	M-774-1, -4
PC	Primary Containment	M-92-2, M-138-2
RD	Control Rod Drive	M-100-2, -3, -4, -5, M-146-2, -3, -4, -6
RE	Reactor Building Equipment Drains & Floor Drains	M-91-3, -4, M-137-3, -4

RH	Residual Heat Removal	M-96-1, -2, -3, -4, M-87-1, -2, -3, M-134-1, -2, -3, M-142-1, -2, -3, -4, M-2096-4, -5, M-2142-4, -5
RI	Reactor Core Isolation Cooling	M-101-1, -2, M-147-1, -2, M-2101-1, M-2147-1
RR	Reactor Recirculation	M-93-1, -2, -3, -4, -5, M-2093-1, -2, -3, -4, -8, M-2139-1, -2, -3, -4, -8
RT	Reactor Water Cleanup	M-97-1, M-143-1, M-2097-1, -2, M-2143-1, -2
SA	Service Air	M-82-3, -5
SC	Standby Liquid Control	M-99, M-145
VG	Standby Gas Treatment	M-89
VP	Primary Containment Chilled Water	M-86-1, M-133-1
VQ	Primary Containment Purge	M-92-1, -2, M-138-1, -2
VR	Reactor Building Ventilation	M-1455-1 M-1456-1
WR	Reactor Building Closed Cooling Water	M-90-2, M-136-2

ATTACHMENT 2

PUMP RELIEF REQUEST INDEX

Designator	Description	Approval Date
RP-01	Water Leg Pump Flow Test	Rev. 0: 9/26/07
RP-02	Water Leg Pump Comprehensive Testing	Rev. 1: 5/07/08

ATTACHMENT 3

PUMP RELIEF REQUESTS

Pump Relief Request - RP-01
Water Leg Pump Flow Test
(Rev. 0)
(Page 1 of 3)

Proposed Alternative in Accordance with 10 CFR 50.55a(a)(3)(ii)

Hardship or Unusual Difficulty without Compensating Increase in Level of Quality or Safety

1. ASME Code Component(s) Affected

Pump	Description	Class	Category	Unit
1E22-C003	HPCS Water Leg Pump	2	Group A	1
1E21-C002	LPCS Water Leg Pump	2	Group A	1
1E12-C003	RHR Water Leg Pump	2	Group A	1
1E51-C003	RCIC Water Leg Pump	2	Group A	1
2E22-C003	HPCS Water Leg Pump	2	Group A	2
2E21-C002	LPCS Water Leg Pump	2	Group A	2
2E12-C003	RHR Water Leg Pump	2	Group A	2
2E51-C003	RCIC Water Leg Pump	2	Group A	2

2. Applicable Code Edition and Addenda

ASME OM Code 2001 Edition through 2003 Addenda

3. Applicable Code Requirement

ISTB-5121, Table ISTB-3000-1; Group A pump quarterly flow tests

4. Reason for Request

The primary purpose of these pumps is to maintain the HPCS, LPCS, RCIC, and RHR pump discharge lines filled to limit the potential for water hammer upon associated pump initiation. Once the supported pump (e.g. HPCS, RHR, etc.) is in operation, the associated water leg pump serves no further safety related function. The amount of flow delivered by each water leg pump is dependant upon each supported systems leakage rate. Each water leg pump is capable of delivering approximately 50 gpm. None of the listed water leg pumps have instrumentation installed in their discharge lines for measuring flow rates.

Pump Relief Request - RP-01
(Rev. 0)
(Page 2 of 3)

While flow measurement instrumentation is provided downstream of the water leg pumps branch connection to its associated support system, during power operation the water leg pump is unable to generate sufficient pressure to flow through the associated flow element into the reactor vessel. Even if the water leg pump was capable of developing a head sufficient to inject into the reactor vessel during power operation, the flow measurement instrumentation, which is designed to measure flow developed by either a HPCS (0-8000 gpm), LPCS (0-10,000 gpm), RHR (0-10,000 gpm) or RCIC (0-700 gpm) pump is not capable of measuring such small flows developed by a water leg pump (i.e. approximately 50 gpm).

The application of temporary flow instrumentation (ultrasonic) cannot be utilized as there does not exist a run of piping long enough that would allow for an accurate measurement. System modifications to provide test measuring locations places undue burden on the licensee without demonstrating any increase in the level of plant safety. These pumps are in continuous operation and pump performance is continuously monitored by a low-pressure alarm on each HPCS, LPCS, RHR and RCIC pump discharge header.

5. Proposed Alternative and Basis for Use

LaSalle Station will continue to monitor the subject pumps for degradation by measuring and recording pump inlet pressure, discharge pressure, (from which differential pressure is calculated), and vibration. The differential pressure and vibration data will be trended. These measurements are taken quarterly during normal plant operation, when the supported system's pump is not in operation and RCS pressure is greater than the water leg pumps discharge pressure. Measurement and trending of these parameters under these stated conditions will provide satisfactory indication of operational readiness as well as the ability to detect potential degradation. In addition, the main ECCS pump headers each have a low pressure sensor which continuously monitors the operability of the respective water leg pump and alarm upon reaching their low setpoints. Station Technical Specification Surveillance Requirements (i.e., TS 3.5.1.1, 3.5.2.3, 3.5.3.1) also verify operability of the water leg pumps by verifying flow through a high point vent on a monthly basis.

Vibration measurement will continue to be obtained under normal operating conditions and evaluated in accordance with ISTB-5121(d) and (e). The differential pressure across the pump will also continue to be determined quarterly through plant procedures utilizing each pumps minimum flow line in accordance with ISTB-5121(c) and (e). Differential Pressure and vibration will continue to be trended. In addition, LaSalle County Station verifies operability of these pumps through the continuous monitoring of the HPCS, LPCS, RHR and RCIC pump discharge line pressures that are monitored in the control room by alarm.

Pump Relief Request - RP-01
(Rev. 0)
(Page 3 of 3)

6. Duration of Proposed Alternative

This proposed alternative will be utilized for the entire third 120 month interval.

7. Precedents

This relief request was previously approved for the second ten-year interval at LaSalle County Station Units 1 and 2 as Relief Request RP-01, documented in a Safety Evaluation and Letter dated July 6, 1998.

8. Approval

This relief request was approved for the third 120 month interval by letter from U.S. NRC to C.M. Crane (Exelon Generation Company, LLC), "Relief Requests for the LaSalle County Station, Units 1 and 2, Third 10-Year Pump and Valve Inservice Testing Program", dated September 26, 2007.

Pump Relief Request - RP-02
Water Leg Pump Comprehensive Test
(Rev. 1)
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Proposed Alternative in Accordance with 10 CFR 50.55a(a)(3)(ii)

Hardship or Unusual Difficulty without Compensating Increase in Level of Quality or Safety

1. ASME Code Component(s) Affected

Pump	Description	Class	Category	Unit
1E22-C003	HPCS Water Leg Pump	2	Group A	1
1E21-C002	LPCS Water Leg Pump	2	Group A	1
1E12-C003	RHR Water Leg Pump	2	Group A	1
1E51-C003	RCIC Water Leg Pump	2	Group A	1
2E22-C003	HPCS Water Leg Pump	2	Group A	2
2E21-C002	LPCS Water Leg Pump	2	Group A	2
2E12-C003	RHR Water Leg Pump	2	Group A	2
2E51-C003	RCIC Water Leg Pump	2	Group A	2

2. Applicable Code Edition and Addenda

ASME OM Code 2001 Edition through 2003 Addenda

3. Applicable Code Requirement

ISTB-5123, Table ISTB-3000-1; Comprehensive pump flow tests

4. Reason for Request

ISTB-5123 requires the performance of Comprehensive pump testing of the parameters listed in Table ISTB-3000-1. Table ISTB-3000-1 includes the measurement of flow, and there are no existing flow instruments associated with these pumps. Installation of flow instruments would be a hardship or unusual difficulty without a compensating increase in the level of quality and safety.

The primary purpose of these pumps is to maintain the High Pressure Core Spray (HPCS), Low Pressure Core Spray (LPCS), Reactor Core Isolation Cooling (RCIC), and Residual Heat Removal (RHR) pump discharge lines filled to limit the potential

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Water Leg Pump Comprehensive Test
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for water hammer upon associated pump initiation. Once the supported pump (e.g., HPCS, RHR, etc.) is in operation, the associated water leg pump serves no further safety related function. The amount of flow delivered by each water leg pump is dependant upon each supported systems leakage rate. Each water leg pump is capable of delivering approximately 50 gpm. None of the listed water leg pumps have instrumentation installed in their discharge lines for measuring flow rates.

While flow measurement instrumentation is provided downstream of the water leg pumps branch connection to its associated support system, during power operation the water leg pump is unable to generate sufficient pressure to flow through the associated flow element into the reactor vessel. Evan if the water leg pump was capable of developing a head sufficient to inject into the reactor vessel during power operation, the flow measurement instrumentation, which is designed to measure flow developed by either a HPCS (0-8000 gpm), LPCS (0-10,000 gpm), RHR (0-10,000 gpm) or RCIC (0-700 gpm) pump is not capable of measuring such small flows developed by a water leg pump (i.e., approximately 50 gpm.)

The application of temporary flow instrumentation (ultrasonic) cannot be utilized, as there does not exist a run of piping long enough that would allow for an accurate measurement.

Quarterly Group A testing as modified by LaSalle Pump Relief Request RP-01 will continue to be performed during the stipulated conditions that the RCS pressure is greater than the discharge pressure of the associated water leg pump, and that the supported system pump is not in operation during the testing of the associated water leg pump.

Comprehensive Pump testing prescribes that pump parameters are measured while the pump is operating at a flowrate within 20% of the pumps design flow. These water leg pumps do not have a safety related design flow rate. These pumps operate in a "keep ready" mode, maintaining the supported systems piping pressurized with water, which is dependent upon each individual systems leakage rate.

The remaining differences then between Comprehensive Pump Testing and Group A testing is the accuracy of the instruments used in measuring the differential pressure (Table ISTB-3500-1) as well as the acceptance criteria associated with the pumps differential pressure (Table ISTB-5100-1).

These water leg pumps are tested quarterly by isolating them from their support system piping and measuring their pressure and vibration parameters as they flow through their minimum flow line, through a minimum flow orifice. As there is no flow

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Water Leg Pump Comprehensive Test
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measurement taken as a result of system configuration, variation of the system resistance is not used.

The utilization of more accurate test instrumentation and acceptance criteria under these conditions would only result in hardship without a compensating increase in the level of quality or safety.

5. Proposed Alternative and Basis for Use

LaSalle Station will continue to monitor the subject pumps for degradation by measuring and recording pump inlet pressure, discharge pressure, (from which differential pressure is calculated), and vibration. The differential pressure and vibration data will be trended as directed by ISTB-5121 (Group A Test Procedure), as amended by Relief Request RP-01. These measurements are taken quarterly during normal plant operation, when the supported system's pump is not in operation and RCS pressure is greater than the water leg pumps discharge pressure. Measurement and trending of these parameters under these stated conditions will provide satisfactory indication of operational readiness as well as the ability to detect potential degradation. In addition, the main ECCS pumps discharge headers each have a low pressure sensor which continuously monitors the operability of the respective water leg pump and alarms upon reaching their low setpoints. Technical Specification Surveillance Requirements (i.e., SR 3.5.1.1, SR 3.5.2.3 and SR 3.5.3.1) also verify operability of the water leg pumps by verifying flow through a high point vent on a monthly basis.

Vibration measurement will continue to be obtained under normal operating conditions and evaluated in accordance with ISTB-5121 (d) and (e), (Group A testing). The differential pressure across the pump will also continue to be determined quarterly through plant procedures utilizing each pumps minimum flow line in accordance with ISTB-5121(c) and (e). Differential Pressure and vibration will continue to be trended. In addition, LaSalle verifies operability of these pumps through the continuous monitoring of the HPCS, LPCS, RHR and RCIC pump discharge lines pressures that are monitored in the control room by alarm.

Comprehensive testing is not applicable as these pumps do not provide a safety related function beyond providing for the readiness of their supported system's pump and thus have no acceptance criteria for a comprehensive test.

6. Duration of Proposed Alternative

This proposed alternative will be utilized for the entire third 120 month interval.

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Water Leg Pump Comprehensive Test
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7. Approval

This relief request was approved for the third 120 month interval by letter from U.S. NRC to C.G. Pardee (Exelon Generation Company, LLC), "LaSalle County Station, Units 1 and 2 – Request for Relief from ASME OM Code for the Third 10-Year Pump and Valve Inservice Testing Program Interval – RP-02", dated May 7, 2008.

ATTACHMENT 4

VALVE RELIEF REQUEST INDEX

Designator	Description	Approval Date
RV-01	Main Steam Line Safety Relief Valves	Rev. 0: 9/26/07
RV-02	Motor Operated Valves	Rev. 1: 9/26/07

ATTACHMENT 5

VALVE RELIEF REQUESTS

Valve Relief Request - RV-01
Main Steam Line Safety Relief Valve Post Installation Actuation
(Rev. 0)
(Page 1 of 4)

Proposed Alternative in Accordance with 10 CFR 50.55a(a)(3)(i)

Alternative Provides Acceptable Level of Quality and Safety

1. ASME Code Component(s) Affected

Valve	Description	Class	Category	Unit
1B21-F013C	C Main Steam Line Safety Relief Valve*	1	C	1
1B21-F013D	B Main Steam Line Safety Relief Valve*	1	C	1
1B21-F013E	C Main Steam Line Safety Relief Valve*	1	C	1
1B21-F013F	B Main Steam Line Safety Relief Valve	1	C	1
1B21-F013H	D Main Steam Line Safety Relief Valve	1	C	1
1B21-F013K	B Main Steam Line Safety Relief Valve	1	C	1
1B21-F013L	C Main Steam Line Safety Relief Valve	1	C	1
1B21-F013M	B Main Steam Line Safety Relief Valve	1	C	1
1B21-F013P	A Main Steam Line Safety Relief Valve	1	C	1
1B21-F013R	C Main Steam Line Safety Relief Valve*	1	C	1
1B21-F013S	B Main Steam Line Safety Relief Valve*	1	C	1
1B21-F013U	D Main Steam Line Safety Relief Valve*	1	C	1
1B21-F013V	A Main Steam Line Safety Relief Valve*	1	C	1
2B21-F013C	C Main Steam Line Safety Relief Valve*	1	C	2
2B21-F013D	B Main Steam Line Safety Relief Valve*	1	C	2
2B21-F013E	C Main Steam Line Safety Relief Valve*	1	C	2
2B21-F013F	B Main Steam Line Safety Relief Valve	1	C	2
2B21-F013H	D Main Steam Line Safety Relief Valve	1	C	2
2B21-F013K	B Main Steam Line Safety Relief Valve	1	C	2
2B21-F013L	C Main Steam Line Safety Relief Valve	1	C	2
2B21-F013M	B Main Steam Line Safety Relief Valve	1	C	2
2B21-F013P	A Main Steam Line Safety Relief Valve	1	C	2
2B21-F013R	C Main Steam Line Safety Relief Valve*	1	C	2
2B21-F013S	B Main Steam Line Safety Relief Valve*	1	C	2
2B21-F013U	D Main Steam Line Safety Relief Valve*	1	C	2
2B21-F013V	A Main Steam Line Safety Relief Valve*	1	C	2

* - Indicates that the subject valve is also equipped with an Automatic Depressurization System (ADS)

Valve Relief Request - RV-01
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2. Applicable Code Edition and Addenda

ASME OM Code 2001 Edition through 2003 Addenda

3. Applicable Code Requirement

Mandatory Appendix I, I-3410(d), that each valve that has been removed for maintenance and testing and reinstalled shall be remotely actuated at reduced or normal system pressure to verify open and close capability of the valve before resumption of electric power generation.

4. Reason for Request

Currently, approximately 50% of the Main Steam Line Safety/Relief Valves (S/RVs), with Automatic Depressurization System (ADS) and approximately 50% of the S/RV's, without ADS, are removed from the plant and setpoint tested during each refueling outage. The setpoint testing program includes the manual actuation of the S/RV valves and actuators through the bench-test valve control system. Prior to June 15, 2001, after re-installation into the plant, each valve was actuated a second time by the plant installed remote manual actuation equipment per Code requirements.

Prior to June 15, 2001, experience at LaSalle County Station, Unit 1 and Unit 2, as well as else where in the nuclear industry, had shown that repeated manual actuation of the S/RVs can lead to valve through seat leakage during plant operation. During previous operating cycles for LaSalle Unit 1 and Unit 2, approximately 18% (i.e., 5 of 28) of the valves that were subjected to a single insitu open/close cycle developed undesirable through seat leakage, whereas, approximately 57% (i.e., 12 of 21) of the valves that experienced more than one insitu open/close cycle developed undesirable through seat leakage. During power operation, S/RV through seat leakage is directed to the primary containment suppression pool resulting in either the need for increased cooling of the suppression pool or a plant shutdown in order to fix the leaking valve.

Since December 13, 2001, when the NRC initially approved this Relief Request, LaSalle Unit's 1 and 2 have not had a single instance of through seat leakage that has resulted in the need for immediate corrective actions that involved a loss of operating capacity.

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(Rev. 0)
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5. Proposed Alternative and Basis for Use

The remote actuation of the Main Steam S/RVs, which have previously been removed for maintenance or refurbishment and replaced, shall be performed in two separate steps. The manual actuation of each valve by its actuator will be performed by the bench-test valve control system of the setpoint testing program. This will verify the opening and closing of the valve by it's actuator. The plant installed manual actuation equipment will then be tested after valve has been reinstallation into the plant, with the valve stem uncoupled from the actuator. This will allow for the testing of the plant installed manual actuation electrical circuitry, manual actuation solenoid and air control valve, and the actuator without causing the valve to open.

As a result, all the components of the S/RV, both with and without ADS, will continue to be tested.

This uncoupled actuator test will also be performed following any maintenance activity performed on the control circuitry/equipment that could affect the relief mode of the associated S/RV or ADS valves.

As originally stated in NUREG-1482, " Guidelines for Inservice Testing at Nuclear Power Plants", section 4.3.4, Revision 0, and NUREG-0626, " Generic Evaluation of Feedwater Transients and Small Break Loss-of-Coolant Accidents in GE-Designed Operating Plants and Near-Term Operating License Applications," the NRC staff recommends reducing the number of challenges to the ADS valves.

NUREG-1482, Rev. 1, section 4.3.2.1 references how several licensees have determined that in situ testing of the S/RVs can contribute to undesirable seat leakage of the valve during subsequent plant operation.

Safety/Relief Valve (with or without ADS), which were either maintained or refurbished in place, will continue to be tested per the requirements of I-3410 (d).

6. Duration of Proposed Alternative

This proposed alternative will be utilized for the entire third 120 month interval.

7. Precedents

This relief request was previously approved for the second ten-year interval at LaSalle County Station Units 1 & 2 as Relief Request RV-11, documented in Safety Evaluation and Letter dated 12/13/2001.

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(Rev. 0)
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8. Approval

This relief request was approved for the third 120 month interval by letter from U.S. NRC to C.M. Crane (Exelon Generation Company, LLC), "Relief Requests for the LaSalle County Station, Units 1 and 2, Third 10-Year Pump and Valve Inservice Testing Program", dated September 26, 2007.

Valve Relief Request - RV-02
Utilization of ASME Code Case OMN-1
(Rev. 1)
(Page 1 of 6)

Proposed Alternative in Accordance with 10 CFR 50.55a(a)(3)(i)

Alternative Provides Acceptable Level of Quality and Safety

1. ASME Code Component(s) Affected

All ASME Class 1, 2 and 3 Motor Operated Valves (MOV) scoped into the LaSalle County Station Inservice Testing Program subject to diagnostic testing per Generic Letter (GL) 96-05, "Periodic Verification of Design-Basis Capability of Safety-Related Power-Operated Valves," and can not be classified as Skid Mounted.

2. Applicable Code Edition and Addenda

ASME OM Code 2001 Edition through 2003 Addenda

3. Applicable Code Requirement

ISTC, excluding ISTC-3600, Testing of Valves, including MOVs

4. Reason for Request

Pursuant to 10 CFR 50.55a, "Codes and Standards", paragraph (a)(3), relief is requested from the requirements of ISTC-3521 and ISTC-5120. The proposed alternative would provide an acceptable level of quality and safety.

5. Proposed Alternative and Basis for Use

In the 2006 issuance of 10 CFR 50.55a, 10 CFR 50.55a(b) states in part, that Regulatory Guide 1.192, "Operating and Maintenance Code Case Acceptability, ASME OM Code," (June 2003), has been approved for incorporation by reference by the Director of the Office of the Federal Register pursuant

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to 5 U.S.C. 552(a) and 1 CFR part 51. In Regulatory Guide 1.192, it states within Table 2, "Conditionally Acceptable OM Code Cases," that the alternative rules of ASME Code Case OMN-1 Revision 0, when applied in conjunction with the provisions for leakage rate testing in ISTC-3600, may be applied with the following provisions:

1. The adequacy of the diagnostic test interval for each valve must be evaluated and adjusted as necessary, but not later than 5 years or three refueling outages (whichever is longer) from initial implementation of ASME Code Case OMN-1.

2. When extending the exercise test intervals for high risk MOVs beyond a quarterly frequency, licensees must ensure that the potential increase in core damage frequency and risk associated with the extension is small and consistent with the intent of the Commission's Safety Goal Policy Statement.

3. When applying risk insights as part of the implementation of OMN-1, licensees must categorize MOVs according to the their safety significance using the methodology described in Code Case OMN-3, "Requirements for Safety Significance Categorization of Components Using Risk Insights for Inservice Testing of LWR Power Plants," with the conditions discussed in this regulatory guide or use other MOV risk-ranking methodologies accepted by the NRC on a plant-specific or industry-wide basis with the conditions in the applicable safety evaluations.

This conditional acceptance of OMN-1, per Regulatory Guide 1.192 is applicable in lieu of the provisions for stroke-time testing in Subsection ISTC of the 1995 Edition up to and including the 2000 Addenda of the ASME OM Code.

LaSalle County Station proposes to use the requirements of Code Case OMN-1 for MOV stroke time testing and position indication testing.

The LaSalle County Station MOV testing program has been developed utilizing GL 89-10, "Safety Related Motor Operated Valve Testing and Surveillance," and GL 96-05, "Periodic Verification of Design Basis Capability of Safety Related Motor Operated Valves." The continued implementation of OMN-1 will continue to reconcile and consolidate testing within the IST program and eliminate unnecessary testing that provides minimal information about MOV operational readiness.

As part of LaSalle County Station's commitment on MOV Periodic Verification Testing made in response to GL 96-05, LaSalle is participating in the Joint Owners Group (JOG) Program for MOV Periodic Verification. This program is described in Topical Report MPR-1807, Revision 2 and was endorsed by the NRC in an October 1997 Safety Evaluation.

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LaSalle County Station implementation and compliance with the above-identified provisions (Items 1-3) of Code Case OMN-1 are detailed below.

1. LaSalle County Station MOV test frequencies identified in the IST program do not exceed three refueling cycles (i.e., a nominal 6 years). Therefore, the expectation that frequency of testing be evaluated and adjusted within five years or three refuel outages, whichever is longer, of OMN-1 implementation will be satisfied.

2. LaSalle will exercise medium and low safety significant MOVs at least once every refuel cycle as required in Code Case OMN-1 Section 3.6.1. Initially, LaSalle County Station commits to continue to test high risk MOVs quarterly (where it is not practicable to exercise a valve during plant operations, the valve will be exercised in cold shutdown or in refuel outages per OMN-1 Section 3.6.3). When extending the exercise test intervals for high risk MOVs beyond a quarterly frequency, LaSalle County Station shall ensure that any potential increase in the core damage frequency and risk associated with the extension is small and consistent with the intent of the Commission's Safety Goal Policy Statement. Upon extension of these frequencies, the IST Program will be appropriately revised.

3. LaSalle County Station has performed differential pressure testing practicability reviews for GL 89-10 that evaluated the benefits of performing a particular test against the potential adverse effects placed on the valves or systems caused by this testing. The evaluation included an assessment of potential component (valve or pump) damage or system availability concerns that may outweigh benefits of dynamic testing for some MOVs. As a result, some MOVs are not subject to differential pressure testing, but are justified for design basis performance by analysis. This methodology has previously been accepted by the NRC by their approval of LaSalle County Station's initial OMN-1 Relief Request VR-14 for the second IST Interval, approved on November 21, 2002.

Exceptions to OMN-1

With LaSalle County Station compliance with the above provisions as stipulated in RG 1.192, LaSalle County Station requests relief from the following OMN-1 section and proposes the following alternative.

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- OMN-1 Section 3.3(b) requires inservice tests to be conducted in the as-found condition.
- OMN-1 Section 3.4, "Effect of MOV Replacement, Repair, or Maintenance," requires deviations between the previous and new inservice tests values to be identified and analyzed.
- OMN-1 Section 6.3, "Evaluation of Data," requires evaluations to determine the amount of degradation in functional margin that occurred over time.

LaSalle County Station proposes not to perform as-found testing in all situations. Not performing as-found testing is justified by the manner in which we determine MOV functional margin and test interval. Unlike the example for determining test interval given in OMN-1 Section 6.4.4, LaSalle County Station uses a process which is less dependent on as-found testing. When pre-service testing is performed, a degradation factor is applied to extrapolate the appropriate test frequency based on a calculated decline in functional margin over time. Random selections of valves are as-found tested, and test results are used to validate degradation assumptions per JOG guidelines. This sample as-found testing is applied to computational methods used to ensure that the functional margin is adequate over the testing interval. Therefore, LaSalle County Station requests relief from the requirement to always perform as-found testing, and will follow the commitments to GL 96-05 to perform some as-found tests.

A comparison of GL 96-05 program to the IST program has identified a number of LaSalle County Station MOVs that have IST requirements but are not subject to diagnostic testing. LaSalle County Station will continue to stroke time test and position indication test these identified MOVs in accordance with ISTC requirements.

Technical Position

The following positions describe how LaSalle County Station interprets and complies with the various requirements of OMN-1.

1. OMN-1 Section 3.1 allows the use of testing that was conducted prior to the implementation of OMN-1 if it meets the requirements of the Code Case. LaSalle County Station intends to utilize the testing performed under GL 89-10 to satisfy the requirement for a one-time test to verify the capacity of each MOV to meet its safety-related design basis requirements.

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2. OMN-1 Section 3.2 requires that each MOV be tested during the preservice test period or before implementing inservice inspection. LaSalle County Station intends to utilize the testing performed under GL 89-10 to satisfy this requirement. LaSalle County Station will perform a new preservice test when an MOV undergoes maintenance or modification that could affect its performance.

3. OMN-1 Section 3.3(b) states that maintenance activities, such as stem lubrication, shall not be conducted if they might invalidate the as-found condition for inservice testing. At LaSalle County Station the frequency of stem lubrication and periodic MOV verification testing differ considerably, and the times at which these activities are optimally performed often do not coincide. As part of our GL 96-05 program, as-found data has been collected for a sample population of MOVs under various lubrication conditions. The results from this as-found data was used to create stem factor variability assumptions that are used to estimate the effect of stem lubrication on stem performance over the entire lubrication cycle. As described above, Relief has been requested from OMN-1, section 3.3(b) as it applies to inservice testing being conducted in the as-found condition. With this Relief, if testing were to occur directly following maintenance activities such as a stem lube, test results would not be invalidated as methods used to analyze the test results take into consideration testing under these circumstances. Therefore the intent of OMN-1, section 3.3(b), that testing is performed under conditions that will not hinder the ability to determine applicable functional margins and determine operational readiness is maintained utilizing the methods previously described.

4. OMN-1 Section 3.3(c) requires the inservice test program to include a mix of static and dynamic MOV performance testing. LaSalle County Station will utilize the JOG program's mix of static and dynamic MOV performance testing to satisfy this requirement. Additionally, LaSalle County Station will utilize the existing engineering standards, which are consistent with the JOG standards, to conduct evaluations to alter the mix of required MOV performance testing, when applicable, in order to meet this requirement.

5. OMN-1 Section 3.3.1(b) requires MOV inservice testing to be conducted every 2 refueling cycles or 3 years (whichever is longer), until insufficient data exists to determine a more appropriate test frequency. LaSalle County Station has sufficient MOV testing data to justify its current testing frequencies, and therefore meets this requirement.

6. OMN-1 Section 6.4.4 requires calculations for determining MOV functional margin to be evaluated to account for anticipated time related changes in performance. LaSalle County Station will utilize the JOG process for setting test

Valve Relief Request - RV-02
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frequencies, which is based on margin and safety significance to meet this requirement.

7. According to Table 2 of Regulatory Guide 1.192, the only testing that is described within ISTC that will need to continue to be performed with the adoption of OMN-1 is that of leakage testing as described by ISTC-3600. Therefore Position Indication Testing (PIT) as described by ISTC-3700 need not be specifically identified or performed per the requirements of ISTC. LaSalle County Station will however continue to perform position indication testing at a frequency consistent with JOG guidelines during MOV diagnostic testing.

6. Duration of Proposed Alternative

This proposed alternative will be utilized for the entire Third Ten-year IST Interval.

7. Precedents

This relief request was previously approved for the Second Ten-year IST interval at LaSalle County Station Units 1 & 2 as Relief Request RV-14, documented in Safety Evaluation and Letter dated November 21, 2002.

8. Approval

This relief request was approved for the third 120 month interval by letter from U.S. NRC to C.M. Crane (Exelon Generation Company, LLC), "Relief Requests for the LaSalle County Station, Units 1 and 2, Third 10-Year Pump and Valve Inservice Testing Program", dated September 26, 2007.

ATTACHMENT 6

COLD SHUTDOWN JUSTIFICATION INDEX

Cold Shutdown Justification No.	Description
CS-01	Recirculation Flow Control Valves
CS-02	Reactor Water Cleanup Isolation Valves
CS-03	Inboard and Outboard MSIVs
CS-04	Drywell Instrument Valves
CS-05	IN Regulated Header Drywell Isolation Valves
CS-06	ADS N2 Supply to DW Isolation Valves
CS-07	Feedwater Check Valves
CS-08	Main Steam Relief Valve Vacuum Breakers
CS-09	Feedwater Outboard Testable Check Valves
CS-10	Shutdown Cooling Testable Check Valves
CS-11	SBLC System Injection Check Valves
CS-12	RCIC Turbine Exhaust Check Valves
CS-13	RCIC Injection Testable Check Valves
CS-14	ADS Accumulator Inlet Check Valves
CS-15	Reactor Recirc Loop Process Sampling Inbd Bypass Check Valve
CS-16	Inboard and Outboard Accumulator Check Valves
CS-17	HPCS, LPCS and RHR Injection Check Valves
CS-18	SRV Accumulator Inlet Check Valves
CS-19	Drywell Instrument Nitrogen TIP Indexer Purge Valves

ATTACHMENT 7

COLD SHUTDOWN JUSTIFICATIONS

Cold Shutdown Justification - CS-01
(Rev. 0)
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Valve Number	System	Class	Category	Unit
1B33-F338A	RR	2	B	1
1B33-F338B	RR	2	B	1
1B33-F340A	RR	2	B	1
1B33-F340B	RR	2	B	1
1B33-F342A	RR	2	B	1
1B33-F342B	RR	2	B	1
1B33-F344A	RR	2	B	1
1B33-F344B	RR	2	B	1
1B33-F339A	RR	2	B	1
1B33-F339B	RR	2	B	1
1B33-F341A	RR	2	B	1
1B33-F341B	RR	2	B	1
1B33-F343A	RR	2	B	1
1B33-F343B	RR	2	B	1
1B33-F345A	RR	2	B	1
1B33-F345B	RR	2	B	1
2B33-F338A	RR	2	B	2
2B33-F338B	RR	2	B	2
2B33-F340A	RR	2	B	2
2B33-F340B	RR	2	B	2
2B33-F342A	RR	2	B	2
2B33-F342B	RR	2	B	2
2B33-F344A	RR	2	B	2
2B33-F344B	RR	2	B	2
2B33-F339A	RR	2	B	2
2B33-F339B	RR	2	B	2
2B33-F341A	RR	2	B	2
2B33-F341B	RR	2	B	2
2B33-F343A	RR	2	B	2
2B33-F345B	RR	2	B	2

Function

These valves are the inboard containment and outboard containment isolation for the Reactor Recirculation Pump hydraulic control lines. These valves are normally open during plant operation to allow hydraulic fluid from the flow control valve hydraulic power unit to position the reactor recirculation line flow control valve in response to electrical signals from the recirculation flow control system.

These valves also have an automatic closure function (Group 2) to isolate primary containment to mitigate the consequences of an accident.

Cold Shutdown Justification - CS-01
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Justification

It is impractical to full or part-stroke exercise these valves closed on a quarterly (nominal 92 days) basis during plant operation. The reactor recirculation system provides forced circulation of water through the reactor core. The recirculation system in conjunction with the recirculation flow control system, provides a means of controlling reactor power over a limited range by adjusting the flow of coolant through the core. Between 65 - 100% power, with the correct control rod pattern, a change in core flow will also result in a change in reactor power.

Each reactor recirculation flow control valve is controlled by a remote hydraulic power unit (HPU) located outside primary containment. The HPUs supply the high pressure fluid used to position the flow control valves. The individual hydraulic lines penetrate the primary containment and are each equipped with both an inboard and outboard isolation valve. Full-stroke closure testing of the subject valves to the closed position will cut off the hydraulic oil required to provide remote operating capability of the FCV. This could result in a loss of the ability of plant operators to appropriately respond to changing plant conditions that require the regulation of core flow and reactor power.

Alternative Frequency

These valves will be full-stroke exercised Closed during Cold Shutdown per ISTC-3521(c) and (f).

References

In the LaSalle Second 10-Year IST Interval, this Cold Shutdown Justification was identified as CS-03.

Cold Shutdown Justification - CS-02
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Valve Number	System	Class	Category	Unit
1G33-F001	RT	1	A	1
1G33-F004	RT	1	A	1
2G33-F001	RT	1	A	2
2G33-F004	RT	1	A	2

Function

These valves are the inboard containment and outboard containment isolation for the Reactor Water Clean Up System. These valves are have a function to be open during normal plant operation to provide a path for reactor coolant to flow to and from the reactor water cleanup system to maintain high water purity. This is not a safety function.

These valves have a safety function to close and limit leakage from the primary containment in the event of an accident. 1(2)G33-F001 and 1(2)G33-F004 automatically close as a result of a Group 5 isolation signal. 1(2)G33-F004 also automatically close as a result of a standby liquid control system actuation.

Justification

These valves are tested per the requirements of OMN-1 as modified by LaSalle County Station Relief Request RV-02, and are assigned a risk ranking of "High", which corresponds to a quarterly test frequency.

It is impractical to full or part-stroke exercise these valves to the closed position on a quarterly (nominal 92 days) basis during plant operation. As stated in section 5.4.8.2 of the UFSAR, the RWCU system continuously purifies reactor water. Closure of any of the subject valves would require that the entire RWCU system be shutdown.

Additionally, closure of either 1(2)G33-F001 or 1(2)G33-F004 during normal system operation will also automatically shutdown all of the cleanup recirculation pumps. This will cause an unnecessary thermal transient on the cleanup recirculation pumps and other system components possibly leading to their premature failure.

Cold Shutdown Justification - CS-02
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System operation is generally maintained during power operation to maintain reactor water chemistry stable.

As a condition of relief to implement Code Case OMN-1, LaSalle Station has committed to continue to exercise high risk MOVs quarterly (where practicable, otherwise in cold shutdown, or in refuel outages per OMN-1, Sections 3.6.3(b) and (c)).

It is not practicable to full or part-stroke exercise the RWCU Isolation valves to the closed position nominally every 3 months per the requirements of OMN-1, Section 3.6.3(a) during normal plant operation.

Alternative Frequency

These valves will be full-stroke exercised during cold shutdown per OMN-1 Section 3.6.3(b).

References

In the LaSalle Second 10-Year IST Interval, this Cold Shutdown Justification was identified as CS-05.

Cold Shutdown Justification - CS-03
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Valve Number	System	Class	Category	Unit
1B21-F022A	MS	1	A	1
1B21-F022B	MS	1	A	1
1B21-F022C	MS	1	A	1
1B21-F022D	MS	1	A	1
1B21-F028A	MS	1	A	1
1B21-F028B	MS	1	A	1
1B21-F028C	MS	1	A	1
1B21-F028D	MS	1	A	1
2B21-F022A	MS	1	A	2
2B21-F022B	MS	1	A	2
2B21-F022C	MS	1	A	2
2B21-F022D	MS	1	A	2
2B21-F028A	MS	1	A	2
2B21-F028B	MS	1	A	2
2B21-F028C	MS	1	A	2
2B21-F028D	MS	1	A	2

Function

These valves are the Main Steam inboard and outboard containment isolation valves. These valves are normally open and must be open to provide a steam flow path from the reactor, through the containment to the turbine and auxiliary loads to support plant operation. This is not a safety related function.

The subject valves have a safety function to close on a Group 1 primary containment isolation signal (PCIS).

Justification

It is impractical to full stroke exercise or fail-safe test these valves to the closed position on a quarterly (nominal 92 days) basis during plant operation. The MSIVs are partial stroked exercised on a quarterly basis in order to meet the MSIV scram functional test requirements identified in Technical Specification Requirement 3.3.1.1.9 and Technical Specification Table 3.3.1.1-1 Item 5.

Cold Shutdown Justification - CS-03
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As identified in UFSAR section 5.4.5.4, the performance of a full-stroke exercise to the Closed position of individual MSIVs can be performed during power operation if reactor power is reduced sufficiently to avoid a scram as a result of reactor overpressure or high flow through the stream line flow restrictors. However, NUREG-1482, Rev. 1, "Guidelines for Inservice Testing at Nuclear Power Plants" identifies in section 2.4.5 that impractical conditions justifying test deferrals may include those situations that could result in an unnecessary plant shutdown, cause unnecessary challenges to safety systems, place undue stress on components, cause unnecessary cycling of equipment, or unnecessarily reduce the life expectancy of the plant systems and components. Therefore, the full stroking of these MSIVs is practical during power operation.

Alternative Test

These valves will be full-stroke exercise tested to the closed position and fail-safe tested during cold shutdowns per ISTC-3521(c) and (f).

References

In the LaSalle Second 10-Year IST Interval, this Cold Shutdown Justification was identified as CS-08.

Cold Shutdown Justification - CS-04
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Valve Number	System	Class	Category	Unit
1IN074	IN	2	A	1
1IN075	IN	2	A	1
2IN074	IN	2	A	2
2IN075	IN	2	A	2

Function

The subject valves are the Drywell Instrument Nitrogen Purge Containment Isolation Valves. These valves have a safety function to close to isolate the primary containment penetrations M-60 (Unit 1) and M-54 (Unit 2) to mitigate the consequences of an accident. 1(2)IN074 and 1(2)IN075 automatically isolate on a Group 10 Containment Isolation signal.

The subject valves have a non-safety related function to open to allow the Drywell Pneumatic System (IN) gases to flow to support the proper operation of pneumatically controlled or operated loads.

Justification

It is impractical to perform a full or part-stroke exercise of the subject valves during plant operation. None of the subject valves have part-stroke closure capability. The purpose of the IN system is to supply instrument quality compressed gas for the continuous operation of pneumatically controlled or operated loads mainly in the drywell during plant operation. The distribution of the compressed gas is via two headers. The regulated header supplies all of the system requirements in the drywell (MSIVs, main steam safety relief valves (SRVs), reactor recirculation sample valves, recirculation pump seal water control valves and RHR, RCIC, HPCS and LPCS testable check valves) with the exception of the ADS valves. The ADS valve accumulators are supplied by the unregulated header. Additionally there are safety related nitrogen bottles connected to the unregulated header outside of containment which will makeup gas to the unregulated header when pressure drops below 160 psig.

Cold Shutdown Justification - CS-04
(Rev. 0)
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It is impractical to perform a full-stroke exercise of 1(2)IN074 and 1(2)IN075 during power operation. The closure of either of these valves would isolate the purge path for all of the IN system air dryers and the relief paths for numerous system relief valves to the drywell. There are two desiccant type air dryers for each compressor. The dryers are used to ensure that the moisture content of the compressed gas will not adversely impact the operation of the components served (MSIVs, SRVs (including ADS valves), and etc.). Closure of either valve could adversely affect the moisture quality of the IN system air. Additionally, there are numerous IN system relief valves that use the dryer purge path as a relief path for IN system gas. Closure of either valve could prevent the relief valves from relieving system pressure as required to prevent overpressurization of the system or damage to system equipment.

Alternative Test

These valves will be full-stroke exercised closed during cold shutdowns per ISTC-3521(c) and (f).

References

In the LaSalle Second 10-Year IST Interval, this Cold Shutdown Justification was identified as CS-19.

Cold Shutdown Justification - CS-05
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Valve Number	System	Class	Category	Unit
1IN017	IN	2	A	1
2IN017	IN	2	A	2

Function
These valves are the Drywell Instrument Nitrogen Regulated Header Supply Containment Isolation Valves. These valves have a safety function to close to isolate the primary containment penetration M-60 (Unit 1) and M-54 (Unit 2) to mitigate the consequences of an accident. These valves automatically isolate on a Group 10 Containment Isolation signal. These valves have a non-safety related open function to provide a flow path for Nitrogen to the Main Steam Safety Relief Valve accumulators.

Justification
The purpose of the IN system is to supply instrument quality compressed gas for the continuous operation of pneumatically controlled or operated loads mainly in the drywell during plant operation. The distribution of the compressed gas is via two headers. The regulated header supplies all of the system requirements in the drywell (MSIVs, main steam safety relief valves (SRV's), reactor recirculation sample valves, recirculation pump seal water control valves and RCIC testable check valves) with the exception of the ADS valves.

The MSIVs are operated by air operated pistons to cause the valves to open or assist spring pressure in closing the valves. The flow of instrument air is controlled by solenoid operated pilot valves in the air supply line. The solenoids are energized to open the MSIV. If both solenoids are deenergized, the air will be vented from the operating piston and air pressure (with spring assist) will close the valve.

It is impractical to perform a full-stroke exercise of 1(2)IN017 during power operation. The closure of 1(2)IN017 would isolate the pneumatic supply to the inboard Main Steam Isolation Valves. Loss of pressure between the Inboard MSIV Accumulator Inlet check Valve and the MSIV with this valve closed will cause the MSIV to close and the reactor to SCRAM.

Alternative Test

These valves will be full-stroke exercised closed during cold shutdowns per ISTC-3521(c) and (f).

Cold Shutdown Justification - CS-05
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References

In the LaSalle Second 10-Year IST Interval, this Cold Shutdown Justification was identified as CS-24.

Cold Shutdown Justification - CS-06
(Rev. 0)
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Valve Number	System	Class	Category	Unit
1IN100	IN	2	B	1
1IN101	IN	2	B	1
2IN100	IN	2	B	2
2IN101	IN	2	B	2

Function

These valves are the ADS Accumulator Unregulated N2 Header Drywell Containment Isolation Valves. These valves have a safety function to close to isolate the primary containment penetration, (Unit 1, penetrations M-55 and M-60, Unit 2, Penetrations M-55 and M-61), to mitigate the consequences of an accident, post-LOCA. These valves do not receive an automatic Containment Isolation signal but can be aligned post-LOCA by the control room if required. These valves exist to satisfy the requirements of 10CFR50 Appendix A, GDC 57. The ADS valves are designed, analyzed and tested to perform their required safety functions on a total loss of pneumatic supply pressure by the pressure retained in the individual accumulators by their respective check valves. This backup pressure source provides the option of using the ADS valves for long term accident mitigation.

These valves have an open safety function to allow for the supply of instrument nitrogen from either the Instrument Nitrogen System or nitrogen bottle banks to allow for the operation of the ADS valves following an accident via continuous supply to the two groups of ADS accumulators. [Ref. USAR Table 7.5-1, Note 6]

Justification

The purpose of the IN system is to supply instrument quality compressed gas for the continuous operation of pneumatically controlled or operated loads mainly in the drywell during plant operation.

It is impractical to perform a partial stroke of these valves because they are solenoid valves and do not have the ability to partially stroke. It is also impractical to full-stroke exercise of these valves to the closed position during plant operation. The closure of 1(2)IN100 or 1(2)IN101 would isolate the pneumatic supply to the individual ADS valve accumulators. This may have adverse affect on the system capability to maintain the ADS valves in the open position.

Cold Shutdown Justification – CS-06
(Rev. 0)
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Alternative Test

These valves will be full-stroke exercised closed during cold shutdowns per ISTC-3521(c) and (f).

References

In the LaSalle Second 10-Year IST Interval, this Cold Shutdown Justification was identified as CS-26.

Cold Shutdown Justification – CS-07
(Rev. 0)
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Valve Number	System	Class	Category	Unit
1B21-F010A	FW	1	A/C	1
1B21-F010B	FW	1	A/C	1
2B21-F010A	FW	1	A/C	2
2B21-F010B	FW	1	A/C	2

Function

These valves are the Feedwater Check Valves located inside Containment, which also function as Containment Isolation Valves. These valves have a safety function to close (self-actuation) to isolate the primary reactor containment (penetration M-5 and M-6 respectively). Additionally, these valves have a safety function to close (self-actuation) to isolate the Reactor Coolant Pressure Boundary whenever normal feedwater flow becomes unavailable.

These valves have a non-safety function to open during normal plant operation to provide a path for feedwater flow to the reactor vessel to maintain the desired water level. Open functional testing to satisfy the bi-directional testing requirement of ISTC-5221(a) is satisfied through Operator observation performed upon transition from Cold Shutdown to power operation following the performance of a closed test.

Justification

It is not practical to full-stroke these valves to the closed position on a quarterly (nominally every 3 months) basis during plant operation. The feedwater system serves as the main source of makeup water to the reactor vessel during plant operation. Closure of either of the subject valves would induce a plant transient due to reduced feedwater flow to the reactor vessel, unnecessarily challenge the plant operators and could subsequently cause a plant scram.

The only practical method to verify the full-stroke closure capability of these valves utilizing flow is by seat leakage testing. As described above, all of the subject check valves have a seat leakage limiting function as primary containment isolation valves. Therefore, these valves are individually leakage rate tested in accordance with the requirements of 10 CFR 50 Appendix J and Technical Specification Surveillance Requirement 3.6.1.1.1.

Cold Shutdown Justification – CS-07
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In order to manipulate the test connections and block valves to their proper position to perform a leakage rate test of the subject valves, an entry into the drywell is required. This is not practical during plant operation or cold shutdowns when the atmosphere in containment is inerted. The drywell at LaSalle County Station is inerted during plant operation as required by Technical Specification 3.6.3.2 to protect against a burn or explosion of hydrogen gas generated by the reactor core metal-water reaction as a result of a loss of coolant accident. Entry into the drywell during plant operation or cold shutdowns for the sole purpose of performing these leakage rate tests would require that the drywell be de-inerted. Section 3.1.1.3 of NUREG-1482, Rev. 1, identifies that de-inerting during cold shutdowns for the sole purpose of performing these tests is impractical because the time and effort needed to de-inert, re-inert and replace the lost nitrogen gas could delay the return to power.

Alternative Test

These valves will be full-stroke exercised closed during cold shutdown if the drywell has been de-inerted for reasons other than Inservice Testing, or during refueling outages per ISTC-3522(b) and ISTC-3522(c). [Reference Technical Position TP-12]

References

In the LaSalle Second 10-Year IST Interval, this Cold Shutdown Justification was identified as RJ-01.

Cold Shutdown Justification – CS-08

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Valve Number	System	Class	Category	Unit
1B21-F037C1	MS	3	C	1
1B21-F037C2	MS	3	C	1
1B21-F037D1	MS	3	C	1
1B21-F037D2	MS	3	C	1
1B21-F037E1	MS	3	C	1
1B21-F037E2	MS	3	C	1
1B21-F037F1	MS	3	C	1
1B21-F037F2	MS	3	C	1
1B21-F037H1	MS	3	C	1
1B21-F037H2	MS	3	C	1
1B21-F037K1	MS	3	C	1
1B21-F037K2	MS	3	C	1
1B21-F037L1	MS	3	C	1
1B21-F037L2	MS	3	C	1
1B21-F037M1	MS	3	C	1
1B21-F037M2	MS	3	C	1
1B21-F037P1	MS	3	C	1
1B21-F037P2	MS	3	C	1
1B21-F037R1	MS	3	C	1
1B21-F037R2	MS	3	C	1
1B21-F037S1	MS	3	C	1
1B21-F037S2	MS	3	C	1
1B21-F037U1	MS	3	C	1
1B21-F037U2	MS	3	C	1
1B21-F037V1	MS	3	C	1
1B21-F037V2	MS	3	C	1
2B21-F037C1	MS	3	C	2
2B21-F037C2	MS	3	C	2
2B21-F037D1	MS	3	C	2
2B21-F037D2	MS	3	C	2
2B21-F037E1	MS	3	C	2
2B21-F037E2	MS	3	C	2
2B21-F037F1	MS	3	C	2
2B21-F037F2	MS	3	C	2
2B21-F037H1	MS	3	C	2
2B21-F037H2	MS	3	C	2
2B21-F037K1	MS	3	C	2
2B21-F037K2	MS	3	C	2
2B21-F037L1	MS	3	C	2
2B21-F037L2	MS	3	C	2

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(continued)

Valve Number	System	Class	Category	Unit
2B21-F037M1	MS	3	C	2
2B21-F037M2	MS	3	C	2
2B21-F037P1	MS	3	C	2
2B21-F037P2	MS	3	C	2
2B21-F037R1	MS	3	C	2
2B21-F037R2	MS	3	C	2
2B21-F037S1	MS	3	C	2
2B21-F037S2	MS	3	C	2
2B21-F037U1	MS	3	C	2
2B21-F037U2	MS	3	C	2
2B21-F037V1	MS	3	C	2
2B21-F037V2	MS	3	C	2

Function

These valves are the Main Steam Relief Valve Vacuum Breakers and have a safety function to open to alleviate any vacuum that could develop within the SRV discharge line following SRV actuation. This prevents water from the suppression pool from being drawn into the affected discharge line, which could result in a serious water hammer condition upon subsequent re-actuation of the SRV.

The subject valves also have a safety related close function to prevent discharge of the SRV from being directed into the drywell.

These check valves are not "capacity certified" and are therefore only required to meet the requirements of ISTC-3522 as provided in Note 4 to Table ISTC-3500-1.

Justification

It is impractical to perform a full stroke exercise of the subject valves during plant operation or during cold shutdowns when the drywell is inerted. The only practical method available to perform a full-stroke exercise of these valves is by manually exercising the valve disk to its full open and full closed position while visually verifying valve obturator (disk) position. Access to the disk is gained from the intake port of the valve body.

Cold Shutdown Justification – CS-08
(Rev. 0)
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In order to perform this test, access to the drywell area is required. Access to the drywell area is not practical during plant operation or cold shutdowns when the atmosphere in containment is inerted. The drywell at LaSalle County Station is inerted during plant operation as required by Technical Specification 3.6.3.2 to protect against a burn or explosion of hydrogen gas generated by the reactor core metal-water reaction as a result of a loss of coolant accident. Entry into the drywell during plant operation or cold shutdowns for the sole purpose of performing the exercise tests for the subject valves would require that the drywell be de-inerted. Section 3.1.1.3 of NUREG-1482, Rev. 1, identifies that de-inerting during cold shutdowns for the sole purpose of performing these tests is impractical because the time and effort needed to de-inert, re-inert and replace the lost nitrogen gas could delay the return to power.

Alternative Test

These valves will be manually full-stroke exercised open and closed during cold shutdown if the drywell has been de-inerted for reasons other than Inservice Testing, or during refueling outages per ISTC-3522(b) and ISTC-3522(c). [Reference Technical Position TP-12]

References

In the LaSalle Second 10-Year IST Interval, this Cold Shutdown Justification was identified as RJ-02.

Cold Shutdown Justification – CS-09
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Valve Number	System	Class	Category	Unit
1B21-F032A	FW	1	A/C	1
1B21-F032B	FW	1	A/C	1
2B21-F032A	FW	1	A/C	2
2B21-F032B	FW	1	A/C	2

Function

The subject valves are the Feedwater Line Outboard Testable Check Valves that also function as Containment Isolation Valves. These valves have a safety related function to close (Group 2 Primary Containment Isolation System - PCIS) to isolate the primary reactor containment (penetration M-5 and M-6). Additionally, these valves have a safety related function to close (self-actuation) to isolate the Reactor Coolant Pressure Boundary whenever normal feedwater flow becomes unavailable.

These valves are equipped with a spring to assist in the valve's closure during no flow conditions. During normal operation, air is applied to the spring in order to compress the spring, preventing the spring from forcing the disk into the flow of feedwater. Upon an isolation signal, air is applied to assist the spring in driving the disk into the valve's seat. Note that the strength of the air/spring combination is not sufficient to fully close the valve during feed flow. [Reference Ops. Feedwater Training Description]

These valves have a non-safety related function to be open during normal plant operation to provide a path for feedwater flow to the reactor vessel to maintain the desired water level.

Justification

It is not practical to full-stroke these valves to the closed position on a quarterly basis during plant operation. The feedwater system serves as the main source of makeup water to the reactor vessel during plant operation. Full closure of either of the subject valves would induce a plant transient due to reduced feedwater flow to the reactor vessel, unnecessarily challenge to the plant and could subsequently result in a plant scram.

As identified in NUREG 1482, Rev. 1, section 4.1.5.4, if the closure of these valves on cessation or reversal of flow is required to accomplish a safety-related function, closure must be verified by reverse flow testing or such other positive means as acoustic monitoring or radiography.

Cold Shutdown Justification – CS-09
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The only practical method to verify the full-stroke closure capability of these valves utilizing flow is by seat leakage testing. As described above, all of the subject check valves have a seat leakage limiting function as primary containment isolation valves. Therefore, these valves are individually leakage rate tested in accordance with the requirements of 10 CFR 50 Appendix J and Technical Specification Surveillance Requirement 3.6.1.1.1.

In order to manipulate the test block valves to their proper position to perform a leakage rate test of the subject valves, an entry into the drywell is required. This is not practical during plant operation or cold shutdowns when the atmosphere in containment is inerted. The drywell at LaSalle County Station is inerted during plant operation as required by Technical Specification 3.6.3.2 to protect against a burn or explosion of hydrogen gas generated by the reactor core metal-water reaction as a result of a loss of coolant accident. Entry into the drywell during plant operation or cold shutdowns for the sole purpose of performing these leakage rate tests would require that the drywell be de-inerted. Section 3.1.1.3 of NUREG-1482, Rev. 1, identifies that de-inerting during cold shutdowns for the sole purpose of performing these tests is impractical because the time and effort needed to de-inert, re-inert and replace the lost nitrogen gas could delay the return to power.

Alternative Test

These valves will be full-stroke exercised to the open and closed position during cold shutdown if the drywell has been de-inerted for reasons other than Inservice Testing, or during refueling outages per ISTC-3522(b) and ISTC-3522(c). [Reference Technical Position TP-12]

References

In the LaSalle Second 10-Year IST Interval, this Cold Shutdown Justification was identified as RJ-18.

Cold Shutdown Justification – CS-10
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Valve Number	System	Class	Category	Unit
1E12-F050A	RH	1	A/C	1
1E12-F050B	RH	1	A/C	1
2E12-F050A	RH	1	A/C	2
2E12-F050B	RH	1	A/C	2

Function

These valves are the RHR Shutdown Cooling Return Check Valves, which also function as Pressure Isolation Valves (PIV). These valves have a safety related function to close to protect the low pressure RHR piping and components from reactor coolant and are considered pressure isolation valves (PIV).

These valves have a non-safety related function to open to allow for flow from the RHR system to the vessel during the normal shutdown cooling mode.

These normally closed testable check valves serve as the first isolation valve in the event of a system line break.

Justification

It is not practical to perform a full-stroke exercise of these subject valves to the closed position during plant operation or cold shutdowns when the atmosphere in containment is inerted. The RHR Pump does not produce adequate head to flow into the vessel during power operation so these valves cannot physically be exercised during those conditions. For conditions to exist that allow for these valves to be exercised, the plant must be in either Modes 4, 5 or defueled.

The only practical method to verify the full-stroke closure capability of these valves utilizing flow is by seat leakage testing. As described above, all of the subject check valves are PIVs that have a seat leakage limiting function as reactor coolant boundary pressure isolation valves. As a result, these valves are individually leakage rate tested in accordance with the requirements of Technical Specification Surveillance Requirement 3.4.6.1.

Cold Shutdown Justification – CS-10
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In order to manipulate the necessary block and test connection valves to perform a leakage rate test entry into the drywell is required. This is not practical during plant operation or cold shutdowns when the atmosphere in containment is inerted. The drywell at LaSalle County Station is inerted during plant operation as required by Technical Specification 3.6.3.. Entry into the drywell during plant operation or cold shutdowns for the sole purpose of performing these leakage rate tests would require that the drywell be de-inerted. Section 3.1.1.3 of NUREG-1482, Rev. 1, identifies that de-inerting during cold shutdowns for the sole purpose of performing these tests is impractical because the time and effort needed to de-inert, re-inert and replace the lost nitrogen gas could delay the return to power.

Alternative Test

The subject valves shall be full-stroke exercised to the closed position during cold shutdown if the drywell has been de-inerted for reasons other than Inservice Testing, or during refueling outages per ISTC-3522(b) and ISTC-3522(c). [Reference Technical Position TP-12]

References

In the LaSalle Second 10-Year IST Interval, this Cold Shutdown Justification was identified as RJ-19.

Cold Shutdown Justification – CS-11
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Valve Number	System	Class	Category	Unit
1C41-F006	SC	1	C	1
1C41-F007	SC	1	A/C	1
2C41-F006	SC	1	C	2
2C41-F007	SC	1	A/C	2

Function

These valves are the Stand By Liquid Control (SBLC) Injection Line Inboard and Outboard Check Valves. These valves have the safety related function to open to provide a flow path for the injection of the SBLC inventory of sodium pentaborate, a neutron absorber, into the reactor which will stop the nuclear chain reaction in response to an Anticipated Transient Without Scram (ATWS) event.

These valves have a safety function to close to isolate containment penetration M-34 once either of the explosively actuated Squib Valves [i.e. 1(2)C41-F004A and B] is actuated.

Justification

It is impractical to perform a full-stroke exercise of the subject valves to the open or closed position nominally every 3 months during plant operation. In order to perform a full-stroke exercise of the subject valves to the open position, the SBLC system must inject fluid into the reactor vessel. This requires actuation of at least one of the explosively actuated injection (squib) valves. (Testing procedures allow for the injection of demineralized water in lieu of the injection of the sodium pentaborate solution).

These squib valves (1(2)C41-F004A/B) are single use type valves that serve as a leakage seal between the SBLC and reactor coolant system and act as primary containment isolation valves. Once actuated, these valves's spent explosive charges and inlet chamber plug must be replaced which necessitates a system lineup that would render the SBLC system inoperable. Technical Specification 3.1.7 requires that the SBLC system be operable during Modes 1 and 2.

The injection of the sodium pentaborate solution during plant operation would cause an unnecessary negative reactivity excursion of the reactor possibly causing a plant shutdown. Injection of the sodium pentaborate solution during cold shutdowns would delay plant startup to restore the reactor coolant system water chemistry to the proper conditions.

Cold Shutdown Justification – CS-11
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Testing is achieved through the injection of cold demineralized water in lieu of the sodium pentaborate solution. Still, the injection of cold demineralized water during plant operation could cause a positive reactivity excursion of the reactor possibly causing a plant shutdown. In both injection scenarios, the explosive activation of a squib valve would result in entry into TS 3.1.7 while in either Mode 1 or 2 in order to perform subcomponent replacement.

In order to perform a closure test of the subject valves, boundary valve 1(2)C41-F008 must be isolated. This valve is located inside of the drywell. The drywell at LaSalle Country Station is inerted during plant operation as required by Technical Specification 3.6.3. Entry into the drywell during plant operation or cold shutdowns when the atmosphere in containment is inerted for the sole purpose of isolating this valve to perform a closure test of the subject valves would require that the drywell be de-inerted. Section 3.1.1.3 of NUREG-1482, Rev. 1, identifies that de-inerting during cold shutdowns for the sole purpose of performing these tests is impractical because the time and effort needed to de-inert, re-inert and replace the lost nitrogen gas could delay the return to power.

The Cold Shutdown testing at a frequency corresponding to that of TSR 3.1.7.8 for the open exercise testing is justified by ISTC-3522(a), which states that open and close tests need only be performed at an interval when it is practicable to perform both tests.

It is therefore impractical to perform a full stroke exercise test in either an open or closed direction during plant operation.

Alternative Test

These valves will be full-stroke exercised to the open and closed position during cold shutdown if the drywell has been de-inerted for reasons other than Inservice Testing, or during refueling outages on a frequency that corresponds to 24 month staggered test frequency associated with TSR 3.1.7.8 per ISTC-3522(b) and ISTC-3522(c). [Reference Technical Position TP-12]

References

In the LaSalle Second 10-Year IST Interval, this Cold Shutdown Justification was identified as RJ-26.

Cold Shutdown Justification – CS-12
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Valve Number	System	Class	Category	Unit
1E51-F040	RI	2	A/C	1
2E51-F040	RI	2	A/C	2

Function

These valves are the RCIC Turbine Exhaust Check Valves. These valves have a safety related function to open to allow exhaust steam from the RCIC turbine to be quenched in the Suppression Pool.

These valves also have a safety related function to close for containment isolation (Penetration M-76). These valves also have a non-safety related closure function to prevent backflow from the suppression pool into the RCIC Pump turbine in the event that either 1(2)E51-F080 or 1(2)E51-F086 is closed following shutdown of the RCIC System.

Justification

The RCIC system is designed to assure adequate core cooling in the event of reactor isolation from its primary heat sink and the loss of feedwater flow to the reactor vessel without actuation of any of the Emergency Core Cooling System equipment. RCIC is required to be operable whenever the plant is in Modes 1-3 when reactor pressure exceeds 150 psig in accordance with Technical Specification 3.5.3.

Closure verification of the subject valves can only be performed utilizing a leakage type test when the RCIC system is isolated and shutdown (inoperable).

It is therefore impractical to perform a full-stroke exercise of these valves to the closed position during plant operation.

Alternative Test

These valves will be full-stroke exercised to the open and closed position during cold shutdown if the drywell has been de-inerted for reasons other than Inservice Testing, or during refueling outages per ISTC-3522(b) and ISTC-3522(c). [Reference Technical Position TP-12]

References

In the LaSalle Second 10-Year IST Interval, this Cold Shutdown Justification was identified as RJ-28.

Cold Shutdown Justification – CS-13
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Valve Number	System	Class	Category	Unit
1(2)E51-F065	RI	1	A/C	1
1(2)E51-F066	RI	1	A/C	1
1(2)E51-F065	RI	1	A/C	2
1(2)E51-F066	RI	1	A/C	2

Function

These valves are the RCIC Injection Inboard and Outboard Testable Check Valves. These valves have a safety related function to open to allow RCIC injection flow to enter the Reactor Vessel to mitigate the consequence of an accident.

These valves also have a safety related function to close to act as reactor coolant system pressure isolation valves.

Justification

The RCIC system is designed to assure adequate core cooling in the event of reactor isolation from its primary heat sink and the loss of feedwater flow to the reactor vessel without actuation of any of the Emergency Core Cooling System equipment. RCIC is required to be operable whenever the plant is in Modes 1-3 when reactor pressure exceeds 150 psig in accordance with Technical Specification 3.5.3.

These valves are located in the main injection line to the reactor vessel. Closure verification of the subject valves can only be performed utilizing a leakage type test when the RCIC system is isolated and shutdown (inoperable). In order to safely (from both the standpoint of equipment and personnel safety) perform this leakage test, the reactor must be shutdown and at atmospheric pressure, (i.e. Mode 4 or 5) and a blind flange installed in the main injection line between 1(2)E51-F066 and the reactor vessel (inside the drywell). Additionally, performance of this test requires the installation of test equipment and the opening of various vent connections.

The drywell at LaSalle County Station is inerted during plant operation as required by Technical Specification 3.6.3. Entry into the drywell during plant operation or cold shutdowns for the sole purpose of performing a closure test of the subject valves would require that the drywell be de-inerted. Section 3.1.1.3 of NUREG-1482, Rev. 1, identifies that de-inerting during cold shutdowns for the sole purpose of performing these tests is impractical because the time and effort needed to de-inert, re-inert and replace the lost nitrogen gas could delay the return to power.

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These valves are located in the main RCIC injection line to the reactor vessel downstream of the injection line isolation valve (i.e. 1(2)E51-F013). In order to perform a full-stroke open exercise 1(2)E51-F065 and 1(2)E51-F066, the RCIC pump must be started, the RCIC injection isolation valve opened, resulting in flow to the reactor vessel. The injection of RCIC system flow into the reactor vessel during power operations would inject large amounts of relatively cold water into the reactor vessel which could cause a reactivity excursion, level control problems and possible subsequent reactor scram. While this test could be performed during Modes 2- 3 conditions, per ISTC 3522(a) open and closed tests need only be performed at an interval when it is practicable to perform both tests.

It is therefore impractical to perform a full-stroke exercise of these valves to either the open or closed position during plant conditions other than Modes 4, and 5 when the drywell is de-inerted.

Alternative Test

These valves will be full-stroke exercised to the open and closed position during cold shutdown if the drywell has been de-inerted for reasons other than Inservice Testing, or during refueling outages per ISTC-3522(b) and ISTC-3522(c). [Reference Technical Position TP-12]

References

In the LaSalle Second 10-Year IST Interval, this Cold Shutdown Justification was identified as RJ-29.

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Valve Number	System	Class	Category	Unit
1B21-F040C	IN	2	A/C	1
1B21-F040D	IN	2	A/C	1
1B21-F040E	IN	2	A/C	1
1B21-F040R	IN	2	A/C	1
1B21-F040S	IN	2	A/C	1
1B21-F040U	IN	2	A/C	1
1B21-F040V	IN	2	A/C	1
2B21-F040C	IN	2	A/C	2
2B21-F040D	IN	2	A/C	2
2B21-F040E	IN	2	A/C	2
2B21-F040R	IN	2	A/C	2
2B21-F040S	IN	2	A/C	2
2B21-F040U	IN	2	A/C	2
2B21-F040V	IN	2	A/C	2

Function

These valves are the ADS Accumulator Inlet Check Valves. These valves have a safety related function to close to permit the ADS valves to be operated in the event of a loss of the drywell pneumatic system gas supply.

These valves also have a safety related function to open to allow pressurized gas to flow to the ADS valve accumulator from the safety related nitrogen bottle banks to support the operation of each valves respective ADS valve.

Justification

The safety function of the SRVs is to prevent overpressurization of the reactor coolant system, which could lead to failure of the reactor coolant pressure boundary.

In order to open exercise these valves to the position required to fulfill their safety function, the supported ADS valve's actuator must be stroked open, after which would necessitate the recharging of the associated ADS accumulator. Opening an ADS/SRV when at full operating pressure would cause a significant challenge to the plants operation. Such actions would result in a significant decrease in reactor pressure and result in a reduction in reactor water inventory, which could result in a plant scram. Even opening the ADS/SRV under Mode 4 conditions would result in needing to recharge the affected ADS accumulators, which would result in a delay to the resumption of power generation.

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Based upon the following, it is also impractical to exercise these check valves during power operation for the following reasons:

As described in Relief Request RV-01, the stroking of the ADS/SRV valves in place can lead to valve through seat leakage during plant operation, as based upon industry experience and experience at LaSalle. In the previous operating cycles for Unit 1 and Unit 2 prior to the institution of RV-01, approximately 18% (i.e., 5 of 28) of the valves that were subjected to one open/close cycle developed leakage, whereas, approximately 57% (i.e., 12 of 21) of the valves that experienced more than one open/close cycle developed through seat leakage. The SRV and ADS valve leakage is directed to the pool of water in the primary containment suppression chamber causing a need to increase cooling to the pool or a plant shutdown to fix the leaking valve. Therefore, the operation of these ADS/SRVs for the sole purpose of performing an open exercise test of these check valves is not practical.

The decoupling of the ADS actuator from the SRV however would allow for actuation of the ADS without the actual opening of the SRV, thus removing the unnecessary introduction of actions that could result in potential through seat leakage of the SRV. However it must be recognized that the drywell at LaSalle County Station is inerted during plant operation as required by Technical Specification 3.6.3. To decouple the ADS actuator from the SRV, a drywell entry would be required, which would necessitate de-inerting. Section 3.1.1.3 of NUREG-1482, Rev. 1, identifies that de-inerting during cold shutdowns for the sole purpose of performing these tests is impractical because the time and effort needed to de-inert, re-inert and replace the lost nitrogen gas could delay the return to power.

An alternative to the decoupling of the ADS from the SRV would involve the opening of vent valve down stream of the associated check valve, however access to that vent valve would also require entry into the drywell which would necessitate de-inerting.

It is therefore determined to be impractical to perform a full-stroke exercise of these valves to the open or closed position during plant operation or during cold shutdowns while the drywell is in inerted conditions.

Alternative Test

These valves will be full-stroke exercised to the open and closed position during cold shutdown if the drywell has been de-inerted for reasons other than Inservice Testing, or during refueling outages per ISTC-3522(b) and ISTC-3522(c). [Reference Technical Position TP-12]

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References

In the LaSalle Second 10-Year IST Interval, this Cold Shutdown Justification was identified as RJ-33 (open testing) and RJ-06 (closed testing).

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Valve Number	System	Class	Category	Unit
1B33-F395	RR	2	A/C	1
2B33-F395	RR	2	A/C	2

Function

These valves are the Reactor Recirculation Loop Process Sampling Inboard Bypass Check Valves. These valves have a safety related function to open to relieve pressure between the containment isolation valves as a result of an accident.

These check valves also have a safety related function to close to act as a containment isolation valve for penetration M-36.

Justification

The only practical method to exercise the subject valves is to perform a leakage rate test. In order to perform a leakage rate test to exercise the subject valves, an entry must be made into the drywell to setup test equipment and manipulate the block valves and test connection valves. Entry into the drywell during plant operation or cold shutdowns for the sole purpose of testing the subject valves would require that the drywell be de-inerted. Section 3.1.1.3 of NUREG-1482, Rev. 1, identifies that de-inerting during cold shutdowns for the sole purpose of performing these tests is impractical because the time and effort needed to de-inert, re-inert and replace the lost nitrogen gas could delay the return to power

It is therefore impractical to perform an exercise test of the subject valves during plant operation or during cold shutdowns while the drywell is in inerted conditions.

Alternative Test

These valves will be full-stroke exercised during cold shutdown if the drywell has been de-inerted for reasons other than Inservice Testing, or during refueling outages per ISTC-3522(b) and ISTC-3522(c). [Reference Technical Position TP-12]

References

In the LaSalle Second 10-Year IST Interval, this Cold Shutdown Justification was identified as RJ-36.

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Valve Number	System	Class	Category	Unit
1B21-F024A	IN	3	A/C	1
1B21-F024B	IN	3	A/C	1
1B21-F024C	IN	3	A/C	1
1B21-F024D	IN	3	A/C	1
1B21-F029A	IA	3	A/C	1
1B21-F029B	IA	3	A/C	1
1B21-F029C	IA	3	A/C	1
1B21-F029D	IA	3	A/C	1
2B21-F024A	IN	3	A/C	2
2B21-F024B	IN	3	A/C	2
2B21-F024C	IN	3	A/C	2
2B21-F024D	IN	3	A/C	2
2B21-F029A	IA	3	A/C	2
2B21-F029B	IA	3	A/C	2
2B21-F029C	IA	3	A/C	2
2B21-F029D	IA	3	A/C	2

Function

This group of valves is made up of the Inboard and Outboard MSIV Accumulator Check Valves. These check valves have a safety function to close to isolate non-safety related instrument air or nitrogen from the gas stored in its supported safety related accumulators. Accumulator pressure is required to ensure proper operation of the MSIVs to mitigate the consequences of an accident.

Justification

The inboard MSIV accumulator check valves are located inside primary containment. The only practical method to verify the full-stroke closure capability of these valves utilizing flow is by seat leakage testing.

In order to manipulate the test connection valves and block valves to their proper position to perform a leakage rate test of the subject valves, entry into the drywell is required. The drywell at LaSalle Country Station is inerted during plant operation as required by Technical Specification 3.6.3. Entry into the drywell during plant operation or cold shutdowns for the sole purpose of performing these leakage rate tests would require that the drywell be de-inerted. Section 3.1.1.3 of NUREG-1482, Rev. 1, identifies that de-inerting during cold shutdowns for the sole purpose of performing these tests is impractical because the time and effort needed to de-inert, re-inert and replace the lost nitrogen gas could delay the return to power.

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The only practical method of verifying the full-stroke closure capability of the outboard MSIV accumulator check valves is by seat leakage testing. This is impractical during plant operation because seat leakage testing would require isolation of the instrument air supply to at least two outboard MSIV accumulators. This removes the fast-closure (3 to 5 second) capability of the MSIVs with the depressurized accumulators. In addition, isolation of the air supply could potentially result in the closure of an MSIV at power potentially leading to a plant scram.

Alternative Test

These valves will be full-stroke exercised to the closed position during cold shutdown if the drywell has been de-inerted for reasons other than Inservice Testing, or during refueling outages per ISTC-3522(b) and ISTC-3522(c). [Reference Technical Position TP-12]

References

In the LaSalle Second 10-Year IST Interval, this Refueling Justification was identified as RJ-06.

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Valve Number	System	Class	Category	Unit
1E22-F005	HP	1	A/C	1
1E21-F006	LP	1	A/C	1
1E12-F041A	RH	1	A/C	1
1E12-F041B	RH	1	A/C	1
1E12-F041C	RH	1	A/C	1
2E22-F005	HP	1	A/C	2
2E21-F006	LP	1	A/C	2
2E12-F041A	RH	1	A/C	2
2E12-F041B	RH	1	A/C	2
2E12-F041C	RH	1	A/C	2

Function

These valves are the HPCS, LPCS and RHR Injection Check Valves. These valves serve as Pressure Isolation Valves (PIV), which are safety related closed functions.

These valves also have a safety related open function to allow for injection from their associated system. This injection flow is necessary to provide sufficient cooling to the reactor core to prevent excessive fuel cladding temperature following a break in the nuclear system piping.

Justification

Open Testing

The only method to verify a full-stroke open exercise of the valve is to flow through the valve at a rate that meets or exceeds the required maximum accident condition flow. It is not practical to provide any flow through the LPCI/RHR and LPCS valves to perform a full stroke exercise during plant operation. The LPCI/RHR and LPCS pumps have insufficient head to flow to the reactor during normal power operations. Additionally, the LPCI/RHR and LPCS injection isolation valves are interlocked to prevent their opening during plant operation when reactor coolant system pressure is > 500 psig. The reactor pressure interlock prevents the inadvertent opening of these valves during power operation to protect the lower design pressure rated LPCI/RHR and LPCS system piping located outside of the reactor containment from overpressurization.

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It is not practical to pass any flow through the HPCS system to perform a full or part-stroke exercise of 1(2)E22-F005 during plant operation. HPCS is an emergency core cooling system that is designed to cool the reactor in the event of a coolant system pipe break. If the HPCS system were operated during plant operation, relatively cold water would be directly injected into the reactor at power. This could cause a reactor reactivity excursion and/or level transient that would unnecessarily challenge the plant and possibly result in a reactor scram.

Close Testing

In order to full stroke close these valves, the valve must first be opened against RCS pressure. During power operation, neither the LPCS nor the RHR systems are capable of developing sufficient pressure to open their subject valves against RCS pressure. While the HPCS system is capable of injecting into the RCS during power operating conditions, doing so is undesirable as the introduction of cold water to the reactor would result in undesirable power fluctuations and possible reactor trip.

In addition, the only practical method to verify the successful closure of these valves is through performing a seat leakage testing. As described above, all of the subject check valves serve as PIVs. Each PIV is assigned individual leakage rate criteria as described in Technical Specification Surveillance Requirement 3.4.6.1.

In order to perform TSR 3.4.6.1, entry into the drywell is required in order to manipulate the test connection and block valves to their necessary positions. This is not practical during plant operation or cold shutdowns when the atmosphere in containment is inerted. The drywell at LaSalle County Station is inerted during plant operation as required by Technical Specification 3.6.3. Entry into the drywell during plant operation or cold shutdowns for the sole purpose of performing these leakage rate tests would require that the drywell be de-inerted. Section 3.1.1.3 of NUREG-1482, Rev. 1, identifies that de-inerting during cold shutdowns for the sole purpose of performing these tests is impractical because the time and effort needed to de-inert, re-inert and replace the lost nitrogen gas could delay the return to power.

Alternative Test

These valves will be full-stroke exercised open and closed following each refueling outage or period of cold shutdown during which the drywell has been de-inerted for reasons other than Inservice Testing per ISTC-3522(b) and ISTC-3522(c).

Note, while it may not be necessary to de-inert the drywell to perform the open testing of these subject valves, per ISTC-3522, open and close tests need only be

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performed at an interval when it is practicable to perform both tests. As a result, the most restrictive criteria as provided above will be used.

References

In the LaSalle Second 10-Year IST Interval, this Refueling Justification was identified as RJ-12 (closed testing) and RJ-17 (open testing).

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Valve Number	System	Class	Category	Unit
1B21-F036C	IN	3	A/C	1
1B21-F036D	IN	3	A/C	1
1B21-F036E	IN	3	A/C	1
1B21-F036F	IN	3	A/C	1
1B21-F036H	IN	3	A/C	1
1B21-F036K	IN	3	A/C	1
1B21-F036L	IN	3	A/C	1
1B21-F036M	IN	3	A/C	1
1B21-F036P	IN	3	A/C	1
1B21-F036R	IN	3	A/C	1
1B21-F036S	IN	3	A/C	1
1B21-F036U	IN	3	A/C	1
1B21-F036V	IN	3	A/C	1
2B21-F036C	IN	3	A/C	2
2B21-F036D	IN	3	A/C	2
2B21-F036E	IN	3	A/C	2
2B21-F036F	IN	3	A/C	2
2B21-F036H	IN	3	A/C	2
2B21-F036K	IN	3	A/C	2
2B21-F036L	IN	3	A/C	2
2B21-F036M	IN	3	A/C	2
2B21-F036P	IN	3	A/C	2
2B21-F036R	IN	3	A/C	2
2B21-F036S	IN	3	A/C	2
2B21-F036U	IN	3	A/C	2
2B21-F036V	IN	3	A/C	2

Function

These valves are the SRV Accumulator Inlet Check Valves. These valves have a safety related function to close to permit the SRV's to be operated in the "relief" mode in the event of a loss of the drywell pneumatic system gas supply.

These valves have a non-safety related open function to provide a flow path from the Instrument Nitrogen Receiver IN02T to the Main Steam SRV Accumulator.

Justification

The safety function of the SRVs is to prevent overpressurization of the reactor coolant system, which could lead to failure of the reactor coolant pressure boundary.

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The SRVs function as both Safety and Relief valves, with a subset of (7) of these SRV's providing a third function of being able to provide a depressurization function. (i.e. those equipped with ADS, valves C/D/E/R/S/U/V). For power operated relief operation, each valve is provided with a pressure sensing device that is programmed with various setpoints, depending upon plant operating parameters. When the relief set pressure is reached, a solenoid valve actuates allowing air/nitrogen to provide the motive force through a pneumatic piston/cylinder and linkage assembly to open the subject SRV. Each SRV can also be operated independently in a Relief Mode from controls located in the main control room. Each SRV is provided with its own pneumatic accumulator and inlet check valve. These accumulators assure that the valve can be opened following failure of their non-safety related air supply.

The accumulators, check valves and associated test connections are physically located inside of the drywell. The drywell at LaSalle Country Station is inerted during plant operation as required by Technical Specification 3.6.3. Entry into the drywell during plant operation or cold shutdowns for the sole purpose of performing a closure test of the subject valves would require that the drywell be de-inerted. Section 3.1.1.3 of NUREG-1482, Rev. 1, identifies that de-inerting during cold shutdowns for the sole purpose of performing these tests is impractical because the time and effort needed to de-inert, re-inert and replace the lost nitrogen gas could delay the return to power.

ISTC requires that all check valves be exercise tested in both directions regardless of safety function. Open and close tests need only be performed at a frequency when it is practical to perform both tests per ISTC-3522(a).

Therefore based upon the above justification, it is impractical to perform a full-stroke exercise of these valves to the closed position during plant operation or during cold shutdowns.

Alternative Test

These valves will be full-stroke exercised to the open and closed position during cold shutdown if the drywell has been de-inerted for reasons other than Inservice Testing, or during refueling outages per ISTC-3522(b) and ISTC-3522(c). [Reference Technical Position TP-12]

References

In the LaSalle Second 10-Year IST Interval, this Refueling Justification was identified as RJ-32.

Cold Shutdown Justification - CS-19
(Rev. 0)
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Valve Number	System	Class	Category	Unit
1IN031	IN	2	A	1
2IN031	IN	2	A	2

Function

These valves are the Drywell Instrument Nitrogen Traversing Incore Probe (TIP) Containment Isolation Valves. These valves have a safety function to close to isolate the primary containment penetration M-47 to mitigate the consequences of an accident. These valves automatically isolate on a Group 2 Containment Isolation signal. These valves have a non-safety related open function to provide a flow path for Nitrogen to each TIP index mechanism and guide tube assembly. These valves are the only Primary Containment Isolation Valves on the penetration, and are location outside the drywell.

Justification

The purpose of the IN system is to supply instrument quality compressed gas for the continuous operation of pneumatically controlled or operated loads mainly in the drywell during plant operation. Each TIP index mechanism and guide tube assembly is continuously purged with dry nitrogen from the drywell pneumatic system. This prevents changes in the drywell atmospheric humidity from affecting the quality of the flux profile. In addition, each drive mechanism is purged with dry instrument air to aid in moisture removal.

It is impractical to perform a partial stroke of these valves because they are solenoid valves and do not have the ability to partially stroke. It is also impractical to full-stroke exercise these valves to the closed position during plant operation because the testing would unnecessarily reduce the life expectancy of plant components (NUREG-1482 Revision 1 section 2.4.5). The closure of 1(2)IN031 would isolate the pneumatic supply to the TIP drive mechanism, and this may have an adverse affect on drywell atmosphere humidity from destroying the Sermetel (graphite) coating of the guide tubes, which could render the TIP system inoperable. The nitrogen purge also limits the amount of general corrosion on all interior surfaces, and thus further reduces the possibilities of component failure.

Furthermore, failure of these valves in the non-conservative position (i.e., open position) during valve cycling would result in a loss of containment integrity (NUREG-1482 revision 1 section 3.1.1(1) and 3.1.1(2)).

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Alternative Test

These valves will be full-stroke exercised closed during cold shutdowns per ISTC-3521(c) and (f).

References

In the LaSalle Second 10-Year IST Interval, this Cold Shutdown Justification was identified as CS-25.

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REFUEL OUTAGE JUSTIFICATION INDEX

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Refueling Outage Justification No.	Description
RJ-01	Drywell Nitrogen Valves
RJ-02	Recirculation Pump Seal Flow Check Valves
RJ-03	RVWLIS Instrument Panel Check Valves
RJ-04	Drywell Instrument Check Valves
RJ-05	Main Steam System Alternate Shutdown Cooling Valves
RJ-06	RCIC System Check Valves
RJ-07	Excess Flow Check Valves

ATTACHMENT 9

REFUEL OUTAGE JUSTIFICATIONS

Reactor Refueling Justification – RJ-01
(Rev. 0)
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Valve Number	System	Class	Category	Unit
1IN001A	IN	2	A	1
1IN001B	IN	2	A	1
2IN001A	IN	2	A	2
2IN001B	IN	2	A	2

Function

These valves are the Drywell Instrument Nitrogen Suction Header Isolation Valves that also function as Containment Isolation Valves. These valves have a safety function to close to isolate the primary containment (penetration M-62 on Unit 1 and penetration M-54 on Unit 2) to mitigate the consequences of an accident. The subject valves automatically isolate on a Group 10 Containment Isolation signal.

The subject valves have a non-safety function to open to allow the Drywell Pneumatic System (IN) gases to flow to support the proper operation of pneumatically controlled or operated loads located in the drywell.

The purpose of the IN system is to supply instrument quality compressed gas for the continuous operation of pneumatically controlled or operated loads located in the drywell during plant operation and during cold shutdowns. The distribution of the compressed gas is via two headers. The regulated header supplies all of the system requirements in the drywell (MSIVs, main steam safety relief valves, reactor recirculation sample valves and the recirculation pump seal water control valves) with the exception of the ADS valves. The ADS valve accumulators are supplied by the unregulated header. Additionally there are safety related nitrogen bottles connected to the unregulated header outside of containment which will makeup gas to the unregulated header when pressure drops below 160 psig.

Justification

In order to perform a closure test of either 1(2)IN001A or 1(2)IN001B, the compressors would have to be shutdown to avoid an automatic compressor trip or compressor damage. A shutdown of the compressors would cause the shutdown of the entire IN system and unnecessary cycling of plant equipment. A backup gas supply from the instrument air system via 1(2)IN059 and 1(2)IN060 is available to provide backup air to operate the components such as the SRVs (non-ADS), MSIVs (inside the drywell) and the recirculation pump seal water control valves. However, use of this air supply line may cause dilution of the inerted containment atmosphere.

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The drywell at LaSalle Country Station is inerted during plant operation as required by Technical Specification 3.6.3. It is also not practical to close these subject valves during cold shutdowns as the compressors typically remain in operation and potential dilution of the inerted containment atmosphere could result in an unnecessary delay in returning the plant to power operation in order to reestablish the required inert concentration. (Ref. NUREG 1482, Rev. 1, section 3.1.1.3). It is therefore impractical to perform a full-stroke exercise of these subject valves during plant operation or cold shutdowns.

Alternative Test

These valves will be full-stroke exercised closed during refueling outages per ISTC-3522(c).

References

In the LaSalle Second 10-Year IST Interval, this Refueling Justification was identified as RJ-03.

Reactor Refueling Justification – RJ-02
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Valve Number	System	Class	Category	Unit
1B33-F013A	RR	2	A/C	1
1B33-F013B	RR	2	A/C	1
1B33-F017A	RR	2	A/C	1
1B33-F017B	RR	2	A/C	1
2B33-F013A	RR	2	A/C	2
2B33-F013B	RR	2	A/C	2
2B33-F017A	RR	2	A/C	2
2B33-F017B	RR	2	A/C	2

Function

These valves are the Reactor Recirculation Pump Seal Flow Check Valves, which also function as Containment Isolation Valves. These valves have a safety function to close to isolate the primary containment to mitigate the consequences of an accident.

These valves have a non-safety related function to open to allow CRD system water to pass to the reactor recirculation pump seal packages.

Justification

It is impractical to perform a full-stroke exercise test of these valves during plant operation or during cold shutdowns. These valves are in the reactor recirculation pump seal purge lines. The reactor recirculation pump seals are provided with water from the control rod drive pumps to prevent coolant flow from leaking along the reactor recirculation pump shaft out into the drywell. The seal purge provides a continuous flow of clean, cool water. It is highly desirable to maintain this flow at all times. If the seal purge flow is interrupted, a backflow of reactor coolant water may carry foreign material into the seal package, which could damage the seal surfaces and result in rapid seal wear. The seal purge line check valves are normally open during plant operation to allow cooling flow to the reactor recirculation pump seals. During plant shutdown to Mode 4 this flow path is also maintained in order to support pump operations and seal health as described above.

The only practical method of verifying the full-stroke closure capability of these valves is by seat leakage testing. It was determined in section 4.1.6 of NUREG-1482, Rev. 1, that the need to setup test equipment in order to perform a seat leakage rate test to verify valve closure is adequate justification to defer backflow testing of a check valve to a refueling outage.

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The non-safety, bi-directional testing of these valves also requires evidence of the valves ability to travel from it's closed position to an open position. As described above, the ability to close this valve in preparation for an open test is not practical during conditions of Recirculation Pump operation or desired when RCS pressure have the potential of back flowing water containing particulate matter into the pump seals that could result in seal package degradation.

Alternative Test

These valves will be full-stroke exercised closed during refueling outages per ISTC-3522(c).

References

In the LaSalle Second 10-Year IST Interval, this Refueling Justification was identified as RJ-08.

Reactor Refueling Justification - RJ-03
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Valve Number	System	Class	Category	Unit
1C11-F422B	RD	2	A/C	1
1C11-F422D	RD	2	A/C	1
1C11-F422F	RD	2	A/C	1
1C11-F422G	RD	2	A/C	1
1C11-F423B	RD	2	A/C	1
1C11-F423D	RD	2	A/C	1
1C11-F423F	RD	2	A/C	1
1C11-F423G	RD	2	A/C	1
2C11-F422B	RD	2	A/C	2
2C11-F422D	RD	2	A/C	2
2C11-F422F	RD	2	A/C	2
2C11-F422G	RD	2	A/C	2
2C11-F423B	RD	2	A/C	2
2C11-F423D	RD	2	A/C	2
2C11-F423F	RD	2	A/C	2
2C11-F423G	RD	2	A/C	2

Function

These valves are the Reactor Vessel Water Level Indication System (RVWLIS) Reference Leg Continuous Backfill Panel Check Valves, which also function as Containment Isolation Valves. These valves have a safety related function to close and limit primary containment leakage in the event of an accident and to maintain the instrument reference legs full to ensure accurate reactor water level signals and indications.

These valves have a non-safety related function to open to allow a continuous flow of water from the control rod drive system into the reactor vessel level indicating system reference legs. This backfill water is provided to prevent non-condensable gases from separating in the reference legs, which could adversely affect the indication of reactor vessel level.

Justification

It is impractical to perform a full-stroke exercise of the subject valves to the closed position during plant operation or during cold shutdowns. The only practical method to verify individual valve closure is by the performance of a local leakage test to the requirement of 10 CFR 50 Appendix J and Technical Requirements Manual Technical Surveillance Requirement 3.3.n.2. This leakage test requires isolation of the reference leg backfill flow and venting and draining of piping. The isolation and draining of these

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portions of the system is not practical during plant operation. The reference leg backfill system is designed to provide a continuous flow of water to the reactor vessel level instrument reference legs to prevent the introduction and propagation of non-condensable gases in the reference legs. The isolation of backfill flow for LLRT testing could adversely affect accuracy of the indication of reactor vessel level indication. Reactor vessel level indication is used as an input to numerous alarms and safety actuations (main turbine trip, reactor feed pump trip, HPCS actuation, PCIS, reactor recirculation trip, reactor scram and etc.).

Seat leakage testing of the subject valves during cold shutdowns is also impractical. As stated above, local leakage rate testing of the subject valves requires the isolation of the reference backfill lines, venting and draining of piping and the installation of test equipment. It was determined in section 4.1.6 of NUREG-1482, Rev. 1, that the need to setup test equipment in order to perform a seat leakage rate test to verify valve closure is adequate justification to defer backflow testing of a check valve to a refueling outage.

Bi-directional exercising requirements of ISTC-3522(a) are satisfied in the open direction during the fill and vent process of leak rate testing on a refuel outage frequency. A refuel frequency for the open exercise testing is justified by ISTC-3522(a), which states that open and close tests need only be performed at an interval when it is practicable to perform both tests.

Alternative Test

These valves will be full-stroke exercised closed during refueling outages per ISTC-3522(c).

References

In the LaSalle Second 10-Year IST Interval, this Refueling Justification was identified as RJ-14.

Reactor Refueling Justification - RJ-04
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Valve Number	System	Class	Category	Unit
1IN018	IN	2	A/C	1
1IN043	IN	3	C	1
1IN044	IN	3	C	1
2IN018	IN	2	A/C	2
2IN043	IN	3	C	2
2IN044	IN	3	C	2

Function

Valves 1(2)IN018 are the Drywell Instrument Nitrogen Regulated Header Drywell Isolation Check Valves. These valves have the safety related closed function to isolate the primary containment (penetration M-60).

Valves 1(2)IN043 and 1(2)IN044 are the A and B ADS Accumulator Unregulated Nitrogen Header Drywell Supply Check Valves and have the safety related function to close to prevent the safety related nitrogen supply gas from the nitrogen bottle bank from being lost through the non-safety related IN header. The nitrogen bottle banks are used only when the normally operating IN system is incapable of meeting the ADS valve accumulator pressure requirements.

These subject valves have a non-safety related function to open to allow the Drywell Pneumatic System (IN) gases to flow to support the proper operation of pneumatically controlled or operated loads located in the drywell.

Justification

It is not practical to perform a full-stroke exercise of the subject valves during plant operation or during cold shutdowns. The purpose of the IN system is to supply instrument quality compressed gas for the continuous operation of pneumatically controlled or operated loads located in the drywell during plant operation and during cold shutdowns. The distribution of the compressed gas is via two headers. The regulated header supplies all of the system requirements in the drywell (MSIVs, main steam safety relief valves, reactor recirculation sample valves, recirculation pump seal water control valves and RHR, RCIC,

Reactor Refueling Justification - RJ-04
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HPCS and LPCS testable check valves) with the exception of the ADS valves. The ADS valve accumulators are supplied by the unregulated header. Additionally there are safety related nitrogen bottles connected to the unregulated header outside of containment which will makeup gas to the unregulated header when pressure drops below 160 psig.

The only practical method to verify the full-stroke closure capability of these valves utilizing flow is through seat leakage testing. As described above, 1(2)IN018 have a leakage limiting function as a containment isolation valves. Therefore, 1(2)IN018 are individually leakage rate tested in accordance with the requirements of Technical Specification Surveillance Requirement 3.6.1.1.1. In order to manipulate the test connection valves and block valves to their proper position to perform a leakage rate test of the subject valves, the regulated gas supply to the MSIVs (inside containment), main steam safety relief valves, reactor recirculation sample valves, recirculation pump seal water control valves and other components must be interrupted. This is not practical during plant operation or cold shutdowns. In addition, in order to perform leakage rate testing of the subject valves, test equipment would have to be setup. In section 4.1.6 of NUREG-1482, Rev. 1, it was determined that the need to setup test equipment is adequate justification to defer backflow testing of a check valve to a refueling outage.

The only practical method to perform a full-stroke closure exercise test of valves 1(2)IN043 and 1(2)IN044 is to perform a seat leakage type test. The ADS valves are required to be operable in Modes 1, 2 and 3 as required by Technical Specification 3.4.4. In order to manipulate the test connection valves and block valves to their proper position to perform a leakage rate test of these subject valves, the un-regulated gas supply to the ADS valves must be isolated. In addition, in order to perform leakage rate testing of the subject valves, test equipment would have to be setup. In section 4.1.6 of NUREG-1482, Rev. 1, it was determined that the need to setup test equipment is adequate justification to defer backflow testing of a check valve to a refueling outage.

Alternative Test

These valves will be full-stroke exercised closed during refueling outages per ISTC-3522(c).

References

In the LaSalle Second 10-Year IST Interval, this Refueling Justification was identified as RJ-20.

Reactor Refueling Justification - RJ-05
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Valve Number	System	Class	Category	Unit
1B21-F020	MS	NS	B	1
1B21-F021	MS	NS	B	1
1B21-F070	MS	NS	B	1
1B21-F071	MS	NS	B	1
1B21-F072	MS	NS	B	1
1B21-F073	MS	NS	B	1
1B21-F418A	MS	NS	B	1
1B21-F418B	MS	NS	B	1
2B21-F020	MS	NS	B	2
2B21-F021	MS	NS	B	2
2B21-F070	MS	NS	B	2
2B21-F071	MS	NS	B	2
2B21-F072	MS	NS	B	2
2B21-F073	MS	NS	B	2
2B21-F418A	MS	NS	B	2
2B21-F418B	MS	NS	B	2

Function

The valves are the Motor Operated valves in the Main Steam System. These valves have no safety function identified. These valves are used to support the operation of the MSIV Alternate Leakage Treatment (ALT) path.

Justification

As a result of a response to an NRC comment (Comment 2.C of letter dated February 5, 1996; Responses to NRC Comments-MSIV-LCS) concerning the reliability of the alternate leakage path (including boundary valves), a commitment was made to include these subject valves in the IST program.

While inclusion into the IST Program would typically prescribe that these valves be tested in accordance with ISTC-5100, and require that power operated valves be tested in accordance with the applicable requirements of ISTC-3000, which is nominally every 3 months, the commitment specifically states that these valves need only be full-stroke exercised once each refueling outage.

Reactor Refueling Justification - RJ-05
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It should also be stated that per, Section 2.2.4 of NUREG-1482, Rev. 1, if a commitment is made to include a component in the IST program, the component is considered to be within the scope of the program.

Alternative Test

The subject valves shall be full-stroke exercised open and closed each refueling outage as identified in the above identified commitment.

References

In the LaSalle Second 10-Year IST Interval, this Refueling Justification was identified as RJ-23.

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Valve Number	System	Class	Category	Unit
1E51-F030	RI	2	C	1
2E51-F030	RI	2	C	2

Function

These valves are the RCIC Pump Suppression Pool Suction Check Valves. These valves have a safety related function to open to provide a suction flow path from the suppression pool to the RCIC pump.

These valves also have a safety related function to close to prevent the backflow of water from the RCIC suction line into either the suppression pool or Cycled (CY) Condensate Storage Tank (CST) thereby maintaining the injection header filled and pressurized.

Justification

To order to full open exercise these valves a full-flow test of the RCIC Pump while taking suction from the Suppression Pool is required. Quarterly full flow testing of the RCIC Pump is performed taking suction from the CST and discharging flow back to the CST via procedures LOS-RI-Q3 or LOS-RI-Q5.

In order to transfer suction to the Suppression Pool, a discharge flow path large enough must also be established to handle RCIC full flow back to the Suppression Pool. During Modes 1-3 would require the installation of the blind side of a spectacle flange in the return line to the CY Tank in order to maintain Primary Containment integrity, opening locked closed, manually operated Containment Isolation Valves 1(2)E51-F362 and 1(2)E51-F363 and lifting a lead which removes the interlock which keeps 1(2)E51-F022 and 1(2)E51-F059 closed if 1(2)E51-F031 is open.

Full open testing is performed during startup after refueling by lining up from the Suppression Pool through the full flow test line to the CY Tank. This transfer requires Chemistry Department approval.

It is therefore not practical to full stroke exercise this valve quarterly or during Cold Shutdowns.

Alternative Test

These valves will be full-stroke exercised open during refueling outages per ISTC-3522(c).

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References

In the LaSalle Second 10-Year IST Interval, this Refueling Justification was identified as RJ-37.

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Valve Number	System	Class	Category	Unit
1B21-F325A	MS	2	C	1
1B21-F325B	MS	2	C	1
1B21-F325C	MS	2	C	1
1B21-F325D	MS	2	C	1
1B21-F326A	MS	2	C	1
1B21-F326B	MS	2	C	1
1B21-F326C	MS	2	C	1
1B21-F326D	MS	2	C	1
1B21-F327A	MS	2	C	1
1B21-F327B	MS	2	C	1
1B21-F327C	MS	2	C	1
1B21-F327D	MS	2	C	1
1B21-F328A	MS	2	C	1
1B21-F328B	MS	2	C	1
1B21-F328C	MS	2	C	1
1B21-F328D	MS	2	C	1
1B21-F344	NB	2	C	1
1B21-F346	NB	2	C	1
1B21-F348	NB	2	C	1
1B21-F350	NB	2	C	1
1B21-F353	NB	2	C	1
1B21-F355	NB	2	C	1
1B21-F357	NB	2	C	1
1B21-F359	NB	2	C	1
1B21-F361	NB	2	C	1
1B21-F363	NB	2	C	1
1B21-F370	NB	2	C	1
1B21-F372	NB	2	C	1
1B21-F374	NB	2	C	1
1B21-F376	NB	2	C	1
1B21-F378	NB	2	C	1
1B21-F413A	RI	2	C	1
1B21-F413B	RI	2	C	1
1B21-F415A	RI	2	C	1
1B21-F415B	RI	2	C	1

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Valve Number	System	Class	Category	Unit
1B21-F437	NB	2	C	1
1B21-F439	NB	2	C	1
1B21-F441	NB	2	C	1
1B21-F443	NB	2	C	1
1B21-F445A	NB	2	C	1
1B21-F445B	NB	2	C	1
1B21-F447	NB	2	C	1
1B21-F449	NB	2	C	1
1B21-F451	NB	2	C	1
1B21-F453	NB	2	C	1
1B21-F455A	NB	2	C	1
1B21-F455B	NB	2	C	1
1B21-F457	NB	2	C	1
1B21-F459	NB	2	C	1
1B21-F461	NB	2	C	1
1B21-F463	NB	2	C	1
1B21-F465A	NB	2	C	1
1B21-F465B	NB	2	C	1
1B21-F467	NB	2	C	1
1B21-F469	NB	2	C	1
1B21-F471	NB	2	C	1
1B21-F473	NB	2	C	1
1B21-F475A	NB	2	C	1
1B21-F475B	NB	2	C	1
1B21-F570	NB	2	C	1
1B21-F571	NB	2	C	1
1B33-F301A	RR	2	C	1
1B33-F301B	RR	2	C	1
1B33-F305A	RR	2	C	1
1B33-F305B	RR	2	C	1
1B33-F305C	RR	2	C	1
1B33-F305D	RR	2	C	1
1B33-F307A	RR	2	C	1
1B33-F307B	RR	2	C	1
1B33-F307C	RR	2	C	1
1B33-F307D	RR	2	C	1
1B33-F311A	RR	2	C	1
1B33-F311B	RR	2	C	1
1B33-F311C	RR	2	C	1
1B33-F311D	RR	2	C	1

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Valve Number	System	Class	Category	Unit
1B33-F313A	RR	2	C	1
1B33-F313B	RR	2	C	1
1B33-F313C	RR	2	C	1
1B33-F313D	RR	2	C	1
1B33-F315A	RR	2	C	1
1B33-F315B	RR	2	C	1
1B33-F315C	RR	2	C	1
1B33-F315D	RR	2	C	1
1B33-F317A	RR	2	C	1
1B33-F317B	RR	2	C	1
1B33-F319A	RR	2	C	1
1B33-F319B	RR	2	C	1
1E12-F315	RH	2	C	1
1E12-F317	RH	2	C	1
1E12-F359A	RH	2	C	1
1E12-F359B	RH	2	C	1
1E12-F360A	RH	2	C	1
1E12-F360B	RH	2	C	1
1E21-F304	LP	2	C	1
1E22-F304	HP	2	C	1
1G33-F309	RT	2	C	1
1G33-F312A	RT	2	C	1
1G33-F312B	RT	2	C	1
2B21-F325A	MS	2	C	2
2B21-F325B	MS	2	C	2
2B21-F325C	MS	2	C	2
2B21-F325D	MS	2	C	2
2B21-F326A	MS	2	C	2
2B21-F326B	MS	2	C	2
2B21-F326C	MS	2	C	2
2B21-F326D	MS	2	C	2
2B21-F327A	MS	2	C	2
2B21-F327B	MS	2	C	2
2B21-F327C	MS	2	C	2
2B21-F327D	MS	2	C	2
2B21-F328A	MS	2	C	2
2B21-F328B	MS	2	C	2
2B21-F328C	MS	2	C	2
2B21-F328D	MS	2	C	2

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Valve Number	System	Class	Category	Unit
2B21-F344	NB	2	C	2
2B21-F346	NB	2	C	2
2B21-F348	NB	2	C	2
2B21-F350	NB	2	C	2
2B21-F353	NB	2	C	2
2B21-F355	NB	2	C	2
2B21-F357	NB	2	C	2
2B21-F359	NB	2	C	2
2B21-F361	NB	2	C	2
2B21-F363	NB	2	C	2
2B21-F370	NB	2	C	2
2B21-F372	NB	2	C	2
2B21-F374	NB	2	C	2
2B21-F376	NB	2	C	2
2B21-F378	NB	2	C	2
2B21-F413A	RI	2	C	2
2B21-F413B	RI	2	C	2
2B21-F415A	RI	2	C	2
2B21-F415B	RI	2	C	2
2B21-F437	NB	2	C	2
2B21-F439	NB	2	C	2
2B21-F441	NB	2	C	2
2B21-F443	NB	2	C	2
2B21-F445A	NB	2	C	2
2B21-F445B	NB	2	C	2
2B21-F447	NB	2	C	2
2B21-F449	NB	2	C	2
2B21-F451	NB	2	C	2
2B21-F453	NB	2	C	2
2B21-F455A	NB	2	C	2
2B21-F455B	NB	2	C	2
2B21-F457	NB	2	C	2
2B21-F459	NB	2	C	2
2B21-F461	NB	2	C	2
2B21-F463	NB	2	C	2
2B21-F465A	NB	2	C	2
2B21-F465B	NB	2	C	2
2B21-F467	NB	2	C	2
2B21-F469	NB	2	C	2
2B21-F471	NB	2	C	2

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Valve Number	System	Class	Category	Unit
2B21-F473	NB	2	C	2
2B21-F475A	NB	2	C	2
2B21-F475B	NB	2	C	2
2B21-F570	NB	2	C	2
2B21-F571	NB	2	C	2
2B33-F301A	RR	2	C	2
2B33-F301B	RR	2	C	2
2B33-F305A	RR	2	C	2
2B33-F305B	RR	2	C	2
2B33-F305C	RR	2	C	2
2B33-F305D	RR	2	C	2
2B33-F307A	RR	2	C	2
2B33-F307B	RR	2	C	2
2B33-F307C	RR	2	C	2
2B33-F307D	RR	2	C	2
2B33-F311A	RR	2	C	2
2B33-F311B	RR	2	C	2
2B33-F311C	RR	2	C	2
2B33-F311D	RR	2	C	2
2B33-F313A	RR	2	C	2
2B33-F313B	RR	2	C	2
2B33-F313C	RR	2	C	2
2B33-F313D	RR	2	C	2
2B33-F315A	RR	2	C	2
2B33-F315B	RR	2	C	2
2B33-F315C	RR	2	C	2
2B33-F315D	RR	2	C	2
2B33-F317A	RR	2	C	2
2B33-F317B	RR	2	C	2
2B33-F319A	RR	2	C	2
2B33-F319B	RR	2	C	2
2E12-F315	RH	2	C	2
2E12-F317	RH	2	C	2
2E12-F359A	RH	2	C	2
2E12-F359B	RH	2	C	2
2E12-F360A	RH	2	C	2
2E12-F360B	RH	2	C	2
2E21-F304	LP	2	C	2
2E22-F304	HP	2	C	2
2G33-F309	RT	2	C	2
2G33-F312A	RT	2	C	2
2G33-F312B	RT	2	C	2

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Function

These valves are excess flow check valves that function to provide the process fluid to their support instrument. These valves have a safety function to perform as Containment Isolation valves in that they act to minimize the loss of fluid through them following a break in the instrument line downstream from the valve.

These valves have a non-safety related function to open to allow for continued operation of their supported downstream instrument.

Justification

It is impractical to full-stroke exercise excess flow check valves to the closed position during plant operation or during cold shutdowns. These valves are controlled leakage check valves, which are designed to automatically close in the event of a downstream line rupture. Upon closing, these valves are designed to allow a controlled leakage. Exercising these valves requires that the instrumentation tubing downstream of each EFCV be depressurized or drained (as applicable) and the closure function verified by change in the amount of flow and/or verification of an audible click when the poppet seats. Draining or depressurizing the downstream side of these valves will separate the subject instrument from its source. These instruments provide indication of a large number of essential plant operational parameters. This instrumentation supplies input to a large number of reactor protection type actuations such as ECCS initiation, Primary Containment Isolation, Secondary Containment Isolation, etc. Isolation and testing of the subject valves during plant operation would render their respective instrumentation inoperable and could cause an unexpected plant transient, equipment actuations or a plant scram. Additionally, the performance of this closure test requires the installation of test equipment to monitor the expected change in flow when the valve moves to the check position. It was determined in section 4.1.6 of NUREG-1482, Rev. 1, that the need to setup test equipment in order to verify valve closure is adequate justification to defer backflow testing of a check valve to a refueling outage.

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The non-safety, bi-directional testing of these valves also requires evidence of the valves ability to travel from it's closed position to an open position. As described above, the ability to close this valve in preparation for an open test is not practical until conditions allow for the closure of the valve. Therefore evidence of an open test cannot be collected until following the performance of a closed test, which is performed on a refueling frequency.

Alternative Test

These valves will be full-stroke exercised closed during refueling outages per ISTC-3522(c).

Evidence of the valves ability to open is satisfied with the return to service verification of the valves supported instrument function as described in Technical Position TP-05.

References

In the LaSalle Second 10-Year IST Interval, this Refueling Justification was contained in Corporate Technical Position TP-EXE-IST-98-02.

ATTACHMENT 10

CHECK VALVE CONDITION MONITORING PLANS BASIS INDEX

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CVCM No.	Description
CM-01	A and B RHR Pump Min Flow Line Check Valves
CM-02	H2 Recombiner Suction Check Valves
CM-03	Standby Gas Treatment Service Air Check Valves
CM-04	Discontinued during 2nd 10-Year IST Interval; H2 Recombiner RHR Cooling Water Supply Check Valves
CM-05	RCIC Pump Min Flow Check Valves
CM-06	B RHR Fuel Pool Emergency Make Up Supply Testable Check Valves
CM-07	Rx Recirc Loop Process Sampling Inboard Bypass Check Valves
CM-08	DG Cooling Water Pump Discharge Check Valves
CM-09	Drywell Instrument N2 Regulated Header Drywell Isolation Check Valves
CM-10	RCIC Condenser Vacuum Pump Discharge Check Valves
CM-11	RCIC Turbine Exhaust Check Valves
CM-12	Discontinued during 2nd 10-Year IST Interval; SBLC Injection Line Check Valves
CM-13	Reserved for future use
CM-14	Reserved for future use
CM-15	Reserved for future use
CM-16	Reserved for future use
CM-17	Reserved for future use
CM-18	Reserved for future use
CM-19	Reserved for future use
CM-20	Reserved for future use
CM-21	Reserved for future use
CM-22	Reserved for future use
CM-23	C RHR Pump Min Flow Line Check Valve
CM-24	RCIC Turbine Exhaust Vacuum Breaker Check Valves

ATTACHMENT 11

CHECK VALVE CONDITION MONITORING PLANS BASIS

Check Valve Condition Monitoring Plan Basis CM-01
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Valve Number	System	Class	Category	Unit
1E12-F046A	RH	2	C	1
1E12-F046B	RH	2	C	1
2E12-F046A	RH	2	C	2
2E12-F046B	RH	2	C	2

Function

These check valves must open to provide a flow path for the RHR pumps when circulating on minimum flow to prevent overheating and potential damage.

These valves are located between their associated Containment Penetration and their associated minimum-flow recirculation isolation valve Although from a practical perspective, these valves would close to function as Containment Isolation Valves in the event of an ECCS failure following an accident, they are not credited as CIVs because 10 CFR 50, Appendix A, General Design Criterion 56 does not permit the use of a simple check valve as the outer Containment Isolation Valve. The CIV function is satisfied by the minimum-flow recirculation isolation valves.

Justification

In accordance with ASME OM Code Appendix II, these valves are included in the station Check Valve Condition Monitoring Program. The following describes the basis for grouping the valves, failure analysis, maintenance and testing history, and planned condition monitoring activities. This plan meets the requirements of Appendix II of the ASME OM Code 2001/2003a including the limitations set forth by the NRC in 10CFR50.55a.

The intended purpose of the condition monitoring activities for the subject valves is the optimization of testing, examination and preventive maintenance activities. An analysis of the test and maintenance history has determined that the grouping of these valves is justified. This group of check valves has the same design characteristics, is installed in the same application, and experience similar service conditions.

Analysis Reference

For the Condition Monitoring analysis and justification details for this group of valves, refer to LaSalle Check Valve Condition Monitoring Plan Group CM-01 as maintained in the LaSalle Inservice Testing Program Bases Documents. This Condition Monitoring Plan documents the analysis performed that determined the groupings, specifies inservice tests, and lists any preventive maintenance activities. The Condition Monitoring

Check Valve Condition Monitoring Plan Basis CM-01
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Plan then identifies the intervals associated with the designated activities and identifies the attributes for trending. CM-01 also documents the maintenance history and industry review along with the failure modes expected for this valve group.

Condition Monitoring Activities

The information in this section satisfies the requirements of ASME OM Code 2001/2003a, Appendix II section II-4000(b), Optimization of Condition Monitoring Activities. The following details the condition monitoring activities and their implementation frequencies associated with valve group CM-01:

ASSESSMENT TECHNIQUES:	TREND PARAMETER AND FREQUENCY
PARTIAL STROKE OPEN	Partial stroke open is performed quarterly per LOS-RH-Q1 by verification of flow noise through the valves upon pump start.
DISASSEMBLY AND INSPECTION	Disassembled and inspected the valve per LMP-RH-04 every outage. This activity will inspect for worn, loose, or deformed parts and verify the open and closed capability.

In accordance with ASME OM Code ISTC-5222 and 10CFR50.55a, if for any reason the condition monitoring plan for this group of valves is discontinued, then the requirements of ISTC-3510, ITSC-3520, ISTC-3540, and ISTC-5221 shall apply to the applicable valve(s).

Compliance

This plan meets the documentation requirements of Appendix II of the ASME OM Code as follows:

a. This Plan Basis documents the valves included in the group for Condition Monitoring.
b. LaSalle Check Valve Condition Monitoring Plan Group CM-01 documents the date and basis for inclusion of these valves in condition monitoring.
c. LaSalle Check Valve Condition Monitoring Plan Group CM-01 documents the analysis and basis for the check valve condition monitoring program for these valves.

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d. LaSalle Check Valve Condition Monitoring Plan Group CM-01 documents the failure and maintenance history patterns for the subject valves.

e. This Plan Basis and LaSalle Check Valve Condition Monitoring Plan Group CM-01 document the condition monitoring activities, attributes and bases for the intervals for each of the valves included in this Plan Basis.

Check Valve Condition Monitoring Plan Basis CM-02
(Rev. 0)
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Valve Number	System	Class	Category	Unit
1HG007	HG	2	C	1
1HG016	HG	2	C	1
2HG007	HG	2	C	2
2HG016	HG	2	C	2

Function

These check valves must open to provide a flow path from its unit's drywell to either its unit's hydrogen recombiner or the opposite unit's recombiner to allow cross connecting. One recombiner system is provided for each nuclear unit. Each recombiner has the capability of serving either containment; therefore, there is 100% redundancy of all components and controls [UFSAR 6.2.5.2].

These valves are not required to close since the hydrogen recombiner upstream and downstream isolation valves are closed to prevent cross connecting both containments when the opposite unit's drywell is supplying the opposite unit's recombiner.

Justification

In accordance with ASME OM Code Appendix II, these valves are included in the station Check Valve Condition Monitoring Program. The following describes the basis for grouping the valves, failure analysis, maintenance and testing history, and planned condition monitoring activities. This plan meets the requirements of Appendix II of the ASME OM Code 2001/2003a including the limitations set forth by the NRC in 10CFR50.55a.

The intended purpose of the condition monitoring activities for the subject valves is the optimization of testing, examination and preventive maintenance activities. An analysis of the test and maintenance history has determined that the grouping of these valves is justified. This group of check valves has the same design characteristics, is installed in the same application, and experience similar service conditions.

Analysis Reference

For the Condition Monitoring analysis and justification details for this group of valves, refer to LaSalle Check Valve Condition Monitoring Plan Group CM-02 as maintained in the LaSalle Inservice Testing Program Bases Document. This Condition Monitoring Plan documents the analysis performed that determined the groupings, specifies inservice tests, and lists any preventive maintenance activities. The Condition Monitoring

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Plan then identifies the intervals associated with the designated activities and identifies the attributes for trending. CM-02 also documents the maintenance history and industry review along with the failure modes expected for this valve group.

Condition Monitoring Activities

The information in this section satisfies the requirements of ASME OM Code 2001/2003a, Appendix II section II-4000(b), Optimization of Condition Monitoring Activities. The following details the condition monitoring activities and their implementation frequencies associated with valve group CM-02:

ASSESSMENT TECHNIQUES:	TREND PARAMETER AND FREQUENCY
DISASSEMBLY AND INSPECTION	Disassembled and inspected the valve every other outage. This activity will inspect for worn, loose, or deformed parts and verify the open and closed capability.
FULL STROKE OPEN	Full stroke open performed every refueling outage in conjunction with the applicable recombiner's functional test.

In accordance with ASME OM Code ISTC-5222 and 10CFR50.55a, if for any reason the condition monitoring plans for this group of valves is discontinued, then the requirements of ISTC-3510, ITSC-3520, ISTC-3540, and ISTC-5221 shall apply to the applicable valve(s).

Compliance

This plan meets the documentation requirements of Appendix II of the ASME OM Code as follows:

a. This Plan Basis documents the valves included in the group for Condition Monitoring.
b. LaSalle Check Valve Condition Monitoring Plan Group CM-02 documents the date and basis for inclusion of these valves in condition monitoring.
c. LaSalle Check Valve Condition Monitoring Plan Group CM-02 documents the analysis and basis for the check valve condition monitoring program for these valves.

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d. LaSalle Check Valve Condition Monitoring Plan Group CM-02 documents the failure and maintenance history patterns for the subject valves.

e. This Plan Basis and LaSalle Check Valve Condition Monitoring Plan Group CM-02 document the condition monitoring activities, attributes and bases for the intervals for each of the valves included in this Plan Basis.

Check Valve Condition Monitoring Plan Basis CM-03
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Valve Number	System	Class	Category	Unit
2VG024A	VG	3	C	2
2VG025A	VG	3	C	2

Function

These check valves must close to prevent diversion of standby gas treatment system air flow to the service air system in the event of a break of the non-safety related service air system piping located upstream of the subject valve.

These valves open to provide a flow path from the service air system to the standby gas treatment system. This function is not required for safe shutdown or accident mitigation.

Justification

In accordance with ASME OM Code Appendix II, these valves are included in the station Check Valve Condition Monitoring Program. The following describes the basis for grouping the valves, failure analysis, maintenance and testing history, and planned condition monitoring activities. This plan meets the requirements of Appendix II of the ASME OM Code 2001/2003a including the limitations set forth by the NRC in 10CFR50.55a.

The intended purpose of the condition monitoring activities for the subject valves is the optimization of testing, examination and preventive maintenance activities. An analysis of the test and maintenance history has determined that the grouping of these valves is justified. This group of check valves has the same design characteristics, is installed in the same application, and experience similar service conditions.

Analysis Reference

For the Condition Monitoring analysis and justification details for this group of valves, refer to LaSalle Check Valve Condition Monitoring Plan Group CM-03 as maintained in the LaSalle Inservice Testing Program Bases Document. This Condition Monitoring Plan documents the analysis performed that determined the groupings, specifies inservice tests, and lists any preventive maintenance activities. The Condition Monitoring Plan then identifies the intervals associated with the designated activities and identifies the attributes for trending.

Check Valve Condition Monitoring Plan Basis CM-03
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CM-03 also documents the maintenance history and industry review along with the failure modes expected for this valve group.

Condition Monitoring Activities

The information in this section satisfies the requirements of ASME OM Code 2001/2003a, Appendix II section II-4000(b), Optimization of Condition Monitoring Activities. The following details the condition monitoring activities and their implementation frequencies associated with valve group CM-03:

ASSESSMENT TECHNIQUES:	TREND PARAMETER AND FREQUENCY
DISASSEMBLY AND INSPECTION	Disassembled and inspected every 48 months, with an allowable 25% extension. This activity will inspect for worn, loose, or deformed parts and verify the open and closed capability
ROUTINE OPERATOR ROUNDS	Flow element 2FI-SA049 is located just upstream of these in-series check valve. During operating rounds, flow is verified through the flow element, further satisfying the open testing requirement for these valves.

In accordance with ASME OM Code ISTC-5222 and 10CFR50.55a, if for any reason the condition monitoring plans for this group of valves is discontinued, then the requirements of ISTC-3510, ITSC-3520, ISTC-3540, and ISTC-5221 shall apply to the applicable valve(s).

Compliance

This plan meets the documentation requirements of Appendix II of the ASME OM Code as follows:

a. This Plan Basis documents the valves included in the group for Condition Monitoring.
b. LaSalle Check Valve Condition Monitoring Plan Group CM-03 documents the date and basis for inclusion of these valves in condition monitoring.
c. LaSalle Check Valve Condition Monitoring Plan Group CM-03 documents the analysis and basis for the check valve condition monitoring program for these valves.

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d. LaSalle Check Valve Condition Monitoring Plan Group CM-03 documents the failure and maintenance history patterns for the subject valves.

e. This Plan Basis and LaSalle Check Valve Condition Monitoring Plan Group CM-03 document the condition monitoring activities, attributes and bases for the intervals for each of the valves included in this Plan Basis.

Check Valve Condition Monitoring Plan Basis CM-04
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The valves in this Condition Monitoring Plan were "Abandoned-In-Place" in accordance with Engineering Change (EC) 358662 during the 2nd 10-Year IST Interval. The Condition Monitoring Plan was retired shortly after the valves were "Abandoned-In-Place". The list of valves included in the Plan prior to the Plan being retired are listed below and are included for historical purposes only.

Valve Number	System	Class	Category	Unit
1HG017A	HG	2	C	1
1HG017B	HG	2	C	1
2HG017A	HG	2	C	2
2HG017B	HG	2	C	2

Check Valve Condition Monitoring Plan Basis CM-05
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Valve Number	System	Class	Category	Unit
1E51-F021	RI	2	C	1
2E51-F021	RI	2	C	2

Function

These check valves must open to provide a flow path from the RCIC pump to the suppression pool to prevent the RCIC pump from being damaged by overheating at reduced pump discharge flow [UFSAR 5.4.6, 7.4.1.2].

These valves close to isolate the suppression pool from the RCIC system. This function is not required for safe shutdown or accident mitigation since the downstream motor operated valve (E51-F019) is relied upon for isolation of the RCIC minimum flow line [UFSAR 7.4.1, Table 6.2-21].

Justification

In accordance with ASME OM Code Appendix II, these valves are included in the station Check Valve Condition Monitoring Program. The following describes the basis for grouping the valves, failure analysis, maintenance and testing history, and planned condition monitoring activities. This plan meets the requirements of Appendix II of the ASME OM Code 2001/2003a including the limitations set forth by the NRC in 10CFR50.55a.

The intended purpose of the condition monitoring activities for the subject valves is the optimization of testing, examination and preventive maintenance activities. An analysis of the test and maintenance history has determined that the grouping of these valves is justified. This group of check valves has the same design characteristics, is installed in the same application, and experience similar service conditions.

Analysis Reference

For the Condition Monitoring analysis and justification details for this group of valves, refer to LaSalle Check Valve Condition Monitoring Plan Group CM-05 as maintained in the LaSalle Inservice Testing Program Bases Document. This Condition Monitoring Plan documents the analysis performed that determined the groupings, specifies inservice tests, and lists any preventive maintenance activities. The Condition Monitoring Plan then identifies the intervals associated with the designated activities and identifies the attributes for trending. CM-05 also documents the maintenance history and industry review along with the failure modes expected for this valve group.

Check Valve Condition Monitoring Plan Basis CM-05
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Condition Monitoring Activities

The information in this section satisfies the requirements of ASME OM Code 2001/2003a, Appendix II section II-4000(b), Optimization of Condition Monitoring Activities. The following details the condition monitoring activities and their implementation frequencies associated with valve group CM-05:

ASSESSMENT TECHNIQUES:	TREND PARAMETER AND FREQUENCY
PARTIAL STROKE OPEN	Partial stroke open performed quarterly in conjunction with the applicable RCIC pump test.
DISASSEMBLY AND INSPECTION	Disassembled and inspected every third outage. This activity will inspect for worn, loose, or deformed parts and verify the open and closed capability.

In accordance with ASME OM Code ISTC-5222 and 10CFR50.55a, if for any reason the condition monitoring plans for this group of valves is discontinued, then the requirements of ISTC-3510, ITSC-3520, ISTC-3540, and ISTC-5221 shall apply to the applicable valve(s).

Compliance

This plan meets the documentation requirements of Appendix II of the ASME OM Code as follows:

a. This Plan Basis documents the valves included in the group for Condition Monitoring.
b. LaSalle Check Valve Condition Monitoring Plan Group CM-05 documents the date and basis for inclusion of these valves in condition monitoring.
c. LaSalle Check Valve Condition Monitoring Plan Group CM-05 documents the analysis and basis for the check valve condition monitoring program for these valves.
d. LaSalle Check Valve Condition Monitoring Plan Group CM-05 documents the failure and maintenance history patterns for the subject valves.
e. This Plan Basis and LaSalle Check Valve Condition Monitoring Plan Group CM-05 document the condition monitoring activities, attributes and bases for the intervals for each of the valves included in this Plan Basis.

Check Valve Condition Monitoring Plan Basis CM-06
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Valve Number	System	Class	Category	Unit
1E12-F089	RH	2	C	1
2E12-F089	RH	2	C	2

Function

These valves must open to provide a flow path from the fuel pool emergency make-up pump to containment for containment flooding.

These valves close to prevent flow from the discharge of RHR Pump E12-C002B from being diverted when required to perform a safety-related function (i.e., LPCI, Suppression Pool Cooling, Containment Cooling) in the event of a loss of system integrity on the upstream side.

Justification

In accordance with ASME OM Code Appendix II, these valves are included in the station Check Valve Condition Monitoring Program. The following describes the basis for grouping the valves, failure analysis, maintenance and testing history, and planned condition monitoring activities. This plan meets the requirements of Appendix II of the ASME OM Code 2001/2003a including the limitations set forth by the NRC in 10CFR50.55a.

The intended purpose of the condition monitoring activities for the subject valves is the optimization of testing, examination and preventive maintenance activities. An analysis of the test and maintenance history has determined that the grouping of these valves is justified. This group of check valves has the same design characteristics, is installed in the same application, and experience similar service conditions.

Analysis Reference

For the Condition Monitoring analysis and justification details for this group of valves, refer to LaSalle Check Valve Condition Monitoring Plan Group CM-06 as maintained in the LaSalle Inservice Testing Program Bases Document. This Condition Monitoring Plan documents the analysis performed that determined the groupings, specifies inservice tests, and lists any preventive maintenance activities. The Condition Monitoring Plan then identifies the intervals associated with the designated activities and identifies the attributes for trending. CM-06 also documents the maintenance history and industry review along with the failure modes expected for this valve group.

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Condition Monitoring Activities

The information in this section satisfies the requirements of ASME OM Code 2001/2003a, Appendix II section II-4000(b), Optimization of Condition Monitoring Activities. The following details the condition monitoring activities and their implementation frequencies associated with valve group CM-06:

ASSESSMENT TECHNIQUES:	TREND PARAMETER AND FREQUENCY
DISASSEMBLY AND INSPECTION	Disassembled and inspected the valve every third outage. This activity will inspect for worn, loose, or deformed parts and verify the open and closed capability.

In accordance with ASME OM Code ISTC-5222 and 10CFR50.55a, if for any reason the condition monitoring plans for this group of valves is discontinued, then the requirements of ISTC-3510, ITSC-3520, ISTC-3540, and ISTC-5221 shall apply to the applicable valve(s).

Compliance

This plan meets the documentation requirements of Appendix II of the ASME OM Code as follows:

a. This Plan Basis documents the valves included in the group for Condition Monitoring.
b. LaSalle Check Valve Condition Monitoring Plan Group CM-06 documents the date and basis for inclusion of these valves in condition monitoring.
c. LaSalle Check Valve Condition Monitoring Plan Group CM-06 documents the analysis and basis for the check valve condition monitoring program for these valves.
d. LaSalle Check Valve Condition Monitoring Plan Group CM-06 documents the failure and maintenance history patterns for the subject valves.
e. This Plan Basis and LaSalle Check Valve Condition Monitoring Plan Group CM-06 document the condition monitoring activities, attributes and bases for the intervals for each of the valves included in this Plan Basis.

Check Valve Condition Monitoring Plan Basis CM-07
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Valve Number	System	Class	Category	Unit
1B33-F395	RR	2	A/C	1
2B33-F395	RR	2	A/C	2

Function

These check valves are installed to relieve pressure that could develop from the thermal expansion of trapped fluid between containment isolation valves B33-F019 and B33-F020. These valves open to relieve overpressure and prevent piping rupture.

These valves must close to isolate primary containment. These valves are required to provide containment isolation for penetration M-36 [UFSAR Table 6.2-21].

Justification

In accordance with ASME OM Code Appendix II, these valves are included in the station Check Valve Condition Monitoring Program. The following describes the basis for grouping the valves, failure analysis, maintenance and testing history, and planned condition monitoring activities. This plan meets the requirements of Appendix II of the ASME OM Code 2001/2003a including the limitations set forth by the NRC in 10CFR50.55a.

The intended purpose of the condition monitoring activities for the subject valves is the optimization of testing, examination and preventive maintenance activities. An analysis of the test and maintenance history has determined that the grouping of these valves is justified. This group of check valves has the same design characteristics, is installed in the same application, and experience similar service conditions.

Analysis Reference

For the Condition Monitoring analysis and justification details for this group of valves, refer to LaSalle Check Valve Condition Monitoring Plan Group CM-07 as maintained in the LaSalle Inservice Testing Program Bases Document. This Condition Monitoring Plan documents the analysis performed that determined the groupings, specifies inservice tests, and lists any preventive maintenance activities. The Condition Monitoring Plan then identifies the intervals associated with the designated activities and identifies the attributes for trending. CM-07 also documents the maintenance history and industry review along with the failure modes expected for this valve group.

Check Valve Condition Monitoring Plan Basis CM-07
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Condition Monitoring Activities

The information in this section satisfies the requirements of ASME OM Code 2001/2003a, Appendix II section II-4000(b), Optimization of Condition Monitoring Activities. The following details the condition monitoring activities and their implementation frequencies associated with this valve group CM-07:

ASSESSMENT TECHNIQUES:	TREND PARAMETER AND FREQUENCY
OPEN AND CLOSE EXERCISE	Verify the ability of the valve to physically Open and Close every third outage.
LEAK RATE TESTING	Leak rate on the Appendix J Program frequency.

In accordance with ASME OM Code ISTC-5222 and 10CFR50.55a, if for any reason the condition monitoring plans for this group of valves is discontinued, then the requirements of ISTC-3510, ITSC-3520, ISTC-3540, and ISTC-5221 shall apply to the applicable valve(s).

Compliance

This plan meets the documentation requirements of Appendix II of the ASME OM Code as follows:

a. This Plan Basis documents the valves included in the group for Condition Monitoring.
b. LaSalle Check Valve Condition Monitoring Plan Group CM-07 documents the date and basis for inclusion of these valves in condition monitoring.
c. LaSalle Check Valve Condition Monitoring Plan Group CM-07 documents the analysis and basis for the check valve condition monitoring program for these valves.
d. LaSalle Check Valve Condition Monitoring Plan Group CM-07 documents the failure and maintenance history patterns for the subject valves.
e. This Plan Basis and LaSalle Check Valve Condition Monitoring Plan Group CM-07 document the condition monitoring activities, attributes and bases for the intervals for each of the valves included in this Plan Basis.

Check Valve Condition Monitoring Plan Basis CM-08
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Valve Number	System	Class	Category	Unit
0DG002	DG	3	C	Common
1DG002	DG	3	C	1
1E22-F028	HP	3	C	1
2DG002	DG	3	C	2
2E22-F028	HP	3	C	2

Function

These check valves are the discharge pump check valves for the Division 1 and 2 DG Cooling Water Pumps and Division 3 HPCS DG Cooling Water Pumps. These valves must open to provide flow to their respective cooling loads. The cooling water flow removes heat to maintain the environmental qualification of and to prevent damage to the essential equipment and ensures a reliable onsite power source for Division 1, 2 and 3 loads.

These check valves must close to prevent reverse rotation of the idle cooling water pump due to backflow from other operating cooling water pumps that share a common lake discharge path.

Justification

In accordance with ASME OM Code Appendix II, these valves are included in the station Check Valve Condition Monitoring Program. The following describes the basis for grouping the valves, failure analysis, maintenance and testing history, and planned condition monitoring activities. This plan meets the requirements of Appendix II of the ASME OM Code 2001/2003a including the limitations set forth by the NRC in 10CFR50.55a.

The intended purpose of the condition monitoring activities for the subject valves is the optimization of testing, examination and preventive maintenance activities. An analysis of the test and maintenance history has determined that the grouping of these valves is justified. This group of check valves has the same design characteristics, is installed in the same application, and experience similar service conditions.

Analysis Reference

For the Condition Monitoring analysis and justification details for this group of valves, refer to LaSalle Check Valve Condition Monitoring Plan Group CM-08 as maintained in the LaSalle Inservice Testing Program Bases Document. This Condition Monitoring Plan

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documents the analysis performed that determined the groupings, specifies inservice tests, and lists any preventive maintenance activities. The Condition Monitoring Plan then identifies the intervals associated with the designated activities and identifies the attributes for trending. CM-08 also documents the maintenance history and industry review along with the failure modes expected for this valve group.

Condition Monitoring Activities

The information in this section satisfies the requirements of ASME OM Code 2001/2003a, Appendix II section II-4000(b), Optimization of Condition Monitoring Activities. The following details the condition monitoring activities and their implementation frequencies associated with valve group CM-08:

ASSESSMENT TECHNIQUES:	TREND PARAMETER AND FREQUENCY
OPEN EXERCISE	Exercise open performed quarterly in conjunction with the applicable pump test.
DISASSEMBLY AND INSPECTION	Disassembled and inspected every 4 years (except 1DG002). This activity will inspect for worn, loose, or deformed parts and verify the open and closed capability. Due to materiel condition issues with 1DG002, this valve will be tested in accordance with a special test until system configuration restraints allow returning to a 4 year disassembly and inspect frequency.

In accordance with ASME OM Code ISTC-5222 and 10CFR50.55a, if for any reason the condition monitoring plans for this group of valves is discontinued, then the requirements of ISTC-3510, ITSC-3520, ISTC-3540, and ISTC-5221 shall apply to the applicable valve(s).

Compliance

This plan meets the documentation requirements of Appendix II of the ASME OM Code as follows:

a. This Plan Basis documents the valves included in the group for Condition Monitoring.

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b. LaSalle Check Valve Condition Monitoring Plan Group CM-08 documents the date and basis for inclusion of these valves in condition monitoring.

c. LaSalle Check Valve Condition Monitoring Plan Group CM-08 documents the analysis and basis for the check valve condition monitoring program for these valves.

d. LaSalle Check Valve Condition Monitoring Plan Group CM-08 documents the failure and maintenance history patterns for the subject valves.

e. This Plan Basis and LaSalle Check Valve Condition Monitoring Plan Group CM-08 document the condition monitoring activities, attributes and bases for the intervals for each of the valves included in this Plan Basis.

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Valve Number	System	Class	Category	Unit
1IN018	IN	2	A/C	1
2IN018	IN	2	A/C	2

Function

These check valves must close to isolate containment from the Drywell Pneumatic system. These valves provides containment isolation for penetration M-60 (Unit 1) and M-54 (Unit 2) [UFSAR Table 6.2-21].

These valves are normally open to provide a flow path to the MSIVs and SRVs accumulators. This function is not required for safe shutdown or accident mitigation since the drywell pneumatic supply is not safety related [UFSAR 9.3.1.3].

Justification

In accordance with ASME OM Code Appendix II, these valves are included in the station Check Valve Condition Monitoring Program. The following describes the basis for grouping the valves, failure analysis, maintenance and testing history, and planned condition monitoring activities. This plan meets the requirements of Appendix II of the ASME OM Code 2001/2003a including the limitations set forth by the NRC in 10CFR50.55a.

The intended purpose of the condition monitoring activities for the subject valves is the optimization of testing, examination and preventive maintenance activities. An analysis of the test and maintenance history has determined that the grouping of these valves is justified. This group of check valves has the same design characteristics, is installed in the same application, and experience similar service conditions.

Analysis Reference

For the Condition Monitoring analysis and justification details for this group of valves, refer to LaSalle Check Valve Condition Monitoring Plan Group CM-09 as maintained in the LaSalle Inservice Testing Program Bases Document. This Condition Monitoring Plan documents the analysis performed that determined the groupings, specifies inservice tests, and lists any preventive maintenance activities. The Condition Monitoring Plan then identifies the intervals associated with the designated activities and identifies the attributes for trending. CM-09 also documents the maintenance history and industry review along with the failure modes expected for this valve group.

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Condition Monitoring Activities

The information in this section satisfies the requirements of ASME OM Code 2001/2003a, Appendix II section II-4000(b), Optimization of Condition Monitoring Activities. The following details the condition monitoring activities and their implementation frequencies associated with valve group CM-09:

ASSESSMENT TECHNIQUES:	TREND PARAMETER AND FREQUENCY
OPEN EXERCISE	Verify the ability of the valve to Open is accomplished quarterly in conjunction with the quarterly stroke testing of the Rx Recirc Loop Process Sampling Inboard Isolation Valves (B33-F019) and partial stroke test of the MSIVs, which results in the need to replenish nitrogen in the MSIV, which results in flow through these check valves.
LEAK RATE TESTING	Leak rate data trend on the Appendix J Program frequency. This satisfies the closed bi-directional testing requirement of Mandatory Appendix II.

In accordance with ASME OM Code ISTC-5222 and 10CFR50.55a, if for any reason the condition monitoring plans for this group of valves is discontinued, then the requirements of ISTC-3510, ITSC-3520, ISTC-3540, and ISTC-5221 shall apply to the applicable valve(s).

Compliance

This plan meets the documentation requirements of Appendix II of the ASME OM Code as follows:

a. This Plan Basis documents the valves included in the group for Condition Monitoring.
b. LaSalle Check Valve Condition Monitoring Plan Group CM-09 documents the date and basis for inclusion of these valves in condition monitoring.
c. LaSalle Check Valve Condition Monitoring Plan Group CM-09 documents the analysis and basis for the check valve condition monitoring program for these valves.
d. LaSalle Check Valve Condition Monitoring Plan Group CM-09 documents the failure and maintenance history patterns for the subject valves.

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e. This Plan Basis and LaSalle Check Valve Condition Monitoring Plan Group CM-09 document the condition monitoring activities, attributes and bases for the intervals for each of the valves included in this Plan Basis.

Check Valve Condition Monitoring Plan Basis CM-10
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Valve Number	System	Class	Category	Unit
1E51-F028	RI	2	A/C	1
2E51-F028	RI	2	A/C	2

Function

These valves are the RCIC Condenser Vacuum Pump Discharge Check Valves and must close to isolate containment from the RCIC system. These valves are considered containment isolation valves for Penetration M-81. [UFSAR Table 6.2-21]

These valves open to provide a flow path for the RCIC turbine barometric condenser vacuum pump exhaust to the suppression pool. The RCIC barometric condenser operates to maintain a vacuum on the turbine seals to prevent steam leakage into the RCIC room. The RCIC barometric condenser, vacuum pump, and condensate pump are non-safety, non-code components. Thus, this valve is not required to open for RCIC operability.

Justification

In accordance with ASME OM Code Appendix II, these valves are included in the station Check Valve Condition Monitoring Program. The following describes the basis for grouping the valves, failure analysis, maintenance and testing history, and planned condition monitoring activities. This plan meets the requirements of Appendix II of the ASME OM Code 2001/2003a including the limitations set forth by the NRC in 10CFR50.55a.

The intended purpose of the condition monitoring activities for the subject valves is the optimization of testing, examination and preventive maintenance activities. An analysis of the test and maintenance history has determined that the grouping of these valves is justified. This group of check valves has the same design characteristics, is installed in the same application, and experience similar service conditions.

Analysis Reference

For the Condition Monitoring analysis and justification details for this group of valves, refer to LaSalle Check Valve Condition Monitoring Plan Group CM-10 as maintained in the LaSalle Inservice Testing Program Bases Document. This Condition Monitoring Plan documents the analysis performed that determined the groupings, specifies inservice tests, and lists any preventive maintenance activities. The Condition Monitoring Plan then identifies the intervals associated with the designated activities and identifies the attributes for trending.

Check Valve Condition Monitoring Plan Basis CM-10
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CM-10 also documents the maintenance history and industry review along with the failure modes expected for this valve group.

Condition Monitoring Activities

The information in this section satisfies the requirements of ASME OM Code 2001/2003a, Appendix II section II-4000(b), Optimization of Condition Monitoring Activities. The following details the condition monitoring activities and their implementation frequencies associated with valve group CM-10:

ASSESSMENT TECHNIQUES:	TREND PARAMETER AND FREQUENCY
OPEN EXERCISE	Verify the ability of the valve to Open is accomplished quarterly in conjunction with the performance of the Condenser Vacuum Pump test.
DISASSEMBLY AND INSPECTION	Disassembled and inspected every outage. This activity will inspect for worn, loose, or deformed parts and verify the open and closed capability.
CLOSE EXERCISE	Verify the ability of the valve to Close at the Appendix J testing frequency.
LEAK RATE TESTING	Leak rate performed on the Appendix J Program frequency.

In accordance with ASME OM Code ISTC-5222 and 10CFR50.55a, if for any reason the condition monitoring plans for this group of valves is discontinued, then the requirements of ISTC-3510, ITSC-3520, ISTC-3540, and ISTC-5221 shall apply to the applicable valve(s).

Compliance

This plan meets the documentation requirements of Appendix II of the ASME OM Code as follows:

a. This Plan Basis documents the valves included in the group for Condition Monitoring.
b. LaSalle Check Valve Condition Monitoring Plan Group CM-10 documents the date and basis for inclusion of these valves in condition monitoring.

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c. LaSalle Check Valve Condition Monitoring Plan Group CM-10 documents the analysis and basis for the check valve condition monitoring program for these valves.

d. LaSalle Check Valve Condition Monitoring Plan Group CM-10 documents the failure and maintenance history patterns for the subject valves.

e. This Plan Basis and LaSalle Check Valve Condition Monitoring Plan Group CM-10 document the condition monitoring activities, attributes and bases for the intervals for each of the valves included in this Plan Basis.

Check Valve Condition Monitoring Plan Basis CM-11
(Rev. 0)
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Valve Number	System	Class	Category	Unit
1E51-F040	RI	2	A/C	1
2E51-F040	RI	2	A/C	2

Function

These valves are the RCIC Turbine Exhaust Check Valves that must open to provide a flow path from the RCIC turbine exhaust to the suppression pool during RCIC operation [UFSAR 5.4.6.3].

These valves must close to isolate containment from the RCIC system. These valves are considered a containment isolation valve for Penetration M-76. [UFSAR Table 6.2-21].

Justification

In accordance with ASME OM Code Appendix II, these valves are included in the station Check Valve Condition Monitoring Program. The following describes the basis for grouping the valves, failure analysis, maintenance and testing history, and planned condition monitoring activities. This plan meets the requirements of Appendix II of the ASME OM Code 2001/2003a including the limitations set forth by the NRC in 10CFR50.55a.

The intended purpose of the condition monitoring activities for the subject valves is the optimization of testing, examination and preventive maintenance activities. An analysis of the test and maintenance history has determined that the grouping of these valves is justified. This group of check valves has the same design characteristics, is installed in the same application, and experience similar service conditions.

Analysis Reference

For the Condition Monitoring analysis and justification details for this group of valves, refer to LaSalle Check Valve Condition Monitoring Plan Group CM-11 as maintained in the LaSalle Inservice Testing Program Bases Document. This Condition Monitoring Plan documents the analysis performed that determined the groupings, specifies inservice tests, and lists any preventive maintenance activities. The Condition Monitoring Plan then identifies the intervals associated with the designated activities and identifies the attributes for trending. CM-11 also documents the maintenance history and industry review along with the failure modes expected for this valve group.

Check Valve Condition Monitoring Plan Basis CM-11
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Condition Monitoring Activities

The information in this section satisfies the requirements of ASME OM Code 2001/2003a, Appendix II section II-4000(b), Optimization of Condition Monitoring Activities. The following details the condition monitoring activities and their implementation frequencies associated with valve group CM-11:

ASSESSMENT TECHNIQUES:	TREND PARAMETER AND FREQUENCY
PARTIAL OPEN EXERCISE	Verify the ability of the valve to Partially Open is accomplished quarterly in conjunction with the performance of the RCIC Pump test LOS-RI-Q3/5
CLOSE EXERCISE	Verify the ability of the valve to Close at the Appendix J testing frequency.
LEAK RATE TESTING	Leak rate on the Appendix J Program frequency.

In accordance with ASME OM Code ISTC-5222 and 10CFR50.55a, if for any reason the condition monitoring plans for this group of valves is discontinued, then the requirements of ISTC-3510, ITSC-3520, ISTC-3540, and ISTC-5221 shall apply to the applicable valve(s).

Compliance

This plan meets the documentation requirements of Appendix II of the ASME OM Code as follows:

a. This Plan Basis documents the valves included in the group for Condition Monitoring.
b. LaSalle Check Valve Condition Monitoring Plan Group CM-11 documents the date and basis for inclusion of these valves in condition monitoring.
c. LaSalle Check Valve Condition Monitoring Plan Group CM-11 documents the analysis and basis for the check valve condition monitoring program for these valves.
d. LaSalle Check Valve Condition Monitoring Plan Group CM-11 documents the failure and maintenance history patterns for the subject valves.
e. This Plan Basis and LaSalle Check Valve Condition Monitoring Plan Group CM-11 document the condition monitoring activities, attributes and bases for the intervals for each of the valves included in this Plan Basis.

Check Valve Condition Monitoring Plan Basis CM-12
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This Condition Monitoring Plan was discontinued during the 2nd 10-Year IST Interval and the valves returned to traditional ISTC testing. The list of valves included in the Plan prior to the Plan being discontinued are listed below and are included for historical purposes only.

Valve Number	System	Class	Category	Unit
1C41-F006	SC	1	AC	1
1C41-F007	SC	1	AC	1
1C41-F006	SC	1	AC	2
1C41-F007	SC	1	AC	2

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Reserved for future use

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Reserved for future use

Check Valve Condition Monitoring Plan Basis CM-15
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Reserved for future use

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Reserved for future use

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Reserved for future use

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Reserved for future use

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Reserved for future use

Check Valve Condition Monitoring Plan Basis CM-23
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Valve Number	System	Class	Category	Unit
1E12-F046C	RH	2	C	1
2E12-F046C	RH	2	C	2

Function

These valves are the C RHR Pump Min Flow Line Check Valves that must open to provide a flow path for the C RHR pump when running on minimum flow to prevent overheating and potential damage. These valves are located between Containment Penetration M-84 (Train B & C) and the minimum-flow recirculation isolation valve (E12-F064). Although from a practical perspective, these valves would function as a Containment Isolation Valves in the event of an ECCS failure following an accident, they are not credited as a CIV because 10 CFR 50, Appendix A, General Design Criterion 56 does not permit the use of a simple check valve as the outer Containment Isolation Valve. The CIV function is satisfied by the minimum-flow recirculation isolation valve (E12-F064).

These valves must close to prevent reverse flow from the other RHR trains from being misdirected into the C RHR flow path when the C RHR pump is idle when E12-F064 is open.

Justification

In accordance with ASME OM Code Appendix II, these valves are included in the station Check Valve Condition Monitoring Program. The following describes the basis for grouping the valves, failure analysis, maintenance and testing history, and planned condition monitoring activities. This plan meets the requirements of Appendix II of the ASME OM Code 2001/2003a including the limitations set forth by the NRC in 10CFR50.55a.

The intended purpose of the condition monitoring activities for the subject valves is the optimization of testing, examination and preventive maintenance activities. An analysis of the test and maintenance history has determined that the grouping of these valves is justified. This group of check valves has the same design characteristics, is installed in the same application, and experience similar service conditions.

Check Valve Condition Monitoring Plan Basis CM-23
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Analysis Reference

For the Condition Monitoring analysis and justification details for this group of valves, refer to LaSalle Check Valve Condition Monitoring Plan Group CM-23 as maintained in the LaSalle Inservice Testing Program Bases Document. This Condition Monitoring Plan documents the analysis performed that determined the groupings, specifies inservice tests, and lists any preventive maintenance activities. The Condition Monitoring Plan then identifies the intervals associated with the designated activities and identifies the attributes for trending. CM-23 also documents the maintenance history and industry review along with the failure modes expected for this valve group.

Condition Monitoring Activities

The information in this section satisfies the requirements of ASME OM Code 2001/2003a, Appendix II section II-4000(b), Optimization of Condition Monitoring Activities. The following details the condition monitoring activities and their implementation frequencies associated with valve group CM-23:

ASSESSMENT TECHNIQUES:	TREND PARAMETER AND FREQUENCY
PARTIAL STROKE OPEN	Partial stroke open performed quarterly in conjunction with the applicable RHR pump test. Verification of "flow noise" by observer.
DISASSEMBLY AND EXAMINATION	Disassembled and inspected the valve every other outage. This activity will inspect for worn, loose, or deformed parts and verify the open and closed capability.

In accordance with ASME OM Code ISTC-5222 and 10CFR50.55a, if for any reason the condition monitoring plans for this group of valves is discontinued, then the requirements of ISTC-3510, ITSC-3520, ISTC-3540, and ISTC-5221 shall apply to the applicable valve(s).

Compliance

This plan meets the documentation requirements of Appendix II of the ASME OM Code as follows:

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a. This Plan Basis documents the valves included in the group for Condition Monitoring.
b. LaSalle Check Valve Condition Monitoring Plan Group CM-23 documents the date and basis for inclusion of these valves in condition monitoring.
c. LaSalle Check Valve Condition Monitoring Plan Group CM-23 documents the analysis and basis for the check valve condition monitoring program for these valves.
d. LaSalle Check Valve Condition Monitoring Plan Group CM-23 documents the failure and maintenance history patterns for the subject valves.
e. This Plan Basis and LaSalle Check Valve Condition Monitoring Plan Group CM-23 document the condition monitoring activities, attributes and bases for the intervals for each of the valves included in this Plan Basis.

Check Valve Condition Monitoring Plan Basis CM-24
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Valve Number	System	Class	Category	Unit
1E51-F082	RI	2	C	1
1E51-F084	RI	2	C	1
2E51-F082	RI	2	C	2
2E51-F084	RI	2	C	2

Function

These valves are the RCIC Turbine Exhaust Vacuum Breaker Downstream and Upstream Check Valves. These valves must open to provide a flow path from the suppression chamber to the RCIC system exhaust line to equalize pressure and prevent vacuum formation in the exhaust line [UFSAR 6.2.4.2.3].

These valves must close to the prevent flow of steam into the suppression chamber air space during turbine operation. This function ensures that the RCIC steam exhaust is directed to and condensed in the suppression pool [UFSAR 6.2.4.2.3].

Justification

In accordance with ASME OM Code Appendix II, these valves are included in the station Check Valve Condition Monitoring Program. The following describes the basis for grouping the valves, failure analysis, maintenance and testing history, and planned condition monitoring activities. This plan meets the requirements of Appendix II of the ASME OM Code 2001/2003a including the limitations set forth by the NRC in 10CFR50.55a.

The intended purpose of the condition monitoring activities for the subject valves is the optimization of testing, examination and preventive maintenance activities. An analysis of the test and maintenance history has determined that the grouping of these valves is justified. This group of check valves has the same design characteristics, is installed in the same application, and experience similar service conditions.

Analysis Reference

For the Condition Monitoring analysis and justification details for this group of valves, refer to LaSalle Check Valve Condition Monitoring Plan Group CM-24 as maintained in the LaSalle Inservice Testing Program Bases Document. This Condition Monitoring Plan documents the analysis performed that determined the groupings, specifies inservice tests, and lists any preventive maintenance activities. The Condition Monitoring Plan then identifies the intervals associated with the designated activities and identifies

Check Valve Condition Monitoring Plan Basis CM-24
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the attributes for trending. CM-24 also documents the maintenance history and industry review along with the failure modes expected for this valve group.

Condition Monitoring Activities

The information in this section satisfies the requirements of ASME OM Code 2001/2003a, Appendix II section II-4000(b), Optimization of Condition Monitoring Activities. The following details the condition monitoring activities and their implementation frequencies associated with valve group CM-24:

ASSESSMENT TECHNIQUES:	TREND PARAMETER AND FREQUENCY
OPEN EXERCISE	Verify the ability of the valve to Open is accomplished on a two refueling outage frequency with the performance of LTS-100-20.
CLOSE EXERCISE	Verify the ability of the valve to Open is accomplished on a two refueling outage frequency with the performance of LTS-100-20.

In accordance with ASME OM Code ISTC-5222 and 10CFR50.55a, if for any reason the condition monitoring plans for this group of valves is discontinued, then the requirements of ISTC-3510, ITSC-3520, ISTC-3540, and ISTC-5221 shall apply to the applicable valve(s).

Compliance

This plan meets the documentation requirements of Appendix II of the ASME OM Code as follows:

a. This Plan Basis documents the valves included in the group for Condition Monitoring.
b. LaSalle Check Valve Condition Monitoring Plan Group CM-24 documents the date and basis for inclusion of these valves in condition monitoring.
c. LaSalle Check Valve Condition Monitoring Plan Group CM-24 documents the analysis and basis for the check valve condition monitoring program for these valves.
d. LaSalle Check Valve Condition Monitoring Plan Group CM-24 documents the failure and maintenance history patterns for the subject valves.
e. This Plan Basis and LaSalle Check Valve Condition Monitoring Plan Group CM-24 document the condition monitoring activities, attributes and bases for the intervals for each of the valves included in this Plan Basis.

ATTACHMENT 12

STATION TECHNICAL POSITION INDEX

Technical Position No.	Description
TP-01	Bi-directional Testing of Check Valves
TP-02	Passive Valves without Test Requirements
TP-03	Fail Safe Testing of Valves
TP-04	Manual Valve Exercise Frequency
TP-05	Check Valves in Regular Use
TP-06	Categorization of IST Pumps (Group A or B)
TP-07	Water Leg Pump Check Valves
TP-08	Thermal Relief Valves
TP-09	Classification of Skid-mounted Components
TP-10	Excess Flow Check Valve Testing
TP-11	Testing of Power Operated Valves with Both Active and Passive Safety Functions.
TP-12	Cold Shutdown Testing
TP-13	Comprehensive Pump Testing Reference Point Determination

ATTACHMENT 13

STATION TECHNICAL POSITIONS

Technical Position TP-01

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Bi-directional Testing of Check Valves with Non-Safety Positions

Purpose

The purpose of this Technical Position is to establish the station position for the verification of the non-safety direction exercise testing of check valves by normal plant operations.

Applicability

This Technical Position is applicable to those valves that are included in the Inservice Testing Program whose open or close function is a non-safety function. This position applies to those check valves required to be tested in accordance with Subsection ISTC (ASME OM Code 2001 Edition through 2003 Addenda) and Appendix II. This Technical Position does not apply to testing of the safety function (direction) of check valves included in the Inservice Testing Program.

Background

The ASME OM Code 2001 through 2003 Addenda section ISTC-3550, "Valves in Regular Use", states:

> "Valves that operate in the course of plant operation at a frequency that would satisfy the exercising requirements of this Subsection need not be additionally exercised, provided that the observations otherwise required for testing are made and analyzed during such operation and recorded in the plant record at intervals no greater than specified in ISTC-3510."

Section ISTC-3510 requires that check valves shall be exercised nominally every 3 months with exceptions (for extended periods) referenced.

Section ISTC-3522(a) requires that each check valve exercise test shall include open and close tests.

Section ISTC-5221(a)(2) states:

> "Check valves that have a safety function in only the open direction shall be exercised by initiating flow and observing that the obturator has traveled to either the full open position or to the position required to perform its intended function(s) (see ISTC-1100), and verify closure."

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Section ISTC-5221(a)(3) states:

> "Check valves that have a safety function in only the close direction shall be exercised by initiating flow and observing that the obturator has traveled [to] at least the partially open position,[3] and verify that on cessation or reversal of flow, the obturator has traveled to the seat."
>
> "[3]The partially open position should correspond to the normal or expected system flow."

Appendix II Section II-4000 requires that valve obturator movement during applicable test or examination activities shall be sufficient to determine the bidirectional functionality of the moving parts.

Normal and/or expected system flow may vary with plant configuration and alignment. LaSalle Country Station Operations staff is trained in recognizing normal plant conditions. For check valves that have a non-safety related function in the open position, Operator judgment has been deemed acceptable in determining whether or not the normal or expected flow rates for plant operation has been obtained. For check valves that have a non-safety related function in the closed position, Operator judgment is also deemed acceptable in determining whether or not flow cessation has occurred resulting in obturator travel to the closed position.

Position

LaSalle County Station will verify the non-safety position of check valves included in the Inservice Testing Program using the plant surveillance program. In lieu of a dedicated surveillance to perform the non-safety direction testing, the following alternate verifications may be performed as follows:

1. An appropriate means shall be determined which establishes the method for validating the open/closed non-safety function of the check valve during normal operations. The validation may be by direct indicator, or by other positive means such as changes in system pressure, flow rate, level, temperature, seat leakage, etc.

Technical Position TP-01
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2. Verification that a check valve is satisfying its non-safety direction function may be accomplished by observation and/or analysis of plant activities. For an example, consider a check valve that has a safety function only in the closed direction and normally provides a flow path to maintain plant operations. If this check valve does not open to pass flow when required, an alarm or indication would identify a problem to the operator. The operator would respond by taking the appropriate actions. An Issue Report would then be generated for the abnormal plant condition, which would identify the check valve failure.

3. Observation and analysis of plant logs and other records is an acceptable method for verifying a check valve's non-safety direction function verification during normal plant operations.

The performance of the open/closed non-safety function shall be recorded at a frequency required by ISTC-3510, nominally every 3 months, (with exceptions as allowed), in plant records such as the LaSalle County Station Operating Logs, Electronic Rounds, chart recorders, automated data loggers, surveillances, etc. Records as indicated above in 1 through 3 are satisfactory for the non-safety direction testing. An Issue Report shall be generated for any issues regarding check valve operability.

Justification

This Technical Position establishes the acceptability of the methods used in determining the ability of a valve to satisfy its non-safety function. Through normal plant system operation and Operator actions, a valve's non-safety function can be verified through either observation or analysis of plant records and logs. Additionally, the recording of parameters that demonstrate valve position will take place at a frequency to meet the frequency requirements of ISTC-3510. These actions collectively demonstrate the non-safety position of Inservice Testing Program check valves in regular use as required by ISTC-3550.

History

In the LaSalle Second 10-Year IST Interval, the Technical Position addressing testing of check valves with non-safety positions was Corporate Technical Position TP-EXE-IST-01-01, Rev. 1.

Technical Position TP-02

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Passive Valves Without Test Requirements

Purpose

The purpose of this Technical Position is to establish the station position for valves with passive safety functions.

Applicability

This Technical Position is applicable to valves with a passive function in accordance with ISTA-2000 and do not have inservice testing requirements per Table ISTC-3500-1. This position is typical of Category B, passive valves that do not have position indication.

An example is a manual valve that must remain in its normal position during an accident to perform its intended function.
Typically, manual valves that perform a safety function are maintained in their safety position and administratively controlled by LaSalle County Station procedures. These valves would be considered passive. If they do not have remote position indicating systems and are categorized as B, they would not be subjected to any test requirements in accordance with Table ISTC-3500-1.

Position

The LaSalle County Station Inservice Testing Program, Valve Tables - Attachment 17, will not list valves that meet the following criteria.

- The valve is Category B in accordance with ISTC-1300 (seat leakage in the closed position is inconsequential for fulfillment of the required function(s)).

- The valve is considered passive in accordance with ISTA-2000 (valve maintains obturator position and is not required to change obturator position to accomplish the required function(s)).

The valve does not have a remote position indicating system that detects and indicates valve position.

Justification

Valves that meet this position will not be listed in the LaSalle County Station Inservice Testing Program, Valve Tables - Attachment 17.

Technical Position TP-03

(Rev. 0)
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Fail Safe Testing of Valves

Purpose

The purpose of this Technical Position is to establish the station position for fail safe testing of valves in conjunction with stroke time exercising or position indication testing.

Applicability

This Technical Position is applicable to valves with fail-safe actuators requiring testing in accordance with ISTC-3560.

Background

The ASME OM Code 2001 through 2003 Addenda section ISTC-3560 requires;

> "Valves with fail-safe actuators shall be tested by observing the operation of the actuator upon loss of valve actuating power in accordance with the exercising frequency of ISTC-3510."

Section ISTC-3510 states;

> "Active Category A, Category B, and Category C check valves shall exercised nominally every 3 months..."

Position

In cases where the valve operator moves the valve to the open or closed position following de-energizing the operator electrically, by venting air, or both, the resultant valve exercise satisfies the fail safe test requirement and an additional test specifically for fail safe testing will not be performed.

Justification

Fail Safe Testing ensures the ability of the fail safe mechanism of the valve to position the valve to the fail safe position. Whether or not the actuation of this fail safe mechanism is due to Operator Action or failure of either the valve's air or electric power source, the resultant action of the valve will be the same. Therefore, credit for the verification of a valve's fail safe ability can be taken based on the successful performance of either stroke time exercising or position indication testing.

Technical Position TP-04

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Manual Valve Exercise Frequency

Purpose

The purpose of this Technical Position is to establish the station position for the frequency of exercising those manual valves requiring exercising.

Applicability

This Technical Position is applicable to the manual valves included in the Inservice Testing Program.

Background

The ASME OM Code 2001 through 2003 Addenda section ISTC-3540 states;

> "Manual valves shall be full-stroke exercised at least once every 5 years, except where adverse conditions[2] may require the valve to be tested more frequently to ensure operational readiness."

[2]Harsh service environment, lubricant hardening, corrosive or sediment laden process fluid, or degraded valve components are some examples of adverse conditions.

In 10CFR 50.55a(b)(3)(vi), the NRC stated the following with regards to manual valve exercise frequency;

> "Manual valves must be exercised on a 2-year interval rather that the 5-year interval specified in paragraph ISTC-3540 of the 1999 Addenda through the latest edition and addenda incorporated by reference in paragraph (b)(3) of this section, provided that adverse conditions do not require more frequent testing."

Which as written, includes the 2001/2003a of the ASME Code.

Position

LaSalle County Station will perform exercising of manual valves within the scope of the IST Program at a frequency not to exceed 2 years.

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Justification

The NRC Rule Change has been adopted for the frequency of exercising manual valves at least once every 2 years. This interval is more frequent than required by the Edition of the Code used by LaSalle County Station, therefore no other justification is required.

Technical Position TP-05

(Rev. 0)
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Check Valves in Regular Use

Purpose

The purpose of this Technical Position is to establish the station position for exercise testing of check valves that are in regular use during normal plant operations.

Applicability

This Technical Position is applicable to check valves that are capable of being demonstrated to be open during routine operations.

Background

The ASME OM Code 2001 through 2003 Addenda section ISTC-3550, "Valves in Regular Use", states:

> "Valves that operate in the course of plant operation at a frequency that would satisfy the exercising requirements of this Subsection need not be additionally exercised, provided that the observations otherwise required for testing are made and analyzed during such operation and recorded in the plant record at intervals no greater than specified in ISTC-3510."

Section ISTC-3510 requires that check valves shall be exercised nominally every 3 months with exceptions (for extended periods) referenced.

Normal and/or expected system flow may vary with plant configuration and alignment. Since the LaSalle County Station Operations staff is trained so as to be able to recognize normal plant conditions, Operator judgment has been deemed acceptable for the purpose of determining check valve open demonstration by observing either normal or expected flow rates for the plant operating condition.

Position

LaSalle County Station will verify the open position of these subject check valves by observing plant logs, computer systems, strip chart recorders, etc., during normal plant operations. The open/closed safety function shall be recorded at a frequency required by ISTC-3510, nominally every 3 months, (with exceptions as provided), in plant records such as LaSalle County Station Operating Logs, Electronic Rounds, chart recorders, automated data loggers, surveillances, etc.

Technical Position TP-05
(Rev. 0)
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Justification

Normal plant systems operation and operator actions provide for the observations and analysis that these valves are capable of satisfying their open safety function. Additionally, the recording of parameters that demonstrate valve position will take place at a frequency in accordance with ISTC-3510. These actions collectively demonstrate the open safety function of Inservice Testing Program check valves in regular use as required by ISTC-3550.

Technical Position TP-06

(Rev. 1)
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Categorization of IST Pumps (Group A or B)

Position

The LaSalle County Station has categorized the pumps that are required to be included in the Inservice Testing Program[a] as either Group A or B in accordance with the requirements of ISTB-1300.

Group A pumps are pumps that are operated continuously or routinely during normal operation, cold shutdown, or refueling operations. The following pumps are categorized as Group A at the LaSalle County Station:

Pump EPN	Class	Group	Type	Function
0DG01P	3	A	Centrifugal	DG Cooling Water
1DG01P	3	A	Centrifugal	DG Cooling Water
1E12-C002A	2	A	Vertical	RHR Pump
1E12-C002B	2	A	Vertical	RHR Pump
1E12-C003	2	A	Centrifugal	RHR Water Leg
1E12-C300A	3	A	Centrifugal	RHR Service Water
1E12-C300B	3	A	Centrifugal	RHR Service Water
1E12-C300C	3	A	Centrifugal	RHR Service Water
1E12-C300D	3	A	Centrifugal	RHR Service Water
1E21-C002	2	A	Centrifugal	LPCS Water Leg
1E22-C002	3	A	Centrifugal	DG Cooling Water
1E22-C003	2	A	Centrifugal	HPCS Water Leg
1E51-C003	2	A	Centrifugal	RCIC Water Leg
2DG01P	3	A	Centrifugal	DG Cooling Water
2E12-C002A	2	A	Vertical	RHR Pump
2E12-C002B	2	A	Vertical	RHR Pump
2E12-C003	2	A	Centrifugal	RHR Water Leg
2E12-C300A	3	A	Centrifugal	RHR Service Water
2E12-C300B	3	A	Centrifugal	RHR Service Water
2E12-C300C	3	A	Centrifugal	RHR Service Water
2E12-C300D	3	A	Centrifugal	RHR Service Water

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Pump EPN	Class	Group	Type	Function
2E21-C002	2	A	Centrifugal	LPSC Water Leg
2E22-C002	3	A	Centrifugal	DG Cooling Water
2E22-C003	2	A	Centrifugal	HPCS Water Leg
2E51-C003	2	A	Centrifugal	RCIC Water Leg

[a] – Pumps classified as "Skid-mounted" per ISTB-1200(c) are not required to be tested in accordance with ISTB, so are therefore not assigned a "Group".

Group B pumps are those pumps in standby systems that are not operated routinely except for testing. The following pumps are categorized as Group B at the LaSalle County Station:

Pump EPN	Class	Group	Type	Function
1C41-C001A	2	B	Positive Disp	Standby Liquid Control
1C41-C001B	2	B	Positive Disp	Standby Liquid Control
1E12-C002C	2	B	Vertical	RHR Pump (LPCI)
1E21-C001	2	B	Vertical	Low Pressure Core Spray
1E22-C001	2	B	Vertical	High Pressure Core Spray
1E51-C001	2	B	Centrifugal	Reactor Core Iso Cooling
1FC03PA	3	B	Centrifugal	Fuel Pool Emer. Make-Up
1FC03PB	3	B	Centrifugal	Fuel Pool Emer. Make-Up
2C41-C001A	2	B	Positive Disp	Standby Liquid Control
2C41-C001B	2	B	Positive Disp	Standby Liquid Control
2E12-C002C	2	B	Vertical	RHR Pump (LPCI)
2E21-C001	2	B	Vertical	Low Pressure Core Spray
2E22-C001	2	B	Vertical	High Pressure Core Spray
2E51-C001	2	B	Centrifugal	Reactor Core Iso Cooling
2FC03PA	3	B	Centrifugal	Fuel Pool Emer. Make-Up
2FC03PB	3	B	Centrifugal	Fuel Pool Emer. Make-Up

The following summarizes the Group A, B, and Comprehensive Pump Test requirements as specified by the ASME OM Code Subsection ISTB.

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Group A Pump Tests – Group A tests are performed quarterly for each pump categorized as A. The following inservice test parameters are measured for each Group A pump test:

- Speed (if pump is variable speed)
- Differential Pressure
- Discharge Pressure, (for positive displacement pumps)
- Flow Rate
- Vibration

Group B Pump Tests – Group B tests are performed quarterly for each pump categorized as B. The following inservice test parameters are measured for each Group B pump test:

- Speed (if pump is variable speed)
- Differential Pressure[1]
- Flow Rate[1]

[1] For positive displacement pumps, only flow rate shall be measured or determined, for all other pumps, either differential pressure or flow rate shall be measured or determined.

Although vibration testing is not required for Category B pumps, LaSalle County Station has chosen to continue to perform vibration monitoring of these pumps.

Comprehensive Pump Tests – Comprehensive pump tests are performed biennially for all pumps in the Inservice Testing Program. The following inservice test parameters are measured for each Comprehensive pump test:

- Speed (if pump is variable speed)
- Differential Pressure
- Discharge Pressure, (for positive displacement pumps)
- Flow Rate (The ISTB Design Flow for the comprehensive pump test shall be defined as the System's Accident Condition Flow for a single pump)
- Vibration

The following instrument accuracy requirements apply to each test type:

Parameter	Group A	Group B	Comprehensive
Pressure	+/- 2.0%	+/- 2.0%	+/- 0.5%
Flow Rate	+/- 2.0%	+/- 2.0%	+/- 2.0%
Speed	+/- 2.0%	+/- 2.0%	+/- 2.0%
Vibration	+/- 5.0%	+/- 5.0%	+/- 5.0%
Differential Pressure	+/- 2.0%	+/- 2.0%	+/- 0.5%

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Water Leg Pump Check Valves

Purpose

The purpose of this Technical Position is to establish the station position for the open and closed exercise testing of the Water Leg Pump (WLP) discharge check valves.

Applicability

This Technical Position is applicable to the following check valves at the LaSalle County Station.

Valve Number	System	Class	Category	Unit
1(2)E22-F007	HP	2	C	1
1(2)E21-F033	LP	2	C	1
1(2)E12-F084A	RH	2	C	1
1(2)E12-F084B	RH	2	C	1
1(2)E12-F084C	RH	2	C	1
1(2)E51-F061	RI	2	C	1
1(2)E22-F007	HP	2	C	2
1(2)E21-F033	LP	2	C	2
1(2)E12-F084A	RH	2	C	2
1(2)E12-F084B	RH	2	C	2
1(2)E12-F084C	RH	2	C	2
1(2)E51-F061	RI	2	C	2

Background

The ASME OM Code 2001 through 2003 Addenda section ISTC-5221(a)(1), "Valve Obturator Movement", states:

> "Check valves that have a safety function in both the open and close directions shall be exercised by initiating flow and observing that the obturator has traveled to either the full open position or to the position required to perform it's intended function(s) (see ISTA-1100), and verify that on cessation or reversal of flow, the obturator has traveled to the seat."

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Position

These WLP Discharge Check Valves do not have a specific safety related flow rate associated with them. The function of each Water Leg Pump (WLP) is to maintain the associated ECCS pump discharge lines filled and pressurized when ECCS is in standby conditions. Without the WLPs the ECCS discharge lines could depressurize and drain. Voids within the discharge lines of any of the ECCS pumps could lead to severe water hammer following ECCS pump actuation. The ECCS lines are provided with instrumentation that continuously monitors the pressure to ensure that the discharge lines are filled and pressurized within allowable limits as delineated in plant Technical Specifications.

The verification of pressure maintenance within the discharge piping alone could be considered adequate to verify the open capability of these valves, however because of the essentially static flow conditions within these discharge lines, an additional test is performed in which the system is vented through a high point vent periodically. In this test, flow (liquid) is verified to exit the vent, after which the ECCS discharge piping system pressure is monitored to return to its required pressure. This test ensures that the valves are exercised open and capable of passing flow. This is considered to be acceptable open exercise tests of the discharge check valves because the check valves are exercised to the position required to fulfill their function in accordance with ISTC-5221(a)(1).

Closure of the WLP discharge check valves is verified during the associated ECCS pump quarterly test. Once ECCS full flow requirements are met, the pressure directly downstream of the WLP discharge check valve is measured. Once measured, the manual stop valve downstream of the check valve will be closed and the pressure between closed stop valve and the WLP discharge check valve is measured again. If the difference between the two pressures is greater than 1.0 psig, then the WLP discharge check valve may not be closed. This is considered to be an acceptable close exercise test of the WLP discharge check valve per the requirements of ISTC-5221(a)(1).

History

In the LaSalle Second 10-Year IST Interval, this Technical Position was identified as TP-02.

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Thermal Relief Valves

Purpose

The purpose of this Technical Position is to establish the station position on the method and frequency of testing of valves that can be classified as Thermal Relief Valves.

Applicability

This Technical Position is applicable to the following valves at the LaSalle County Station.

Valve Number	System	Class	Category	Unit
0DG014	DG	3	C	0
1DG034	DG	3	C	1
1E22-F345	HP	3	C	1
1E12-F460	RH	2	A/C	1
1VP197A	VP	2	A/C	1
1VP197B	VP	2	A/C	1
1VP198A	VP	2	A/C	1
1VP198B	VP	2	A/C	1
1WR225	WR	2	A/C	1
1WR226	WR	2	A/C	1
1E22-F035	HP	2	C	1
1E12-F311A	RH	2	C	1
1E12-F311B	RH	2	C	1
2DG034	DG	3	C	2
2E22-F345	HP	3	C	2
2E12-F460	RH	2	A/C	2
2VP197A	VP	2	A/C	2
2VP197B	VP	2	A/C	2
2VP198A	VP	2	A/C	2
2VP198B	VP	2	A/C	2
2WR225	WR	2	A/C	2
2WR226	WR	2	A/C	2
2E22-F035	HP	2	C	2
2E12-F311A	RH	2	C	2
2E12-F311B	RH	2	C	2

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Background

When this technical position for thermal relief valves was first drafted, the position was based upon 10CFR50.55a(b) endorsement of Regulatory Guide 1.192, "Operation and Maintenance Code Case Acceptability, ASME OM Code", as issued in June 2003. This Reg. Guide contains a list of ASME Code Cases which either in full or in part, are allowed by the NRC to be used by licensees without the submittal of a request for relief from the NRC. Table 1 of the Reg. Guide 1.197 contains a list of Code Cases that can be adopted by the utility without conditions or modifications, which includes Code Case OMN-2, Rev. 0, "Thermal Relief Valve Code Case", 1998 Edition.

Code Case OMN-2 states in part:

> "It is the opinion of the Committee that in lieu of the requirements specified in ASME OM Code 1995, paragraphs I 1.3.5(a), (b), and (c) testing for Class 2 and Class 3 pressure relief devices whose only overpressure protection function is to protect isolated components from fluid expansion caused by changes in fluid temperature shall be performed once every ten years on each device unless performance data indicates that more frequent testing is needed to assure device function. In lieu of test, the Owner may replace these devices every ten years unless performance data indicates more frequent replacement is needed to assure device function."

However, in the current edition of the ASME Code 2001/2003a, Mandatory Appendix I, "Inservice Testing of Pressure Relief Devices in Light-Water Reactor Nuclear Power Plants", section I-1390 has been created which removes the need for OMN-2. This section states:

> "Test shall be performed on all Class 2 and 3 relief devices used in thermal relief application every 10 years, unless performance data indicate more frequent testing is necessary. In lieu of tests the Owner may replace the relief devices at a frequency of every 10 years, unless performance data indicate more frequent replacement are necessary."

LaSalle Engineering Evaluation EC 353154 reviewed all IST Program Class 2 and 3 relief valves for OMN-2 applicability, and for those deemed applicable, reviewed performance data to ensure ten-year testing/replacement is merited.

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Position

The LaSalle Evaluation EC 353154 concluded that all valves designated as thermal relief valves, with the exception of 1(2)E12-F311A/B, qualified for a test/replacement frequency of ten years. During the Second IST 10-Year Interval, as discussed in this Technical Position, LaSalle had chosen to replace rather than test these valves as allowed by I-1390.

Based upon their failure history, valves 1(2)E12-311A/B shall continue to be tested/replaced per the frequency requirements of I-1350 in that at least 20% of the valves is this group of 4 shall be tested every 48 months, with all valves being either tested or replaced once every 10 years. Once sufficient performance data have been gathered, these valves may be re-evaluated to consider increasing their frequency to the I-1390 10-year replacement allowance.

History

In the LaSalle Second 10-Year IST Interval, this Technical Position was identified as TP-08.

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Classification of Skid- Mounted Components

Purpose

The purpose of this technical position is to clarify requirements for classification of various skid- mounted components, and to clarify the testing requirements of these components.

Background

The ASME Code allows classification of some components as skid- mounted when their satisfactory operation is demonstrated by the satisfactory performance of the associated major components. Testing of the major component is sufficient to satisfy Inservice Testing requirements for skid- mounted components. In section 3.4 of NUREG 1482 Rev 1, the NRC supports the designation of components as skid-mounted:

"The staff has determined that the testing of the major component is an acceptable means for verifying the operational readiness of the skid-mounted and component subassemblies if the licensee documents this approach in the IST Program. This is acceptable for both Code class components and non-Code class components tested and tracked by the IST Program."

The term skid-mounted is defined in the 2001/2003a Editions of the ASME OM Code:

ISTA-2000 DEFINITIONS

> *Skid-mounted pumps and valves* – pumps and valves integral to or that support operation of major components, even though these components may not be located directly on the skid. In general, these pumps and valves are supplied by the manufacturer of the major component. Examples include:
> (a) diesel fuel oil pumps and valves;
> (b) steam admission and trip throttle valves for high-pressure coolant injection pumps;
> (c) steam admission and trip throttle valves for Auxiliary Feedwater turbine driven pumps;
> (d) solenoid-operated valves provided to control an air-operated valve.

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Additionally the Subsections pertaining to pumps (ISTB) and valves (ISTC) include exclusions/exemptions for skid-mounted components;

ISTB-1200(c) Exclusions

> Skid-mounted pumps that are tested as part of the major component and are justified by the Owner to be adequately tested.

ISTC-1200 Exemptions

> Skid-mounted valves are excluded from this Subsection provided they are tested as part of the major component and are justified by the Owner to be adequately tested.

Position

The 2001/2003a ASME OM Code definition of skid-mounted will be used for classification of components in the LaSalle County Station Inservice Testing Program. In addition, for a component to be considered skid-mounted:

- The major component associated with the skid-mounted component must be surveillance tested at a frequency sufficient to meet ASME Code test frequency for the skid-mounted component.

- Satisfactory operation*, of the skid-mounted component must be demonstrated by satisfactory operation of the major component.

* - as defined by the utility

Justification

Recognition and classification of components as skid-mounted eliminates the need for the redundant testing of the sub component(s) because the testing of the major (parent) component(s) satisfactorily demonstrates operation of the "skid-mounted" component(s).

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Resultant Discussion
Skid-mounted Pumps

In recognition of this Technical Position on skid-mounted components, pumps classified as Skid-mounted need not be classified as either Group A or Group B as the acceptable performance of the skid-mounted pump is based upon the acceptable performance of the major component to which it gives support, not the manner in which it operates. The frequency at which this skid-mounted pump's ability to function in support of its major component will be verified quarterly, as a minimum. This frequency is chosen so as to not be greater than the minimum test frequency associated with an IST pump that is not classified as skid-mounted.

If the frequency associated with the testing of the skid-mounted pump is ever determined to be greater than quarterly, that evaluation/justification will be provided in that specific pump basis document.

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The following IST pumps have been classified as skid-mounted;

Pump EPN	Class	Type	Function
0-ACSOAKBACK	3	Positive Disp	DG AC Soak Back Pump
0-DGOILCIRC	NC	Positive Disp	DG Oil Circulating Pump
1A-ACSOAKBACK	3	Positive Disp	DG AC Soak Back Pump
1A-DGOILCIRC	NC	Positive Disp	DG Oil Circulating Pump
1B-ACSOAKBACK	3	Positive Disp	DG AC Soak Back Pump
1B-DGOILCIRC	NC	Positive Disp	DG Oil Circulating Pump
2A-ACSOAKBACK	3	Positive Disp	DG AC Soak Back Pump
2A-DGOILCIRC	NC	Positive Disp	DG Oil Circulating Pump
2B-ACSOAKBACK	3	Positive Disp	DG AC Soak Back Pump
2B-DGOILCIRC	NC	Positive Disp	DG Oil Circulating Pump
0-DCSOAKBACK	3	Positive Disp	DG DC Soak Back Pump
0-DGMAINLUBE	NC	Positive Disp	DG Main Lube Oil Pump
0-DGPISTON	NC	Positive Disp	DG Piston Cooling Oil Pump
0-DGSCAVENGE	3	Positive Disp	DG Scavenging Oil Pump
0-DO01P	3	Centrifugal	DG Fuel Transfer Pump
1A-DCSOAKBACK	3	Positive Disp	DG DC Soak Back Pump
1A-DGMAINLUBE	NC	Positive Disp	DG Main Lube Oil Pump
1A-DGPISTON	NC	Positive Disp	DG Piston Cooling Oil Pump
1A-DGSCAVENGE	3	Positive Disp	DG Scavenging Oil Pump
1B-DCSOAKBACK	3	Positive Disp	DG DC Soak Back Pump
1B-DGMAINLUBE	NC	Positive Disp	DG Main Lube Oil Pump
1B-DGPISTON	NC	Positive Disp	DG Piston Cooling Oil Pump
1B-DGSCAVENGE	3	Positive Disp	DG Scavenging Oil Pump
2A-DCSOAKBACK	3	Positive Disp	DG DC Soak Back Pump
2A-DGMAINLUBE	NC	Positive Disp	DG Main Lube Oil Pump
2A-DGPISTON	NC	Positive Disp	DG Piston Cooling Oil Pump
2A-DGSCAVENGE	3	Positive Disp	DG Scavenging Oil Pump
2B-DCSOAKBACK	3	Positive Disp	DG DC Soak Back Pump
2B-DGMAINLUBE	NC	Positive Disp	DG Main Lube Oil Pump
2B-DGPISTON	NC	Positive Disp	DG Piston Cooling Oil Pump
2B-DGSCAVENGE	3	Positive Disp	DG Scavenging Oil Pump
1DO01P	3	Centrifugal	DG Fuel Transfer Pump
1DO02P	3	Centrifugal	DG Fuel Transfer Pump
2DO01P	3	Centrifugal	DG Fuel Transfer Pump
2DO02P	3	Centrifugal	DG Fuel Transfer Pump

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Skid-mounted Valves

Only those parameters necessary for a valve to perform the safety related function(s) need be considered when evaluating the ability of the major component's test to verify the required function of the skid-mounted valve. (e.g. If a skid-mounted valve has a non-safety related open function, the major component testing need not consider verification of the open non-safety function, as would have been required if the valve were not classified as skid-mounted.)

The frequency at which this skid-mounted valve's ability to function in support of its major component will be verified quarterly, as a minimum. This frequency is chosen to be consistent with the minimum test frequency associated with a non-skid-mounted IST valve. If the frequency associated with the testing of a skid-mounted valve is determined to be greater than quarterly, that evaluation/justification will be provided in that specific valves basis document.

Valve EPN	Class	Type	Function
0DG035A	3	Globe	DG A/C Starting Air Motors Supply Control Valve
0DG035B	3	Globe	DG B/D Starting Air Motors Supply Control Valve
0DG036A	NC	3-Way	DG A/C Starting Air Motors Pinion Supply SOV
0DG036B	NC	3-Way	DG B/D Starting Air Motors Pinion Supply SOV
0DG038A	NC	Check	DG A/C Starting Air Mtrs Pinion Sup Bleed Off CV
0DG038B	NC	Check	DG B/D Starting Air Mtrs Pinion Sup Bleed Off CV
0DG048A	3	Check	DG Lube Oil DC Soak Back Pump Dsch CV
0DG048B	3	Check	DG Lube Oil AC Soak Back Pump Dsch CV
0DG049	NC	Check	DG Lube Oil Circ Pump Dsch Relief CV
0DG050	3	Check	DG Lube Oil Soak Back Pumps Dsch Relief CV
0DG051	3	Check	DG Lube Oil Cooler Outlet Check Valve
0DGABC	NC	Check	DG Turbocharger Check Valve
0DGXYZ	NC	Check	DG Turbocharger Check Valve
0DO002	3	Globe	DG Fuel Transfer Pump Suction Valve
1C11-D001-114	2	Check	CRD HCU Scram Discharge CV (Typ 185)

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Valve EPN	Class	Type	Function
1C11-D001-115	NC	Check	CRD HCU Charging Water CV (Typ 185)
1C11-D001-117	NC	3-Way	CRD HCU Scram Pilot Valve (Typ 185)
1C11-D001-118	NC	3-Way	CRD HCU Scram Pilot Valve (Typ 185)
1C11-D001-126	NC	Gate	CRD HCU Scram Inlet Valve (Typ 185)
1C11-D001-127	NC	Gate	CRD HCU Scram Outlet Valve (Typ 185)
1C11-D001-137	NC	Check	CRD HCU Drive Water CV (Typ 185)
1C11-D001-138	NC	Check	CRD HCU Cooling Water CV (Typ 185)
1CM-CK-2A	NC	Check	CAM-Reagent Gas Supply Check Valve
1CM-CK-2B	NC	Check	CAM-Reagent Gas Supply Check Valve
1CM-CK-4A	NC	Check	CAM-Reagent Gas Supply Check Valve
1CM-CK-4B	NC	Check	CAM-Reagent Gas Supply Check Valve
1CM-PP CK-A	NC	Check	CAM-Sample Pump Discharge Check Valve
1CM-PP CK-B	NC	Check	CAM-Sample Pump Discharge Check Valve
1DG061A	NC	Gate	DG A/C Starting Air Motors Supply Control Valve
1DG061B	NC	Gate	DG B/D Starting Air Motors Supply Control Valve
1DG062A	NC	3-Way	DG A/C Starting Air Motors Pinion Supply SOV
1DG062B	NC	3-Way	DG B/D Starting Air Motors Pinion Supply SOV
1DG064A	NC	Check	DG A/C Strting Air Mtrs Pinion Sup Bleed Off CV
1DG064B	NC	Check	DG B/D Strting Air Mtrs Pinion Sup Bleed Off CV
1DG083A	3	Check	DG Lube Oil DC Soak Back Pump Dsch CV
1DG083B	3	Check	DG Lube Oil AC Soak Back Pump Dsch CV
1DG084	NC	Check	DG Lube Oil Circ Pump Dsch Relief CV
1DG085	3	Check	DG Lube Oil Soak Back Pumps Dsch Relief CV
1DG087A	3	Check	DG Lube Oil DC Soak Back Pump Dsch CV
1DG087B	3	Check	DG Lube Oil AC Soak Back Pump Dsch CV
1DG088	NC	Check	DG Lube Oil Circ Pumps Dsch Relief CV
1DG089	3	Check	DG Lube Oil Soak Back Pumps Dsch Relief CV
1DG091	3	Check	DG Lube Oil Cooler Outlet Check Valve
1DG092	3	Check	DG Lube Oil Cooler Outlet Check Valve
1DGABC	NC	Check	DG Turbocharger Check Valve
1DGABC-HPCS	NC	Check	DG Turbocharger Check Valve

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Valve EPN	Class	Type	Function
1DGXYZ	NC	Check	DG Turbocharger Check Valve
1DGXYZ-HPCS	NC	Check	DG Turbocharger Check Valve
1DO002	3	Check	DG Fuel Transfer Pump Dsch Check Valve
1DO012	3	Check	DG Fuel Transfer Pump Dsch Check Valve
1E22-F381A	NC	Gate	DG A/C Starting Air Motors Supply Control Valve
1E22-F381B	NC	Gate	DG B/D Starting Air Motors Supply Control Valve
1E22-F382A	NC	3-Way	DG A/C Starting Air Motors Pinion Supply SOV
1E22-F382B	NC	3-Way	DG B/D Starting Air Motors Pinion Supply SOV
1E22-F383A	NC	Check	DG A/C Strting Air Mtrs Pinion Sup Bleed Off CV
1E22-F383B	NC	Check	DG B/D Strting Air Mtrs Pinion Sup Bleed Off CV
1E51-F360	2	Gate	RCIC Turbine Trip/Throttle Valve
2C11-D001-114	2	Check	CRD HCU Scram Discharge CV (Typ 185)
2C11-D001-115	NC	Check	CRD HCU Charging Water CV (Typ 185)
2C11-D001-117	NC	3-Way	CRD HCU Scram Pilot Valve (Typ 185)
2C11-D001-118	NC	3-Way	CRD HCU Scram Pilot Valve (Typ 185)
2C11-D001-126	NC	Gate	CRD HCU Scram Inlet Valve (Typ 185)
2C11-D001-127	NC	Gate	CRD HCU Scram Outlet Valve (Typ 185)
2C11-D001-137	NC	Check	CRD HCU Drive Water CV (Typ 185)
2C11-D001-138	NC	Check	CRD HCU Cooling Water CV (Typ 185)
2CM-CK-2A	NC	Check	CAM-Reagent Gas Supply Check Valve
2CM-CK-2B	NC	Check	CAM-H2/O2 Analyzer Calibration Gas CV
2CM-CK-4A	NC	Check	CAM-Reagent Gas Supply Check Valve
2CM-CK-4B	NC	Check	CAM-Reagent Gas Supply Check Valve
2CM-PP CK-A	NC	Check	CAM-Sample Pump Discharge Check Valve
2CM-PP CK-B	NC	Check	CAM-Hydrogen/Oxygen Analyzer Calibration Gas SOV
2DG061A	NC	Gate	DG A/C Starting Air Motors Supply Control Valve
2DG061B	NC	Gate	DG B/D Starting Air Motors Supply Control Valve
2DG062A	NC	3-Way	DG A/C Starting Air Motors Pinion Supply SOV
2DG062B	NC	3-Way	DG B/D Starting Air Motors Pinion Supply SOV

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Valve EPN	Class	Type	Function
2DG064A	NC	Check	DG A/C Strting Air Mtrs Pinion Sup Bleed Off CV
2DG064B	NC	Check	DG B/D Strting Air Mtrs Pinion Sup Bleed Off CV
2DG083A	3	Check	DG Lube Oil DC Soak Back Pump Dsch CV
2DG083B	3	Check	DG Lube Oil AC Soak Back Pump Dsch CV
2DG084	NC	Check	DG Lube Oil Circ Pump Dsch Relief CV
2DG085	3	Check	DG Lube Oil Soak Back Pumps Dsch Relief CV
2DG087A	3	Check	DG Lube Oil DC Soak Back Pump Dsch CV
2DG087B	3	Check	DG Lube Oil AC Soak Back Pump Dsch CV
2DG088	NC	Check	DG Lube Oil Circ Pumps Dsch Relief CV
2DG089	3	Check	DG Lube Oil Soak Back Pumps Dsch Relief CV
2DG091	3	Check	DG Lube Oil Cooler Outlet Check Valve
2DG092	3	Check	DG Lube Oil Cooler Outlet Check Valve
2DGABC	NC	Check	DG Turbocharger Check Valve
2DGABC-HPCS	NC	Check	DG Turbocharger Check Valve
2DGXYZ	NC	Check	DG Turbocharger Check Valve
2DGXYZ-HPCS	NC	Check	DG Turbocharger Check Valve
2DO002	3	Check	DG Fuel Transfer Pump Dsch Check Valve
2DO012	3	Check	DG Fuel Transfer Pump Dsch Check Valve
2E22-F381A	2	Gate	DG A/C Starting Air Motors Supply Control Valve
2E22-F381B	2	Gate	DG B/D Starting Air Motors Supply Control Valve
2E22-F382A	NC	3-Way	DG A/C Starting Air Motors Pinion Supply SOV
2E22-F382B	NC	3-Way	DG B/D Starting Air Motors Pinion Supply SOV
2E22-F383A	NC	Check	DG A/C Strting Air Mtrs Pinion Sup Bleed Off CV
2E22-F383B	NC	Check	DG B/D Strting Air Mtrs Pinion Sup Bleed Off CV
2E51-F360	2	Gate	RCIC Turbine Trip/Throttle Valve

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History

In the LaSalle Second 10-Year IST Interval, the Technical Position addressing skid-mounted equipment was Corporate Technical Position TP-EXE-IST-00-04, Rev. 1.

Technical Position TP-10

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Excess Flow Check Valve Testing

Purpose

The purpose of this position paper is to clarify inservice testing requirements for Excess Flow Check Valves (EFCVs).

Application

This Technical Position is applicable to the following check valves at LaSalle County Station.

Valve Number	System	Class	Category	Unit
1B21-F325A	MS	2	C	1
1B21-F325B	MS	2	C	1
1B21-F325C	MS	2	C	1
1B21-F325D	MS	2	C	1
1B21-F326A	MS	2	C	1
1B21-F326B	MS	2	C	1
1B21-F326C	MS	2	C	1
1B21-F326D	MS	2	C	1
1B21-F327A	MS	2	C	1
1B21-F327B	MS	2	C	1
1B21-F327C	MS	2	C	1
1B21-F327D	MS	2	C	1
1B21-F328A	MS	2	C	1
1B21-F328B	MS	2	C	1
1B21-F328C	MS	2	C	1
1B21-F328D	MS	2	C	1
1B21-F344	NB	2	C	1
1B21-F346	NB	2	C	1
1B21-F348	NB	2	C	1
1B21-F350	NB	2	C	1
1B21-F353	NB	2	C	1
1B21-F355	NB	2	C	1
1B21-F357	NB	2	C	1
1B21-F359	NB	2	C	1
1B21-F361	NB	2	C	1
1B21-F363	NB	2	C	1
1B21-F370	NB	2	C	1
1B21-F372	NB	2	C	1
1B21-F374	NB	2	C	1

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Valve Number	System	Class	Category	Unit
1B21-F376	NB	2	C	1
1B21-F378	NB	2	C	1
1B21-F413A	RI	2	C	1
1B21-F413B	RI	2	C	1
1B21-F415A	RI	2	C	1
1B21-F415B	RI	2	C	1
1B21-F437	NB	2	C	1
1B21-F439	NB	2	C	1
1B21-F441	NB	2	C	1
1B21-F443	NB	2	C	1
1B21-F445A	NB	2	C	1
1B21-F445B	NB	2	C	1
1B21-F447	NB	2	C	1
1B21-F449	NB	2	C	1
1B21-F451	NB	2	C	1
1B21-F453	NB	2	C	1
1B21-F455A	NB	2	C	1
1B21-F455B	NB	2	C	1
1B21-F457	NB	2	C	1
1B21-F459	NB	2	C	1
1B21-F461	NB	2	C	1
1B21-F463	NB	2	C	1
1B21-F465A	NB	2	C	1
1B21-F465B	NB	2	C	1
1B21-F467	NB	2	C	1
1B21-F469	NB	2	C	1
1B21-F471	NB	2	C	1
1B21-F473	NB	2	C	1
1B21-F475A	NB	2	C	1
1B21-F475B	NB	2	C	1
1B21-F570	NB	2	C	1
1B21-F571	NB	2	C	1
1B33-F301A	RR	2	C	1
1B33-F301B	RR	2	C	1
1B33-F305A	RR	2	C	1
1B33-F305B	RR	2	C	1
1B33-F305C	RR	2	C	1
1B33-F305D	RR	2	C	1
1B33-F307A	RR	2	C	1
1B33-F307B	RR	2	C	1
1B33-F307C	RR	2	C	1
1B33-F307D	RR	2	C	1

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Valve Number	System	Class	Category	Unit
1B33-F311A	RR	2	C	1
1B33-F311B	RR	2	C	1
1B33-F311C	RR	2	C	1
1B33-F311D	RR	2	C	1
1B33-F313A	RR	2	C	1
1B33-F313B	RR	2	C	1
1B33-F313C	RR	2	C	1
1B33-F313D	RR	2	C	1
1B33-F315A	RR	2	C	1
1B33-F315B	RR	2	C	1
1B33-F315C	RR	2	C	1
1B33-F315D	RR	2	C	1
1B33-F317A	RR	2	C	1
1B33-F317B	RR	2	C	1
1B33-F319A	RR	2	C	1
1B33-F319B	RR	2	C	1
1E12-F315	RH	2	C	1
1E12-F317	RH	2	C	1
1E12-F359A	RH	2	C	1
1E12-F359B	RH	2	C	1
1E12-F360A	RH	2	C	1
1E12-F360B	RH	2	C	1
1E21-F304	LP	2	C	1
1E22-F304	HP	2	C	1
1G33-F309	RT	2	C	1
1G33-F312A	RT	2	C	1
1G33-F312B	RT	2	C	1
2B21-F325A	MS	2	C	2
2B21-F325B	MS	2	C	2
2B21-F325C	MS	2	C	2
2B21-F325D	MS	2	C	2
2B21-F326A	MS	2	C	2
2B21-F326B	MS	2	C	2
2B21-F326C	MS	2	C	2
2B21-F326D	MS	2	C	2
2B21-F327A	MS	2	C	2
2B21-F327B	MS	2	C	2
2B21-F327C	MS	2	C	2
2B21-F327D	MS	2	C	2
2B21-F328A	MS	2	C	2
2B21-F328B	MS	2	C	2
2B21-F328C	MS	2	C	2
2B21-F328D	MS	2	C	2

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Valve Number	System	Class	Category	Unit
2B21-F344	NB	2	C	2
2B21-F346	NB	2	C	2
2B21-F348	NB	2	C	2
2B21-F350	NB	2	C	2
2B21-F353	NB	2	C	2
2B21-F355	NB	2	C	2
2B21-F357	NB	2	C	2
2B21-F359	NB	2	C	2
2B21-F361	NB	2	C	2
2B21-F363	NB	2	C	2
2B21-F370	NB	2	C	2
2B21-F372	NB	2	C	2
2B21-F374	NB	2	C	2
2B21-F376	NB	2	C	2
2B21-F378	NB	2	C	2
2B21-F413A	RI	2	C	2
2B21-F413B	RI	2	C	2
2B21-F415A	RI	2	C	2
2B21-F415B	RI	2	C	2
2B21-F437	NB	2	C	2
2B21-F439	NB	2	C	2
2B21-F441	NB	2	C	2
2B21-F443	NB	2	C	2
2B21-F445A	NB	2	C	2
2B21-F445B	NB	2	C	2
2B21-F447	NB	2	C	2
2B21-F449	NB	2	C	2
2B21-F451	NB	2	C	2
2B21-F453	NB	2	C	2
2B21-F455A	NB	2	C	2
2B21-F455B	NB	2	C	2
2B21-F457	NB	2	C	2
2B21-F459	NB	2	C	2
2B21-F461	NB	2	C	2
2B21-F463	NB	2	C	2
2B21-F465A	NB	2	C	2
2B21-F465B	NB	2	C	2
2B21-F467	NB	2	C	2
2B21-F469	NB	2	C	2
2B21-F471	NB	2	C	2

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Valve Number	System	Class	Category	Unit
2B21-F473	NB	2	C	2
2B21-F475A	NB	2	C	2
2B21-F475B	NB	2	C	2
2B21-F570	NB	2	C	2
2B21-F571	NB	2	C	2
2B33-F301A	RR	2	C	2
2B33-F301B	RR	2	C	2
2B33-F305A	RR	2	C	2
2B33-F305B	RR	2	C	2
2B33-F305C	RR	2	C	2
2B33-F305D	RR	2	C	2
2B33-F307A	RR	2	C	2
2B33-F307B	RR	2	C	2
2B33-F307C	RR	2	C	2
2B33-F307D	RR	2	C	2
2B33-F311A	RR	2	C	2
2B33-F311B	RR	2	C	2
2B33-F311C	RR	2	C	2
2B33-F311D	RR	2	C	2
2B33-F313A	RR	2	C	2
2B33-F313B	RR	2	C	2
2B33-F313C	RR	2	C	2
2B33-F313D	RR	2	C	2
2B33-F315A	RR	2	C	2
2B33-F315B	RR	2	C	2
2B33-F315C	RR	2	C	2
2B33-F315D	RR	2	C	2
2B33-F317A	RR	2	C	2
2B33-F317B	RR	2	C	2
2B33-F319A	RR	2	C	2
2B33-F319B	RR	2	C	2
2E12-F315	RH	2	C	2
2E12-F317	RH	2	C	2
2E12-F359A	RH	2	C	2
2E12-F359B	RH	2	C	2
2E12-F360A	RH	2	C	2
2E12-F360B	RH	2	C	2
2E21-F304	LP	2	C	2
2E22-F304	HP	2	C	2
2G33-F309	RT	2	C	2
2G33-F312A	RT	2	C	2
2G33-F312B	RT	2	C	2

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Background

The ASME OM Code 2001 through 2003 Addenda section ISTC-1300, "Valve Categories", states in part:

> "(a) Category A: valves for which seat leakage is limited to a specific maximum amount in the closed position for fulfillment of their required function(s), as specified in ISTA-1100;"

The ASME OM Code 2001 through 2003 Addenda section ISTC-3620, "Containment Isolation Valves", states in part:

> "Containment isolation valves with a leakage rate requirement based on an Nonmandatory Appendix J program commitment shall be tested in accordance with the Owner's 10 CFR 50, Nonmandatory Appendix J program. "

Position

1. Seat leakage testing of excess flow check valves is not required by the IST program.

   Justification

   Per UFSAR Table 6.2-21, note 33, these valves are located on lines which are sized with flow-restricting orifices to assure that in the event of a postulated failure of the piping or component, the potential offsite exposure would be substantially below the guidelines of 10 CFR 100. Therefore, these excess flow check valves do not have seat leakage requirements associated with them, and therefore are not categorized as "Category A" valves, but as "Category C". As a result, even though these excess check valves are classified as containment isolation valves, they are not required to be tested per the seat leakage requirements of Appendix J or ISTC-3600.

2. Close testing of EFCVs can be performed under minimal system pressure (greater than 600 psig) and can be verified either acoustically by listening for an audible "click" which signifies the poppet coming in contact with the valve seat, or by the verification of a significant reduction in flow through the valve. Position indication testing may be performed in conjunction with closure testing at reduced system pressures.

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Justification

EFCVs are designed to close when the flow rate past the valve disk is sufficient to pull the disk to the closed position. Testing is typically performed by blowing down the instrument line during an inservice leak or hydrostatic test and verifying a distinctive 'click' made when the poppet valve seats or a quick reduction in flow. (Note that the function of these EFCVs is not to completely isolate the associated instrument line upon closure as a ¼" hole is drilled through the valve seat to allow for flow and continued operation of the sensing line.) System pressure has little impact on check valve performance during the closure test. In fact, a higher system pressure is likely to create a higher flow rate through the valve while it is open. Therefore, testing the valves at lower than design pressure should be conservative with respect to closure capability. The LaSalle excess flow check valve drawings indicate that these valves are designed to fully close at from 0.5 to 10 psid differential pressure, dependant upon the specific valve. (Drawings 11935-N16297, Rev. F and 14531, Rev. A)

References

1. USNRC letter from Domenic Vassallo to Dennis Farrar dated June 12, 1984.
2. GE Nuclear Energy "Excess Flow Check Valve Testing Relaxation", NEDO-32977-A, June 2000.

History

In the LaSalle Second 10-Year IST Interval, the Technical Position addressing excess flow check valves was Corporate Technical Position TP-EXE-IST-98-02, Rev. 6.

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Testing of Power Operated Valves with Both Active and Passive Safety Functions

Purpose

The purpose of this Technical Position is to establish the testing requirements for power operated valves that have both an active and passive safety function.

Applicability

This Technical Position is applicable to power operated valves that have an active safety function in one direction while performing a passive safety function in the other direction.

Background

The IST Program requires valves to be exercised to the position(s) required to fulfill their safety function(s). In addition, valves with remote position indication shall have their position indication verified. The Code does not restrict position indication to active valves.

Position

Several valves included in the plant are designed to perform passive safety functions during accident conditions, and then based on plant accident response, are designed to change positions to perform another (active) function. Once in their final position, there exist no conditions (for certain valves) in which they would be required to be placed in their original passive position.

These valves are typically emergency core cooling system valves, which require changing position during different phases of the accident. After the original passive safety function (e.g. provide flow path) is performed, the valves are repositioned to perform the active safety function (e.g. provide containment isolation or to allow injection from another water source). The valves may not be required to return to their original position.

Power operated valves with passive functions in one direction and active in the other will be exercised and stroke timed to only their active position. If these valves have position indication, the position indication verification will include verification of both positions.

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Justification

Code Interpretation 01-02 (response to inquiry OMI 99-07) addressed this issue.

Question: If a valve has safety functions in both the open and closed positions and is maintained in one of these positions, but is only required to move from the initial position to the other and is not required to return to the initial position, is stroke timing in both directions required?

Reply: No

History

In the LaSalle Second 10-Year IST Interval the Technical Position addressing the Testing of Power Operated Valves with Both Active and Passive Safety Functions was Corporate Technical Position TP-EXE-IST-03-01, Rev. 0.

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Cold Shutdown Testing

Purpose

The purpose of this Technical Position is to establish the methodology behind the determination of when to perform Cold Shutdown Testing giving consideration to the potential of having an inert atmosphere in containment.

Applicability

This Technical Position is applicable to periods when the plant enters Cold Shutdown (i.e. Mode 4) and the containment atmosphere has not been de-inerted.

Background

The ASME OM Code provides guidance on performing Inservice Testing on valves given whether the plant is in operating, cold shutdown, or refueling mode. However, when combined with a containment/drywell that is required to maintain an inert atmosphere during some operational conditions, the ability to determine when testing should occur is more open to interpretation.

The ASME OM Code 2001 through 2003 Addenda section ISTC-3521, "Category A and Category B Valves", states:

"Category A and Category B valves shall be tested as follows:

(a) full-stroke exercising of Category A and Category B valves during operation at power to the position(s) required to fulfill its function(s), and exercising or examining check valves during plant operation in a manner that verifies obturator travel to the closed, full-open, or partially open position required to fulfill its functions(s);

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(b) if full-stroke exercising during operation at power is not practicable, it may be limited to part-stroke during operation at power and full-stroke during cold shutdowns:

(c) if exercising is not practicable during operation at power, it may be limited to full-stroke exercising during cold shutdowns;

(d) if exercising is not practicable during operation at power and full-stroke during cold shutdowns is also not practicable, it may be limited to part-stroke during cold shutdowns, and full-stroke during refueling outages

(e) If exercising is not practicable during operation at power or cold shutdowns, it may be limited to full-stroke during refueling outages:

(f) valves full-stroke exercised at cold shutdowns shall be exercised during each cold shutdown, except as specified in ISTC-3521(g). Such exercise is not required if the time period since the previous full stroke exercise is less than 3 months. During extended shutdowns, valves that are required to perform their intended functions (see ISTA-1100) shall be exercised every 3 months, if practicable:

(g) valve exercising during cold shutdown shall commence within 48 hr of achieving cold shutdown and continue until all testing is complete or the plant is ready to return to operation at power. For extended outages, testing need not be commenced in 48 hr, provided all valves required to be tested during cold shutdown will be tested before or as part of plant startup. However, it is not the intent of this Subsection to keep the plant in cold shutdown to complete cold shutdown testing;"

The ASME OM Code 2001 through 2003 Addenda section ISTC-3522, "Category C Check Valves", states:

"Category C valves shall be exercised as follows:

(a) During operation at power, each check valve shall be exercised or examined in a manner that verifies obturator travel by using the methods in ISTC-5221.

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Each check valve exercise test shall include open and close tests. Open and close tests need only be performed in an interval then it is practicable to perform both tests. Test order (e.g., whether the open test precedes the close test) shall be determined by the Owner. Open and close tests are not required to be performed at the same time if they are both performed within the same interval.

(b) If exercising is not practicable during operation at power, it shall be performed during cold shutdowns:

(c) If exercising is not practicable during operation at power and cold shutdown, it may be performed during refueling outages.

(d) Valves exercised at shutdowns shall be exercised during each shutdown, except as specified in ISTC-3522(e). Such exercise is not required if the interval since the previous exercise is less than 3 months. During extended shutdowns, valves that are required to perform their intended functions (see ISTA-1100) shall be exercised every 3 months, if practicable;

(e) Valve exercising shall commence within 48 hr of achieving cold shutdown and continue until all testing is complete or the plant is ready to return to operation at power. For extended outages, testing need not be commenced in 48 hr, provided all valves required to be tested during cold shutdown will be tested before or as part of plant startup. However, it is not the intent of this Subsection to keep the plant in cold shutdown to complete cold shutdown testing;"

NUREG 1482, Revision 1, section 3.1.1.3, "De-Inerting Containment of Boiling-Water Reactors To Allow Cold Shutdown Testing", states:

"According to 10 CFR 50.54, "Standards for Combustible Gas Control System in Light-Water-Cooled Power Reactors," each BWR that is equipped with a Mark I or Mark II containment must have provisions for an inerted containment atmosphere during power operation to protect against a burn or explosion of hydrogen gas generated by the core metal-water reaction following a postulated loss-of-coolant accident (LOCA).

Licensees regularly monitor oxygen content in the containment atmosphere during normal power operation, and the plant's TSs specify the maximum oxygen concentrations allowed. Since hydrogen generation is not a concern during cold shutdown or refueling outages, the TSs allow the containment atmosphere to be de-inerted. However, licensees do not routinely de-inert the containment during

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cold shutdown outages because of impracticality concerns associated with the time needed to de-inert and re-inert the containment, and because of the amount of nitrogen necessary for inerting.

For certain valves that are located in the inerted containment, Subsection ISTC 3500 allows Licensees to perform testing during cold shutdown outages because it is not practical to test such valves during power operation. The staff has determined that it is impractical to de-inert the containment during each cold shutdown outage solely to perform such routine testing or repair activities.

NRC Recommendation

The staff considers it impractical to de-inert the containment merely to conduct regularly scheduled valve testing, and the ASME Code allows licensees to defer such testing to a refueling outage when the containment is de-inerted for refueling or other reasons. The staff has also determined that few outages require de-inerting, and it is unnecessary to maintain a separate schedule for valve testing. Consequently, testing is at the discretion of the licensee in the event of an extended could shutdown that necessitates de-inerting the containment. Factors to be considered in the licensee's decision-making might include the length of the shutdown and the extent of other outage activities. In addition, for extended outage that last several months, the requirements of Subsection ISTC 3570 may apply for valves in systems that are out-of-service.

Basis for Recommendation

Section ISTC of the OM Code allows licensees to extend the test interval to defer valve testing to refueling outages if such testing is impractical at quarterly intervals (during power operations) or during cold shutdown outages. Consequently, it is also acceptable for licensees to extend the test interval for valves that cannot be tested unless the containment is de-inerted.

Unless the licensee has some other reason to enter the drywell during cold shutdown outages, it is impractical to de-inert the drywell during such outages merely to perform valve testing because of the time and effort needed to de-inert, re-inert, and replace lost nitrogen gas (which could delay the plant's return to power operation). Most plants with custom TSs must reduce the primary containment oxygen content to less than 4 percent within 24 hours of placing the reactor mode switch in the "run" position. If, for any reason, the licensee is unable to establish the proper oxygen concentration, the plant must return to the

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startup mode. Plants using the standard technical specifications are also restricted, in that the licensee must establish the proper oxygen content with 24 hours of exceeding 15-percent thermal power. If, for any reason, the licensee is unable to establish the proper oxygen concentration, the plant must enter a shutdown action statement. In either case, the return to power could be significantly delayed."

Position

Those valves for which the containments/drywell inert atmosphere has been determined to be a factor in determining whether it is impractical or not to perform testing during operating or cold shutdown conditions, the following guidance will be used by LaSalle County Station:

- The testing of valves not previously tested within the last three months shall commence within 48 hours of reaching cold shutdown provided the drywell has been de-inerted and is safe to enter. (The 48- hour clock does not start until the drywell has been designated as de-inerted.)

- If the drywell has not been de-inerted, testing need not be performed.

- The containment drywell atmosphere will not be de-inerted solely to perform the Inservice Testing of valves.

- Actions to re-inert the containment drywell will not be delayed in order to complete Inservice Testing of valves unless cold shutdown was entered from a refueling mode or unless the cold shutdown has been classified as an "extended" cold shutdown, in which case all cold shutdown testing is required to be completed prior to proceeding into the operational modes per ISTC 3521(g) and ISTC 3522(e).

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Comprehensive Pump Testing Reference Point Determination

Purpose

The purpose of this Technical Position is to establish the methodology used in determining reference value(s) for Comprehensive Pump Testing.

Applicability

This Technical Position is applicable to all pumps that are tested within the IST Program per the requirements of ASME ISTB.

Background

In the 1995 Edition of the ASME OM Code, the concept of a 'Comprehensive Pump Test' was introduced. A Comprehensive Pump Test, as compared to the quarterly type of pump testing specified to be performed in earlier versions of the Code, requires that the pump be tested at conditions approaching its 'design flow'. Previously the pump only needed to be tested utilizing a reference point on the pump curve that was repeatable, and if practical, close to the pumps design conditions.

Now there is no choice. At least once every two years, the Owner must perform a pump test during which the pump is operating within 20% of its 'design flow' rate to satisfy ISTB-3300(e)(1).

There have since developed two schools of thought when it comes to defining the pumps 'design flow' rate. From the ASME Code standpoint, the 'design flow' rate is that flow rate to which the pump was manufactured. To the Nuclear Utility, the 'design flow' rate is that flow rate credited within the plants Safety Analysis that the specific pump must be capable of providing.

For example, a site has a pump which was designed by its manufacturer to develop a flow of 30,000 gpm at a differential pressure of 250 psid, which is installed in an application that per the site's Safety Analysis has a design requirement to produce 23,750 gpm to satisfy it's safety related function.

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ASME OM Code 2001 through 2003 Addenda, section ISTB-3300(e), "Reference Values", states:

> "Reference values shall be established within region(s) of relatively stable pump flow.
>
> (1) Reference values shall be established within ± 20% of pump design flow rate for the comprehensive test,
>
> (2) Reference values shall be established within ± 20% of pump design flow for the Group A and Group B tests, if practicable. If not practicable, the reference point flow rate shall be established at the highest practical flow rate.

Position

It is the position of the LaSalle County Station that the 'design flow', is that flow as specified within the site's Safety Analysis. Determination of reference values for pumps within the Inservice Testing Program will be determined utilizing the applicable ASME Code sections, utilizing the definition of a pump's 'design flow' as that flow specified by the site's Safety Analysis, or subsequent analyses.

Justification

While the ASME Code Committee is ultimately concerned with the operation of equipment as per it's manufacture's design, the nuclear industry is primarily concerned with the ability to protect the health and safety of the general public. Therefore, verification of the design basis of our plant is primary to our goals. To attempt to verify the equipment manufacturer's design may result in exceeding the design tolerances associated with the pump's support/supported equipment and piping. This could reduce the life and overstress these support/supported components; components that could ultimately be called upon to support the safe shutdown of the plant following an accident.

In addition, there is no added benefit, either in cost or reliability, from the plant's perspective, to perform testing beyond that required by the design.

ATTACHMENT 14

INSERVICE TESTING PUMP TABLE INDEX

System Designator	System Description
DG	Diesel Generator
DO	Diesel Fuel Oil
FC	Fuel Pool Cooling
HP	High Pressure Core Spray
LP	Low Pressure Core Spray
RH	Residual Heat Removal
RI	Reactor Core Isolation Cooling
SC	Standby Liquid Control

ATTACHMENT 15

INSERVICE TESTING PUMP TABLE

Diesel Generator

Pump EPN	P&ID	P&ID Coor.	IST Group	Safety Class	Pump Type	Pump Driver	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
0-ACSOAKBACK	M-83-4	B6	N/A	3	PD	Motor	SKID	M3			TP-09
	Pump Name	0 DG AC Soak Back Pump									
0-DCSOAKBACK	M-83-4	B6	N/A	3	PD	Motor	SKID	M3			TP-09
	Pump Name	0 DG DC Soak Back Pump									
0DG01P	M-87-2	C7	Group A	3	C	Motor	dP (a)	M3			TP-06
							dP (c)	Y2			TP-06
							Q (a)	M3			TP-06
							Q (c)	Y2			TP-06
							V (a)	M3			TP-06
							V (c)	Y2			TP-06
	Pump Name	0 Diesel Generator Cooling Water Pump									
0-DGMAINLUBE	M-83-4	B3	N/A	NC	PD	Engine	SKID	M3			TP-09
	Pump Name	0 DG Main Lube Oil Pump									
0-DGOILCIRC	M-83-4	B5	N/A	NC	PD	Motor	SKID	M3			TP-09
	Pump Name	0 DG Oil Circulating Pump									
0-DGPISTON	M-83-4	B2	N/A	NC	PD	Engine	SKID	M3			TP-09
	Pump Name	0 DG Piston Cooling Oil Pump									
0-DGSCAVENGE	M-83-4	B4	N/A	3	PD	Engine	SKID	M3			TP-09
	Pump Name	0 DG Scavenging Oil Pump									
1A-ACSOAKBACK	M-83-4	B6	N/A	3	PD	Motor	SKID	M3			TP-09
	Pump Name	1A DG AC Soak Back Pump									
1A-DCSOAKBACK	M-83-4	B6	N/A	3	PD	Motor	SKID	M3			TP-09
	Pump Name	1A DG DC Soak Back Pump									
1A-DGMAINLUBE	M-83-4	B3	N/A	NC	PD	Engine	SKID	M3			TP-09
	Pump Name	1A DG Main Lube Oil Pump									
1A-DGOILCIRC	M-83-4	B5	N/A	NC	PD	Motor	SKID	M3			TP-09
	Pump Name	1A DG Oil Circulating Pump									
1A-DGPISTON	M-83-4	B2	N/A	NC	PD	Engine	SKID	M3			TP-09
	Pump Name	1A DG Piston Cooling Oil Pump									
1A-DGSCAVENGE	M-83-4	B4	N/A	3	PD	Engine	SKID	M3			TP-09
	Pump Name	1A DG Scavenging Oil Pump									
1B-ACSOAKBACK	M-83-4	E6	N/A	3	PD	Motor	SKID	M3			TP-09
	Pump Name	1B DG AC Soak Back Pump									
1B-DCSOAKBACK	M-83-4	E6	N/A	3	PD	Motor	SKID	M3			TP-09
	Pump Name	1B DG DC Soak Back Pump									
1B-DGMAINLUBE	M-83-4	E3	N/A	NC	PD	Engine	SKID	M3			TP-09
	Pump Name	1B DG Main Lube Oil Pump									
1B-DGOILCIRC	M-83-4	E5	N/A	NC	PD	Motor	SKID	M3			TP-09
	Pump Name	1B DG Oil Circulating Pump									

Diesel Generator

Pump EPN	P&ID	P&ID Coor.	IST Group	Safety Class	Pump Type	Pump Driver	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1B-DGPISTON	M-83-4	E2	N/A	NC	PD	Engine	SKID	M3			TP-09
	Pump Name	1B DG Piston Cooling Oil Pump									
1B-DGSCAVENGE	M-83-4	E4	N/A	3	PD	Engine	SKID	M3			TP-09
	Pump Name	1B DG Scavenging Oil Pump									
1DG01P	M-87-1	D7	Group A	3	C	Motor	dP (a)	M3			TP-06
							dP (c)	Y2			TP-06
							Q (a)	M3			TP-06
							Q (c)	Y2			TP-06
							V (a)	M3			TP-06
							V (c)	Y2			TP-06
	Pump Name	1A Diesel Generator Cooling Water Pump									
2A-ACSOAKBACK	M-83-4	B6	N/A	3	PD	Motor	SKID	M3			TP-09
	Pump Name	2A DG AC Soak Back Pump									
2A-DCSOAKBACK	M-83-4	B6	N/A	3	PD	Motor	SKID	M3			TP-09
	Pump Name	2A DG DC Soak Back Pump									
2A-DGMAINLUBE	M-83-4	B3	N/A	NC	PD	Engine	SKID	M3			TP-09
	Pump Name	2A DG Main Lube Oil Pump									
2A-DGOILCIRC	M-83-4	B5	N/A	NC	PD	Motor	SKID	M3			TP-09
	Pump Name	2A DG Oil Circulating Pump									
2A-DGPISTON	M-83-4	B2	N/A	NC	PD	Engine	SKID	M3			TP-09
	Pump Name	2A DG Piston Cooling Oil Pump									
2A-DGSCAVENGE	M-83-4	B4	N/A	3	PD	Engine	SKID	M3			TP-09
	Pump Name	2A DG Scavenging Oil Pump									
2B-ACSOAKBACK	M-83-4	E6	N/A	3	PD	Motor	SKID	M3			TP-09
	Pump Name	2B DG AC Soak Back Pump									
2B-DCSOAKBACK	M-83-4	E6	N/A	3	PD	Motor	SKID	M3			TP-09
	Pump Name	2B DG DC Soak Back Pump									
2B-DGMAINLUBE	M-83-4	E3	N/A	NC	PD	Engine	SKID	M3			TP-09
	Pump Name	2B DG Main Lube Oil Pump									
2B-DGOILCIRC	M-83-4	E5	N/A	NC	PD	Motor	SKID	M3			TP-09
	Pump Name	2B DG Oil Circulating Pump									
2B-DGPISTON	M-83-4	E2	N/A	NC	PD	Engine	SKID	M3			TP-09
	Pump Name	2B DG Piston Cooling Oil Pump									
2B-DGSCAVENGE	M-83-4	E4	N/A	3	PD	Engine	SKID	M3			TP-09
	Pump Name	2B DG Scavenging Oil Pump									

Diesel Generator

Pump EPN	P&ID	P&ID Coor.	IST Group	Safety Class	Pump Type	Pump Driver	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2DG01P	M-134-1	D7	Group A	3	C	Motor	dP (a)	M3			TP-06
							dP (c)	Y2			TP-06
							Q (a)	M3			TP-06
							Q (c)	Y2			TP-06
							V (a)	M3			TP-06
							V (c)	Y2			TP-06
	Pump Name	2A Diesel Generator Cooling Water Pump									

Diesel Fuel Oil

Pump EPN	P&ID	P&ID Coor.	IST Group	Safety Class	Pump Type	Pump Driver	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
0DO01P	M-85-1	C4	N/A	3	C	Motor	SKID	M3			TP-09
	Pump Name	0 Diesel Generator Fuel Transfer Pump									
1DO01P	M-85-1	C6	N/A	3	C	Motor	SKID	M3			TP-09
	Pump Name	1A Diesel Generator Fuel Transfer Pump									
1DO02P	M-85-1	C1	N/A	3	C	Motor	SKID	M3			TP-09
	Pump Name	1B Diesel Generator Fuel Transfer Pump									
2DO01P	M-132	C6	N/A	3	C	Motor	SKID	M3			TP-09
	Pump Name	2A Diesel Generator Fuel Transfer Pump									
2DO02P	M-132	C4	N/A	3	C	Motor	SKID	M3			TP-09
	Pump Name	2B Diesel Generator Fuel Transfer Pump									

Fuel Pool Cooling

Pump EPN	P&ID	P&ID Coor.	IST Group	Safety Class	Pump Type	Pump Driver	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1FC03PA	M-87-2	E7	Group B	3	C	Motor	dP (b)	M3			TP-06
							dP (c)	Y2			TP-06
							Q (b)	M3			TP-06
							Q (c)	Y2			TP-06
							V (c)	Y2			TP-06
	Pump Name	1A Fuel Pool Emergency Make-Up Pump									
1FC03PB	M-87-1	C7	Group B	3	C	Motor	dP (b)	M3			TP-06
							dP (c)	Y2			TP-06
							Q (b)	M3			TP-06
							Q (c)	Y2			TP-06
							V (c)	Y2			TP-06
	Pump Name	1B Fuel Pool Emergency Make-Up Pump									
2FC03PA	M-134-2	E7	Group B	3	C	Motor	dP (b)	M3			TP-06
							dP (c)	Y2			TP-06
							Q (b)	M3			TP-06
							Q (c)	Y2			TP-06
							V (c)	Y2			TP-06
	Pump Name	2A Fuel Pool Emergency Make-Up Pump									
2FC03PB	M-134-1	C7	Group B	3	C	Motor	dP (b)	M3			TP-06
							dP (c)	Y2			TP-06
							Q (b)	M3			TP-06
							Q (c)	Y2			TP-06
							V (c)	Y2			TP-06
	Pump Name	2B Fuel Pool Emergency Make-Up Pump									

High Pressure Core Spray

Pump EPN	P&ID	P&ID Coor.	IST Group	Safety Class	Pump Type	Pump Driver	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1E22-C001	M-95	C2	Group B	2	VLS	Motor	dP (b)	M3			TP-06
							dP (c)	Y2			TP-06
							Q (b)	M3			TP-06
							Q (c)	Y2			TP-06
							V (c)	Y2			TP-06
	Pump Name	U-1 High Pressure Core Spray Pump									
1E22-C002	M-87-1	B7	Group A	3	C	Motor	dP (a)	M3			TP-06
							dP (c)	Y2			TP-06
							Q (a)	M3			TP-06
							Q (c)	Y2			TP-06
							V (a)	M3			TP-06
							V (c)	Y2			TP-06
	Pump Name	U-1 (HPCS) Diesel Gen Cooling Water Pump									
1E22-C003	M-95	D4	Group A	2	C	Motor	dP (a)	M3			TP-06
							dP (c)	Y2	RP-02		TP-06
							Q (a)	M3	RP-01		TP-06
							Q (c)	Y2	RP-02		TP-06
							V (a)	M3			TP-06
							V (c)	Y2	RP-02		TP-06
	Pump Name	U-1 High Pressure Spray Water Leg Pump									
2E22-C001	M-141	C2	Group B	2	VLS	Motor	dP (b)	M3			TP-06
							dP (c)	Y2			TP-06
							Q (b)	M3			TP-06
							Q (c)	Y2			TP-06
							V (c)	Y2			TP-06
	Pump Name	U-2 High Pressure Core Spray Pump									
2E22-C002	M-134-1	B7	Group A	3	C	Motor	dP (a)	M3			TP-06
							dP (c)	Y2			TP-06
							Q (a)	M3			TP-06
							Q (c)	Y2			TP-06
							V (a)	M3			TP-06
							V (c)	Y2			TP-06
	Pump Name	U-2 (HPCS) Diesel Gen Cooling Water Pump									
2E22-C003	M-141	D4	Group A	2	C	Motor	dP (a)	M3			TP-06
							dP (c)	Y2	RP-02		TP-06
							Q (a)	M3	RP-01		TP-06
							Q (c)	Y2	RP-02		TP-06
							V (a)	M3			TP-06
							V (c)	Y2	RP-02		TP-06
	Pump Name	U-2 High Pressure Spray Water Leg Pump									

Low Pressure Core Spray

Pump EPN	P&ID	P&ID Coor.	IST Group	Safety Class	Pump Type	Pump Driver	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1E21-C001	M-94	B2	Group B	2	VLS	Motor	dP (b)	M3			TP-06
							dP (c)	Y2			TP-06
							Q (b)	M3			TP-06
							Q (c)	Y2			TP-06
							V (c)	Y2			TP-06
	Pump Name	U-1 Low Pressure Core Spray Pump									
1E21-C002	M-94	B3	Group A	2	C	Motor	dP (a)	M3			TP-06
							dP (c)	Y2	RP-02		TP-06
							Q (a)	M3	RP-01		TP-06
							Q (c)	Y2	RP-02		TP-06
							V (a)	M3			TP-06
							V (c)	Y2	RP-02		TP-06
	Pump Name	U-1 Low Press Core Spray Water Leg Pump									
2E21-C001	M-140	C2	Group B	2	VLS	Motor	dP (b)	M3			TP-06
							dP (c)	Y2			TP-06
							Q (b)	M3			TP-06
							Q (c)	Y2			TP-06
							V (c)	Y2			TP-06
	Pump Name	U-1 Low Pressure Core Spray Pump									
2E21-C002	M-140	B3	Group A	2	C	Motor	dP (a)	M3			TP-06
							dP (c)	Y2	RP-02		TP-06
							Q (a)	M3	RP-01		TP-06
							Q (c)	Y2	RP-02		TP-06
							V (a)	M3			TP-06
							V (c)	Y2	RP-02		TP-06
	Pump Name	U-2 Low Press Core Spray Water Leg Pump									

Residual Heat Removal

Pump EPN	P&ID	P&ID Coor.	IST Group	Safety Class	Pump Type	Pump Driver	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1E12-C002A	M-96-1	A5	Group A	2	VLS	Motor	dP (a)	M3			TP-06
							dP (c)	Y2			TP-06
							Q (a)	M3			TP-06
							Q (c)	Y2			TP-06
							V (a)	M3			TP-06
							V (c)	Y2			TP-06
	Pump Name	1A Residual Heat Removal Pump									
1E12-C002B	M-96-2	B4	Group A	2	VLS	Motor	dP (a)	M3			TP-06
							dP (c)	Y2			TP-06
							Q (a)	M3			TP-06
							Q (c)	Y2			TP-06
							V (a)	M3			TP-06
							V (c)	Y2			TP-06
	Pump Name	1B Residual Heat Removal Pump									
1E12-C002C	M-96-3	B5	Group B	2	VLS	Motor	dP (b)	M3			TP-06
							dP (c)	Y2			TP-06
							Q (b)	M3			TP-06
							Q (c)	Y2			TP-06
							V (c)	Y2			TP-06
	Pump Name	1C Residual Heat Removal Pump (LPCI)									
1E12-C003	M-96-3	A7	Group A	2	C	Motor	dP (a)	M3			TP-06
							dP (c)	Y2	RP-02		TP-06
							Q (a)	M3	RP-01		TP-06
							Q (c)	Y2	RP-02		TP-06
							V (a)	M3			TP-06
							V (c)	Y2	RP-02		TP-06
	Pump Name	U-1 RHR Water Leg Pump (DIV. II)									
1E12-C300A	M-87-2	A7	Group A	3	C	Motor	dP (a)	M3			TP-06
							dP (c)	Y2			TP-06
							Q (a)	M3			TP-06
							Q (c)	Y2			TP-06
							V (a)	M3			TP-06
							V (c)	Y2			TP-06
	Pump Name	1A RHR Service Water Pump (DIV. I)									

Residual Heat Removal

Pump EPN	P&ID	P&ID Coor.	IST Group	Safety Class	Pump Type	Pump Driver	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1E12-C300B	M-87-2	B7	Group A	3	C	Motor	dP (a)	M3			TP-06
							dP (c)	Y2			TP-06
							Q (a)	M3			TP-06
							Q (c)	Y2			TP-06
							V (a)	M3			TP-06
							V (c)	Y2			TP-06
	Pump Name	1B RHR Service Water Pump (DIV. I)									
1E12-C300C	M-87-1	E7	Group A	3	C	Motor	dP (a)	M3			TP-06
							dP (c)	Y2			TP-06
							Q (a)	M3			TP-06
							Q (c)	Y2			TP-06
							V (a)	M3			TP-06
							V (c)	Y2			TP-06
	Pump Name	1C RHR Service Water Pump (DIV. II)									
1E12-C300D	M-87-1	F7	Group A	3	C	Motor	dP (a)	M3			TP-06
							dP (c)	Y2			TP-06
							Q (a)	M3			TP-06
							Q (c)	Y2			TP-06
							V (a)	M3			TP-06
							V (c)	Y2			TP-06
	Pump Name	1D RHR Service Water Pump (DIV. II)									
2E12-C002A	M-142-1	A5	Group A	2	VLS	Motor	dP (a)	M3			TP-06
							dP (c)	Y2			TP-06
							Q (a)	M3			TP-06
							Q (c)	Y2			TP-06
							V (a)	M3			TP-06
							V (c)	Y2			TP-06
	Pump Name	2A Residual Heat Removal Pump									
2E12-C002B	M-142-2	B4	Group A	2	VLS	Motor	dP (a)	M3			TP-06
							dP (c)	Y2			TP-06
							Q (a)	M3			TP-06
							Q (c)	Y2			TP-06
							V (a)	M3			TP-06
							V (c)	Y2			TP-06
	Pump Name	2B Residual Heat Removal Pump									

Residual Heat Removal

Pump EPN	P&ID	P&ID Coor.	IST Group	Safety Class	Pump Type	Pump Driver	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2E12-C002C	M-142-3	B5	Group B	2	VLS	Motor	dP (b)	M3			TP-06
							dP (c)	Y2			TP-06
							Q (b)	M3			TP-06
							Q (c)	Y2			TP-06
							V (c)	Y2			TP-06
	Pump Name	2C Residual Heat Removal Pump (LPCI)									
2E12-C003	M-142-3	A7	Group A	2	C	Motor	dP (a)	M3			TP-06
							dP (c)	Y2	RP-02		TP-06
							Q (a)	M3	RP-01		TP-06
							Q (c)	Y2	RP-02		TP-06
							V (a)	M3			TP-06
							V (c)	Y2	RP-02		TP-06
	Pump Name	U-2 RHR Water Leg Pump (DIV. II)									
2E12-C300A	M-134-2	B6	Group A	3	C	Motor	dP (a)	M3			TP-06
							dP (c)	Y2			TP-06
							Q (a)	M3			TP-06
							Q (c)	Y2			TP-06
							V (a)	M3			TP-06
							V (c)	Y2			TP-06
	Pump Name	2A RHR Service Water Pump (DIV. I)									
2E12-C300B	M-134-2	C6	Group A	3	C	Motor	dP (a)	M3			TP-06
							dP (c)	Y2			TP-06
							Q (a)	M3			TP-06
							Q (c)	Y2			TP-06
							V (a)	M3			TP-06
							V (c)	Y2			TP-06
	Pump Name	2B RHR Service Water Pump (DIV. I)									
2E12-C300C	M-134-1	E7	Group A	3	C	Motor	dP (a)	M3			TP-06
							dP (c)	Y2			TP-06
							Q (a)	M3			TP-06
							Q (c)	Y2			TP-06
							V (a)	M3			TP-06
							V (c)	Y2			TP-06
	Pump Name	2C RHR Service Water Pump (DIV. II)									

Residual Heat Removal

Pump EPN	P&ID	P&ID Coor.	IST Group	Safety Class	Pump Type	Pump Driver	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2E12-C300D	M-134-1	F7	Group A	3	C	Motor	dP (a)	M3			TP-06
							dP (c)	Y2			TP-06
							Q (a)	M3			TP-06
							Q (c)	Y2			TP-06
							V (a)	M3			TP-06
							V (c)	Y2			TP-06
	Pump Name	2D RHR Service Water Pump (DIV. II)									

Reactor Core Isolation Cooling

Pump EPN	P&ID	P&ID Coor.	IST Group	Safety Class	Pump Type	Pump Driver	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1E51-C001	M-101-2	C2	Group B	2	C	Turbine	dP (b)	M3			TP-06
							dP (c)	Y2			TP-06
							Q (b)	M3			TP-06
							Q (c)	Y2			TP-06
							S (b)	M3			TP-06
							S (c)	Y2			TP-06
							V (c)	Y2			TP-06
	Pump Name	U-1 Reactor Core Isolation Cooling Pump									
1E51-C003	M-101-2	A4	Group A	2	C	Motor	dP (a)	M3			TP-06
							dP (c)	Y2	RP-02		TP-06
							Q (a)	M3	RP-01		TP-06
							Q (c)	Y2	RP-02		TP-06
							V (a)	M3			TP-06
							V (c)	Y2	RP-02		TP-06
	Pump Name	U-1 RCIC Water Leg Pump									
2E51-C001	M-147-2	C2	Group B	2	C	Turbine	dP (b)	M3			TP-06
							dP (c)	Y2			TP-06
							Q (b)	M3			TP-06
							Q (c)	Y2			TP-06
							S (b)	M3			TP-06
							S (c)	Y2			TP-06
							V (c)	Y2			TP-06
	Pump Name	U-2 Reactor Core Isolation Cooling Pump									
2E51-C003	M-147-2	A4	Group A	2	C	Motor	dP (a)	M3			TP-06
							dP (c)	Y2	RP-02		TP-06
							Q (a)	M3	RP-01		TP-06
							Q (c)	Y2	RP-02		TP-06
							V (a)	M3			TP-06
							V (c)	Y2	RP-02		TP-06
	Pump Name	U-2 RCIC Water Leg Pump									

Standby Liquid Control

Pump EPN	P&ID	P&ID Coor.	IST Group	Safety Class	Pump Type	Pump Driver	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1C41-C001A	M-99	C4	Group B	2	PD	Motor	DIS-P (b)	M3			TP-06
							DIS-P (c)	Y2			TP-06
							Q (b)	M3			TP-06
							Q (c)	Y2			TP-06
							V (c)	Y2			TP-06
	Pump Name	1A Standby Liquid Control Pump									
1C41-C001B	M-99	B4	Group B	2	PD	Motor	DIS-P (b)	M3			TP-06
							DIS-P (c)	Y2			TP-06
							Q (b)	M3			TP-06
							Q (c)	Y2			TP-06
							V (c)	Y2			TP-06
	Pump Name	1B Standby Liquid Control Pump									
2C41-C001A	M-145	C4	Group B	2	PD	Motor	DIS-P (b)	M3			TP-06
							DIS-P (c)	Y2			TP-06
							Q (b)	M3			TP-06
							Q (c)	Y2			TP-06
							V (c)	Y2			TP-06
	Pump Name	2A Standby Liquid Control Pump									
2C41-C001B	M-145	B4	Group B	2	PD	Motor	DIS-P (b)	M3			TP-06
							DIS-P (c)	Y2			TP-06
							Q (b)	M3			TP-06
							Q (c)	Y2			TP-06
							V (c)	Y2			TP-06
	Pump Name	2B Standby Liquid Control Pump									

ATTACHMENT 16

INSERVICE TESTING VALVE TABLE INDEX

System Designator	System Description
CM	Containment Monitoring
DG	Diesel Generator
DO	Diesel Fuel Oil
FC	Fuel Pool Cooling
FW	Feedwater
HG	Containment Combustible Gas Control
HP	High Pressure Core Spray
IA	Instrument Air
IN	Instrument Nitrogen
LP	Low Pressure Core Spray
MC	Clean Condensate Storage
MS	Main Steam
NB	Nuclear Boiler
NR	Neutron Monitoring
PC	Primary Containment
RD	Control Rod Drive
RE	Reactor Building Equipment Drains & Floor Drains
RH	Residual Heat Removal
RI	Reactor Core Isolation Cooling
RR	Reactor Recirculation
RT	Reactor Water Cleanup
SA	Service Air
SC	Standby Liquid Control
VG	Standby Gas Treatment
VP	Primary Containment Chilled Water
VQ	Primary Containment Purge
VR	Reactor Building Ventilation
WR	Reactor Building Closed Cooling Water

ATTACHMENT 17

INSERVICE TESTING VALVE TABLE

Containment Monitoring

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1CM017A	M-156-1	F7	2	A	0.5	GL	SO	A	O	C	FS-C	M3			TP-03
											LT-J	AppJ			
											PIT	Y2			
											ST-C	M3			
	Valve Name	Supp Chamber/DW O2 Monitor Inlet Isol Valve													
1CM017B	M-156-2	E2	2	A	0.5	GL	SO	A	O	C	FS-C	M3			TP-03
											LT-J	AppJ			
											PIT	Y2			
											ST-C	M3			
	Valve Name	Tritium Grab Sample Station Inlet Isol Valve													
1CM018A	M-156-1	E7	2	A	0.5	GL	SO	A	O	C	FS-C	M3			TP-03
											LT-J	AppJ			
											PIT	Y2			
											ST-C	M3			
	Valve Name	Supp Chamber/DW O2 Monitor Inlet Isol Valve													
1CM018B	M-156-2	D2	2	A	0.5	GL	SO	A	O	C	FS-C	M3			TP-03
											LT-J	AppJ			
											PIT	Y2			
											ST-C	M3			
	Valve Name	Tritium Grab Sample Station Inlet Isol Valve													
1CM019A	M-156-1	B7	2	A	0.5	GL	SO	A	O	C	FS-C	M3			TP-03
											LT-J	AppJ			
											PIT	Y2			
											ST-C	M3			
	Valve Name	Supp Chamber/DW O2 Monitor Outlet Isol Valve													
1CM019B	M-156-2	C2	2	A	0.5	GL	SO	A	O	C	FS-C	M3			TP-03
											LT-J	AppJ			
											PIT	Y2			
											ST-C	M3			
	Valve Name	Tritium Grab Sample Station Outlet Isol Valve													
1CM020A	M-156-1	B7	2	A	0.5	GL	SO	A	O	C	FS-C	M3			TP-03
											LT-J	AppJ			
											PIT	Y2			
											ST-C	M3			
	Valve Name	Supp Chamber/DW O2 Monitor Outlet Isol Valve													

Containment Monitoring

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1CM020B	M-156-2	B2	2	A	0.5	GL	SO	A	O	C	FS-C	M3			TP-03
											LT-J	AppJ			
											PIT	Y2			
											ST-C	M3			
	Valve Name	Tritium Grab Sample Station Outlet Isol Valve													
1CM021B	M-156-2	E6	2	B	0.5	GL	SO	A	C	O/C	FS-O	M3			TP-03
											PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name	Post LOCA H2/O2 Cnt Mon Pnl DW Sample Isol Vlv													
1CM022A	M-156-1	E3	2	B	0.5	GL	SO	A	C	O/C	FS-O	M3			TP-03
											PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name	Post LOCA H2/O2 Cnt Mon Pnl DW Sample Isol Vlv													
1CM023B	M-156-2	E6	2	B	0.5	GL	SO	A	C	O/C	FS-O	M3			TP-03
											PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name	Post LOCA H2/O2 Cnt Mon Pnl DW Sample Isol Vlv													
1CM024A	M-156-1	E3	2	B	0.5	GL	SO	A	C	O/C	FS-O	M3			TP-03
											PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name	Post LOCA H2/O2 Cnt Mon Pnl DW Sample Isol Vlv													
1CM025A	M-156-1	A4	2	B	0.5	GL	SO	A	C	O/C	FS-O	M3			TP-03
											PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name	Post LOCA H2/O2 Mon Pnl Sup Chbr Retrn Isol Vlv													
1CM026B	M-156-2	A6	2	B	0.5	GL	SO	A	C	O/C	FS-O	M3			TP-03
											PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name	Post LOCA H2/O2 Mon Pnl Sup Chbr Retrn Isol Vlv													

Containment Monitoring

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1CM027	M-156-4	E8	2	A	0.5	GL	SO	A	O	C	FS-C	M3			TP-03
											LT-J	AppJ			
											PIT	Y2			
											ST-C	M3			
	Valve Name	Pri Cnmt CAM Sup Chbr Inlet Upstrm Isol Valve													
1CM028	M-156-4	E8	2	A	0.5	GL	SO	A	O	C	FS-C	M3			TP-03
											LT-J	AppJ			
											PIT	Y2			
											ST-C	M3			
	Valve Name	Pri Cnmt CAM Sup Chbr Inlet Dwnst Isol Valve													
1CM029	M-156-4	F8	2	A	0.5	GL	SO	A	O	C	FS-C	M3			TP-03
											LT-J	AppJ			
											PIT	Y2			
											ST-C	M3			
	Valve Name	Pri Cnmt CAM Dw Inlet Upstrm Isol Valve													
1CM030	M-156-4	E8	2	A	0.5	GL	SO	A	O	C	FS-C	M3			TP-03
											LT-J	AppJ			
											PIT	Y2			
											ST-C	M3			
	Valve Name	Pri Cnmt CAM Dw Inlet Dwnst Isol Valve													
1CM031	M-156-4	C6	2	A	1.5	GL	SO	A	O	C	FS-C	M3			TP-03
											LT-J	AppJ			
											PIT	Y2			
											ST-C	M3			
	Valve Name	Pri Cnmt 24 Point CAM Inlet Upstrm Isol Valve													
1CM032	M-156-4	C6	2	A	1.5	GL	SO	A	O	C	FS-C	M3			TP-03
											LT-J	AppJ			
											PIT	Y2			
											ST-C	M3			
	Valve Name	Pri Cnmt 24 Point CAM Inlet Dwnst Isol Valve													
1CM033	M-156-4	B6	2	A	1.5	GL	SO	A	O	C	FS-C	M3			TP-03
											LT-J	AppJ			
											PIT	Y2			
											ST-C	M3			
	Valve Name	Pri Cnmt CAM Sample Panel Outlet Upstrm Valve													

Containment Monitoring

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1CM034	M-156-4	A6	2	A	1.5	GL	SO	A	O	C	FS-C	M3			TP-03
											LT-J	AppJ			
											PIT	Y2			
											ST-C	M3			
	Valve Name	Pri Cnmt CAM Sample Panel Outlet Dwnst Valve													
1CM085	M-156-2	E5	2	A	0.5	GL	SO	A	C	C	FS-C	M3			TP-03
											LT-J	AppJ			
											PIT	Y2			
											ST-C	M3			
	Valve Name	Containment Air Sample HRSS Stop Valve													
1CM086	M-156-2	E5	2	A	0.5	GL	SO	A	C	C	FS-C	M3			TP-03
											LT-J	AppJ			
											PIT	Y2			
											ST-C	M3			
	Valve Name	*Containment Air Sample HRSS Stop Valve*													
1CM089	M-156-2	A5	2	A	0.5	GL	SO	A	C	C	FS-C	M3			TP-03
											LT-J	AppJ			
											PIT	Y2			
											ST-C	M3			
	Valve Name	Containment Air Sample HRSS Return Valve													
1CM090	M-156-2	A5	2	A	0.5	GL	SO	A	C	C	FS-C	M3			TP-03
											LT-J	AppJ			
											PIT	Y2			
											ST-C	M3			
	Valve Name	Containment Air Sample HRSS Return Valve													
1CM-CK-2A	M-156-1	C4	NC	C	0.5	CK	SA	A	SYS	O	CO	M3			TP-09
	Valve Name	CAM-Reagent Gas Supply Check Valve													
1CM-CK-2B	M-156-2	C4	NC	C	0.5	CK	SA	A	SYS	O	CO	M3			TP-09
	Valve Name	CAM-Reagent Gas Supply Check Valve													
1CM-CK-4A	M-156-1	C2	NC	C	0.5	CK	SA	A	SYS	O	CO	M3			TP-09
	Valve Name	CAM-Reagent Gas Supply Check Valve													
1CM-CK-4B	M-156-2	C2	NC	C	0.5	CK	SA	A	SYS	O	CO	M3			TP-09
	Valve Name	CAM-Reagent Gas Supply Check Valve													
1CM-PP CK-A	M-156-1	B4	NC	C	0.5	CK	SA	A	SYS	O	CO	M3			TP-09
	Valve Name	CAM-Sample Pump Discharge Check Valve													
1CM-PP CK-B	M-156-2	B6	NC	C	0.5	CK	SA	A	SYS	O	CO	M3			TP-09
	Valve Name	CAM-Sample Pump Discharge Check Valve													

Containment Monitoring

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2CM017A	M-158-1	F7	2	A	0.5	GL	SO	A	O	C	FS-C	M3			TP-03
											LT-J	AppJ			
											PIT	Y2			
											ST-C	M3			
	Valve Name	Supp Chamber/DW O2 Monitor Inlet Isol Valve													
2CM017B	M-158-2	F7	2	A	0.5	GL	SO	A	O	C	FS-C	M3			TP-03
											LT-J	AppJ			
											PIT	Y2			
											ST-C	M3			
	Valve Name	Tritium Grab Sample Station Inlet Isol Valve													
2CM018A	M-158-1	F7	2	A	0.5	GL	SO	A	O	C	FS-C	M3			TP-03
											LT-J	AppJ			
											PIT	Y2			
											ST-C	M3			
	Valve Name	Supp Chamber/DW O2 Monitor Inlet Isol Valve													
2CM018B	M-158-2	F7	2	A	0.5	GL	SO	A	O	C	FS-C	M3			TP-03
											LT-J	AppJ			
											PIT	Y2			
											ST-C	M3			
	Valve Name	Tritium Grab Sample Station Inlet Isol Valve													
2CM019A	M-158-1	B7	2	A	0.5	GL	SO	A	O	C	FS-C	M3			TP-03
											LT-J	AppJ			
											PIT	Y2			
											ST-C	M3			
	Valve Name	Supp Chamber/DW O2 Monitor Outlet Isol Valve													
2CM019B	M-158-2	D7	2	A	0.5	GL	SO	A	O	C	FS-C	M3			TP-03
											LT-J	AppJ			
											PIT	Y2			
											ST-C	M3			
	Valve Name	Tritium Grab Sample Station Outlet Isol Valve													
2CM020A	M-158-1	A7	2	A	0.5	GL	SO	A	O	C	FS-C	M3			TP-03
											LT-J	AppJ			
											PIT	Y2			
											ST-C	M3			
	Valve Name	Supp Chamber/DW O2 Monitor Outlet Isol Valve													

Containment Monitoring

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2CM020B	M-158-2	D7	2	A	0.5	GL	SO	A	O	C	FS-C	M3			TP-03
											LT-J	AppJ			
											PIT	Y2			
											ST-C	M3			
	Valve Name	Tritium Grab Sample Station Outlet Isol Valve													
2CM021B	M-158-2	E3	2	B	0.5	GL	SO	A	C	O/C	FS-O	M3			TP-03
											PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name	Post LOCA H2/O2 Cnt Mon Pnl DW Sample Isol Vlv													
2CM022A	M-158-1	E3	2	B	0.5	GL	SO	A	C	O/C	FS-O	M3			TP-03
											PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name	Post LOCA H2/O2 Cnt Mon Pnl DW Sample Isol Vlv													
2CM023B	M-158-2	E3	2	B	0.5	GL	SO	A	C	O/C	FS-O	M3			TP-03
											PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name	Post LOCA H2/O2 Cnt Mon Pnl DW Sample Isol Vlv													
2CM024A	M-158-1	E3	2	B	0.5	GL	SO	A	C	O/C	FS-O	M3			TP-03
											PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name	Post LOCA H2/O2 Cnt Mon Pnl DW Sample Isol Vlv													
2CM025A	M-158-1	A4	2	B	0.5	GL	SO	A	C	O/C	FS-O	M3			TP-03
											PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name	Post LOCA H2/O2 Mon Pnl Sup Chbr Retrn Isol Vlv													
2CM026B	M-158-2	A4	2	B	0.5	GL	SO	A	C	O/C	FS-O	M3			TP-03
											PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name	Post LOCA H2/O2 Mon Pnl Sup Chbr Retrn Isol Vlv													

Containment Monitoring

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2CM027	M-158-4	F7	2	A	0.5	GL	SO	A	O	C	FS-C	M3			TP-03
											LT-J	AppJ			
											PIT	Y2			
											ST-C	M3			
	Valve Name	Pri Cnmt CAM Sup Chbr Inlet Upstrm Isol Valve													
2CM028	M-158-4	E7	2	A	0.5	GL	SO	A	O	C	FS-C	M3			TP-03
											LT-J	AppJ			
											PIT	Y2			
											ST-C	M3			
	Valve Name	Pri Cnmt CAM Sup Chbr Inlet Dwnst Isol Valve													
2CM029	M-158-4	F7	2	A	0.5	GL	SO	A	O	C	FS-C	M3			TP-03
											LT-J	AppJ			
											PIT	Y2			
											ST-C	M3			
	Valve Name	Pri Cnmt CAM Dw Inlet Upstrm Isol Valve													
2CM030	M-158-4	E7	2	A	0.5	GL	SO	A	O	C	FS-C	M3			TP-03
											LT-J	AppJ			
											PIT	Y2			
											ST-C	M3			
	Valve Name	Pri Cnmt CAM Dw Inlet Dwnst Isol Valve													
2CM031	M-158-4	C5	2	A	1.5	GL	SO	A	O	C	FS-C	M3			TP-03
											LT-J	AppJ			
											PIT	Y2			
											ST-C	M3			
	Valve Name	Pri Cnmt 24 Point CAM Inlet Upstrm Isol Valve													
2CM032	M-158-4	C5	2	A	1.5	GL	SO	A	O	C	FS-C	M3			TP-03
											LT-J	AppJ			
											PIT	Y2			
											ST-C	M3			
	Valve Name	Pri Cnmt 24 Point CAM Inlet Dwnst Isol Valve													
2CM033	M-158-4	B6	2	A	1.5	GL	SO	A	O	C	FS-C	M3			TP-03
											LT-J	AppJ			
											PIT	Y2			
											ST-C	M3			
	Valve Name	Pri Cnmt CAM Sample Panel Outlet Upstrm Valve													

Containment Monitoring

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2CM034	M-158-4	A6	2	A	1.5	GL	SO	A	O	C	FS-C	M3			TP-03
											LT-J	AppJ			
											PIT	Y2			
											ST-C	M3			
	Valve Name	Pri Cnmt CAM Sample Panel Outlet Dwnst Valve													
2CM085	M-158-2	E3	2	A	0.5	GL	SO	A	C	C	FS-C	M3			TP-03
											LT-J	AppJ			
											PIT	Y2			
											ST-C	M3			
	Valve Name	Containment Air Sample HRSS Stop Valve													
2CM086	M-158-2	E2	2	A	0.5	GL	SO	A	C	C	FS-C	M3			TP-03
											LT-J	AppJ			
											PIT	Y2			
											ST-C	M3			
	Valve Name	Containment Air Sample HRSS Stop Valve													
2CM089	M-158-2	A3	2	A	0.5	GL	SO	A	C	C	FS-C	M3			TP-03
											LT-J	AppJ			
											PIT	Y2			
											ST-C	M3			
	Valve Name	Containment Air Sample HRSS Return Valve													
2CM090	M-158-2	A3	2	A	0.5	GL	SO	A	C	C	FS-C	M3			TP-03
											LT-J	AppJ			
											PIT	Y2			
											ST-C	M3			
	Valve Name	Containment Air Sample HRSS Return Valve													
2CM-CK-2A	M-158-1	C4	NC	C	0.5	CK	SA	A	SYS	O	CO	M3			TP-09
	Valve Name	CAM-Reagent Gas Supply Check Valve													
2CM-CK-2B	M-158-2	C4	NC	C	0.5	CK	SA	A	SYS	O	CO	M3			TP-09
	Valve Name	CAM-Reagent Gas Supply Check Valve													
2CM-CK-4A	M-158-1	C2	NC	C	0.5	CK	SA	A	SYS	O	CO	M3			TP-09
	Valve Name	CAM-Reagent Gas Supply Check Valve													
2CM-CK-4B	M-158-2	C2	NC	C	0.5	CK	SA	A	SYS	O	CO	M3			TP-09
	Valve Name	CAM-Reagent Gas Supply Check Valve													
2CM-PP CK-A	M-158-1	B4	NC	C	0.5	CK	SA	A	SYS	O	CO	M3			TP-09
	Valve Name	CAM-Sample Pump Discharge Check Valve													
2CM-PP CK-B	M-158-2	B4	NC	C	0.5	CK	SA	A	SYS	O	CO	M3			TP-09
	Valve Name	CAM-Sample Pump Discharge Check Valve													

Diesel Generator

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
0DG002	M-87-2	D6	3	C	12	CK	SA	A	SYS	O/C	CCD	CM			CM08
											COD	CM			CM08
											COF	M3			CM08
	Valve Name	0 DG Cooling Water Pump Dsch Check Valve													
0DG009	M-87-2	C5	3	B	4	GA	MO	A	C	O/C	ET	M3			
	Valve Name	DG Cooling Water Strainer Backwash Valve													
0DG014	M-87-2	D4	3	C	0.75 x 1	RV	SA	A	C	O/C	RVT	Y10			TP-08
	Valve Name	0 DG Cooler Inlet Header Relief Valve													
0DG023A	M-83-2	E6	3	C	1.5	CK	SA	A	SYS	C	CC	M3			
											CO	M3			TP-01
	Valve Name	0 DG A Starting Air Compressor Dsch Check Valve													
0DG023B	M-83-2	F6	3	C	1.5	CK	SA	A	SYS	C	CC	M3			
											CO	M3			TP-01
	Valve Name	0 DG B Starting Air Compressor Dsch Check Valve													
0DG029A	M-83-2	E6	3	C	0.75 x 1	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name	0 DG A Starting Air Receiver Relief Valve													
0DG029B	M-83-2	F6	3	C	0.75 x 1	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name	0 DG B Starting Air Receiver Relief Valve													
0DG035A	M-83-2	E3	NC	B	2	GA	AO	A	C	O	ET	M3			TP-09
	Valve Name	0 DG A/C Starting Air Motors Supply Control Valve													
0DG035B	M-83-2	F3	NC	B	2	GA	AO	A	C	O	ET	M3			TP-09
	Valve Name	0 DG B/D Starting Air Motors Supply Control Valve													
0DG036A	M-83-2	D4	NC	B	2	3W	SO	A	D	E/D	SD	M3			TP-09
											SE	M3			TP-09
	Valve Name	0 DG A/C Starting Air Motors Pinion Supply SOV													
0DG036B	M-83-2	E4	NC	B	2	3W	SO	A	D	E/D	SD	M3			TP-09
											SE	M3			TP-09
	Valve Name	0 DG B/D Starting Air Motors Pinion Supply SOV													
0DG038A	M-83-2	D3	NC	C	2	CK	SA	A	SYS	C	CC	M3			TP-09
	Valve Name	0 DG A/C Starting Air Mtrs Pinion Sup Bleed Off CV													
0DG038B	M-83-2	E3	NC	C	2	CK	SA	A	SYS	C	CC	M3			TP-09
	Valve Name	0 DG B/D Starting Air Mtrs Pinion Sup Bleed Off CV													
0DG048A	M-83-4	B6	3	C	1	CK	SA	A	SYS	O/C	CC	M3			TP-09
											CO	M3			TP-09
	Valve Name	0 DG Lube Oil DC Soak Back Pump Dsch Check Valve													
0DG048B	M-83-4	B6	3	C	1	CK	SA	A	SYS	O/C	CC	M3			TP-09
											CO	M3			TP-09
	Valve Name	0 DG Lube Oil AC Soak Back Pump Dsch Check Valve													

Diesel Generator

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
0DG049	M-83-4	C5	NC	C	1	CK	SA	A	SYS	O/C	CC	M3			TP-09
											CO	M3			TP-09
	Valve Name	0 DG Lube Oil Circ Pump Dsch Relief Check Valve													
0DG050	M-83-4	C5	3	C	1	CK	SA	A	SYS	C	CC	M3			TP-09
	Valve Name	0 DG Lube Oil Soak Back Pumps Dsch Relief CV													
0DG051	M-83-4	B3	3	C	0.5	CK	SA	A	SYS	O/C	CC	M3			TP-09
											CO	M3			TP-09
	Valve Name	0 DG Lube Oil Cooler Outlet Check Valve													
0DGABC	M-83-4	C8	NC	C	1	CK	SA	A	SYS	O/C	CC	M3			TP-09
											CO	M3			TP-09
	Valve Name	0 DG Turbocharger Check Valve													
0DGXYZ	M-83-4	C8	NC	C	1	CK	SA	A	C	O/C	CC	M3			TP-09
											CO	M3			TP-09
	Valve Name	0 Diesel Generator Turbocharger Check Valve													
1DG002	M-87-1	D6	3	C	10	CK	SA	A	SYS	O/C	CCD	CM			CM08
											CCF	CM			CM08
											COD	CM			CM08
											COF	M3			CM08
	Valve Name	1A DG Cooling Water Pump Dsch Check Valve													
1DG011	M-87-1	D6	3	B	4	GA	MO	A	C	O/C	ET	M3			
	Valve Name	DG Cooling Water Strainer Backwash Valve													
1DG034	M-87-1	D3	3	C	0.75 x 1	RV	SA	A	C	O/C	RVT	Y10			TP-08
	Valve Name	1A DG Cooler Outlet Header Relief Valve													
1DG049A	M-83-1	B6	3	C	1.5	CK	SA	A	SYS	C	CC	M3			
											CO	M3			TP-01
	Valve Name	1A DG A Starting Air Compressor Dsch Check Valve													
1DG049B	M-83-1	C6	3	C	1.5	CK	SA	A	SYS	C	CC	M3			
											CO	M3			TP-01
	Valve Name	1A DG B Starting Air Compressor Dsch Check Valve													
1DG055A	M-83-1	C6	3	C	0.75 x 1	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name	1A DG A Starting Air Receiver Relief Valve													
1DG055B	M-83-1	D6	3	C	0.75 x 1	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name	1A DG B Starting Air Receiver Relief Valve													
1DG061A	M-83-1	B3	NC	B	2	GA	AO	A	C	O	FS-C	M3			TP-09
											ST-C	M3			TP-09
											ST-O	M3			TP-09
	Valve Name	1A DG A/C Starting Air Motors Supply Control Valve													

Diesel Generator

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1DG061B	M-83-1	C3	NC	B	2	GA	AO	A	C	O	FS-C	M3			TP-09
											ST-C	M3			TP-09
											ST-O	M3			TP-09
	Valve Name	1A DG B/D Starting Air Motors Supply Control Valve													
1DG062A	M-83-1	B4	NC	B	2	3W	SO	A	D	E/D	SD	M3			TP-09
											SE	M3			TP-09
	Valve Name	1A DG A/C Starting Air Motors Pinion Supply SOV													
1DG062B	M-83-1	C4	NC	B	2	3W	SO	A	D	E/D	SD	M3			TP-09
											SE	M3			TP-09
	Valve Name	1A DG B/D Starting Air Motors Pinion Supply SOV													
1DG064A	M-83-1	B3	NC	C	2	CK	SA	A	SYS	C	CC	M3			TP-09
	Valve Name	1A DG A/C Strting Air Mtrs Pinion Sup Bleed Off CV													
1DG064B	M-83-1	C3	NC	C	2	CK	SA	A	SYS	C	CC	M3			TP-09
	Valve Name	1A DG B/D Strting Air Mtrs Pinion Sup Bleed Off CV													
1DG083A	M-83-4	E6	3	C	1	CK	SA	A	SYS	O/C	CC	M3			TP-09
											CO	M3			TP-09
	Valve Name	1B DG Lube Oil DC Soak Back Pump Dsch Check Valve													
1DG083B	M-83-4	E6	3	C	1	CK	SA	A	SYS	O/C	CC	M3			TP-09
											CO	M3			TP-09
	Valve Name	1B DG Lube Oil AC Soak Back Pump Dsch Check Valve													
1DG084	M-83-4	F5	NC	C	1	CK	SA	A	SYS	O/C	CC	M3			TP-09
											CO	M3			TP-09
	Valve Name	1B DG Lube Oil Circ Pump Dsch Relief Check Valve													
1DG085	M-83-4	F5	3	C	1	CK	SA	A	SYS	C	CC	M3			TP-09
	Valve Name	1B DG Lube Oil Soak Back Pumps Dsch Relief CV													
1DG087A	M-83-4	B6	3	C	1	CK	SA	A	SYS	O/C	CC	M3			TP-09
											CO	M3			TP-09
	Valve Name	1A DG Lube Oil DC Soak Back Pump Dsch Check Valve													
1DG087B	M-83-4	B6	3	C	1	CK	SA	A	SYS	O/C	CC	M3			TP-09
											CO	M3			TP-09
	Valve Name	1A DG Lube Oil AC Soak Back Pump Dsch Check Valve													
1DG088	M-83-4	C5	NC	C	1	CK	SA	A	SYS	O/C	CC	M3			TP-09
											CO	M3			TP-09
	Valve Name	1A DG Lube Oil Circ Pumps Dsch Relief Check Valve													
1DG089	M-83-4	C5	3	C	1	CK	SA	A	SYS	C	CC	M3			TP-09
	Valve Name	1A DG Lube Oil Soak Back Pumps Dsch Relief CV													

Diesel Generator

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1DG091	M-83-4	E3	3	C	0.5	CK	SA	A	SYS	O/C	CC	M3			TP-09
											CO	M3			TP-09
	Valve Name	1B DG Lube Oil Cooler Outlet Check Valve													
1DG092	M-83-4	B3	3	C	0.5	CK	SA	A	SYS	O/C	CC	M3			TP-09
											CO	M3			TP-09
	Valve Name	1A DG Lube Oil Cooler Outlet Check Valve													
1DGABC	M-83-4	C8	NC	C	1	CK	SA	A	SYS	O/C	CC	M3			TP-09
											CO	M3			TP-09
	Valve Name	DG Turbocharger Check Valve													
1DGABC-HPCS	M-83-4	F8	NC	C	1	CK	SA	A	SYS	O/C	CC	M3			TP-09
											CO	M3			TP-09
	Valve Name	DG Turbocharger Check Valve													
1DGXYZ	M-83-4	C8	NC	C	1	CK	SA	A	C	O/C	CC	M3			TP-09
											CO	M3			TP-09
	Valve Name	Diesel Generator Turbocharger Check Valve													
1DGXYZ-HPCS	M-83-4	F8	NC	C	1	CK	SA	A	C	O/C	CC	M3			TP-09
											CO	M3			TP-09
	Valve Name	Diesel Generator Turbocharger Check Valve													
1E22-F362A	M-83-1	E6	3	C	1.5	CK	SA	A	SYS	C	CC	M3			
											CO	M3			TP-01
	Valve Name	1B DG A Starting Air Comp Dsch Check Valve													
1E22-F362B	M-83-1	F6	3	C	1.5	CK	SA	A	SYS	C	CC	M3			
											CO	M3			TP-01
	Valve Name	1B DG A Starting Air Comp Dsch Check Valve													
1E22-F369A	M-83-1	E6	3	C	0.75 x 1	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name	1B DG A Starting Air Receiver Relief Valve													
1E22-F369B	M-83-1	F6	3	C	0.75 x 1	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name	1B DG B Starting Air Receiver Relief Valve													
1E22-F370A	M-83-1	D6	3	C	0.75 x 1	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name	1B DG C Starting Air Receiver Relief Valve													
1E22-F370B	M-83-1	E6	3	C	0.75 x 1	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name	1B DG D Starting Air Receiver Relief Valve													
1E22-F381A	M-83-1	E3	NC	B	2	GA	AO	A	C	O	ET	M3			TP-09
	Valve Name	1B DG A/C Starting Air Motors Supply Control Valve													
1E22-F381B	M-83-1	F3	NC	B	2	GA	AO	A	C	O	ET	M3			TP-09
	Valve Name	1B DG B/D Starting Air Motors Supply Control Valve													
1E22-F382A	M-83-1	D4	NC	B	2	3W	SO	A	D	E/D	ET	M3			TP-09
	Valve Name	1B DG A/C Starting Air Motors Pinion Supply SOV													

Diesel Generator

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1E22-F382B	M-83-1	E4	NC	B	2	3W	SO	A	D	E/D	ET	M3			TP-09
	Valve Name	1B DG B/D Starting Air Motors Pinion Supply SOV													
1E22-F383A	M-83-1	E3	NC	C	2	CK	SA	A	SYS	C	CC	M3			TP-09
	Valve Name	1B DG A/C Strting Air Mtrs Pinion Sup Bleed Off CV													
1E22-F383B	M-83-1	F3	NC	C	2	CK	SA	A	SYS	C	CC	M3			TP-09
	Valve Name	1B DG B/D Strting Air Mtrs Pinion Sup Bleed Off CV													
2DG002	M-134-1	D6	3	C	10	CK	SA	A	SYS	O/C	CCD	CM			CM08
											COD	CM			CM08
											COF	M3			CM08
	Valve Name	2A DG Cooling Water Pump Dsch Check Valve													
2DG011	M-134-1	D6	3	B	4	GA	MO	A	C	O/C	ET	M3			
	Valve Name	DG Cooling Water Strainer Backwash Valve													
2DG034	M-134-1	C4	3	C	0.75 x 1	RV	SA	A	C	O/C	RVT	Y10			TP-08
	Valve Name	2A DG Cooler Outlet Header Relief Valve													
2DG049A	M-83-3	B6	3	C	1.5	CK	SA	A	SYS	C	CC	M3			
											CO	M3			TP-01
	Valve Name	2A DG A Starting Air Compressor Dsch Check Valve													
2DG049B	M-83-3	C6	3	C	1.5	CK	SA	A	SYS	C	CC	M3			
											CO	M3			TP-01
	Valve Name	2A DG B Starting Air Compressor Dsch Check Valve													
2DG055A	M-83-3	B6	3	C	0.75 x 1	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name	2A DG A Starting Air Receiver Relief Valve													
2DG055B	M-83-3	C6	3	C	0.75 x 1	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name	2A DG B Starting Air Receiver Relief Valve													
2DG061A	M-83-3	B3	NC	B	2	GA	AO	A	C	O	FS-C	M3			TP-09
											ST-C	M3			TP-09
											ST-O	M3			TP-09
	Valve Name	2A DG A/C Starting Air Motors Supply Control Valve													
2DG061B	M-83-3	C3	NC	B	2	GA	AO	A	C	O	FS-C	M3			TP-09
											ST-C	M3			TP-09
											ST-O	M3			TP-09
	Valve Name	2A DG B/D Starting Air Motors Supply Control Valve													
2DG062A	M-83-3	B4	NC	B	2	3W	SO	A	D	E/D	SD	M3			TP-09
											SE	M3			TP-09
	Valve Name	2A DG A/C Starting Air Motors Pinion Supply SOV													
2DG062B	M-83-3	C4	NC	B	2	3W	SO	A	D	E/D	SD	M3			TP-09
											SE	M3			TP-09
	Valve Name	2A DG B/D Starting Air Motors Pinion Supply SOV													

Diesel Generator

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2DG064A	M-83-3	B3	NC	C	2	CK	SA	A	SYS	C	CC	M3			TP-09
	Valve Name	2A DG A/C Strting Air Mtrs Pinion Sup Bleed Off CV													
2DG064B	M-83-3	C3	NC	C	2	CK	SA	A	SYS	C	CC	M3			TP-09
	Valve Name	2A DG B/D Strting Air Mtrs Pinion Sup Bleed Off CV													
2DG083A	M-83-4	E6	3	C	1	CK	SA	A	SYS	O/C	CC	M3			TP-09
											CO	M3			TP-09
	Valve Name	2B DG Lube Oil DC Soak Back Pump Dsch Check Valve													
2DG083B	M-83-4	E6	3	C	1	CK	SA	A	SYS	O/C	CC	M3			TP-09
											CO	M3			TP-09
	Valve Name	2B DG Lube Oil AC Soak Back Pump Dsch Check Valve													
2DG084	M-83-4	F5	NC	C	1	CK	SA	A	SYS	O/C	CC	M3			TP-09
											CO	M3			TP-09
	Valve Name	2B DG Lube Oil Circ Pump Dsch Relief Check Valve													
2DG085	M-83-4	F5	3	C	1	CK	SA	A	SYS	C	CC	M3			TP-09
	Valve Name	2B DG Lube Oil Soak Back Pumps Dsch Relief CV													
2DG087A	M-83-4	B6	3	C	1	CK	SA	A	SYS	O/C	CC	M3			TP-09
											CO	M3			TP-09
	Valve Name	2A DG Lube Oil DC Soak Back Pump Dsch Check Valve													
2DG087B	M-83-4	B6	3	C	1	CK	SA	A	SYS	O/C	CC	M3			TP-09
											CO	M3			TP-09
	Valve Name	2A DG Lube Oil AC Soak Back Pump Dsch Check Valve													
2DG088	M-83-4	C5	NC	C	1	CK	SA	A	SYS	O/C	CC	M3			TP-09
											CO	M3			TP-09
	Valve Name	2A DG Lube Oil Circ Pumps Dsch Relief Check Valve													
2DG089	M-83-4	C5	3	C	1	CK	SA	A	SYS	C	CC	M3			TP-09
	Valve Name	2A DG Lube Oil Soak Back Pumps Dsch Relief CV													
2DG091	M-83-4	E3	3	C	0.5	CK	SA	A	SYS	O/C	CC	M3			TP-09
											CO	M3			TP-09
	Valve Name	2B DG Lube Oil Cooler Outlet Check Valve													
2DG092	M-83-4	B3	3	C	0.5	CK	SA	A	SYS	O/C	CC	M3			TP-09
											CO	M3			TP-09
	Valve Name	2A DG Lube Oil Cooler Outlet Check Valve													
2DGABC	M-83-4	C8	NC	C	1	CK	SA	A	SYS	O/C	CC	M3			TP-09
											CO	M3			TP-09
	Valve Name	DG Turbocharger Check Valve													
2DGABC-HPCS	M-83-4	F8	NC	C	1	CK	SA	A	SYS	O/C	CC	M3			TP-09
											CO	M3			TP-09
	Valve Name	DG Turbocharger Check Valve													

Diesel Generator

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2DGXYZ	M-83-4	C8	NC	C	1	CK	SA	A	C	O/C	CC	M3			TP-09
											CO	M3			TP-09
	Valve Name	Diesel Generator Turbocharger Check Valve													
2DGXYZ-HPCS	M-83-4	F8	NC	C	1	CK	SA	A	C	O/C	CC	M3			TP-09
											CO	M3			TP-09
	Valve Name	Diesel Generator Turbocharger Check Valve													
2E22-F362A	M-83-3	E6	3	C	1.5	CK	SA	A	SYS	C	CC	M3			
											CO	M3			TP-01
	Valve Name	2B DG A Starting Air Comp Dsch Check Valve													
2E22-F362B	M-83-3	F6	3	C	1.5	CK	SA	A	SYS	C	CC	M3			
											CO	M3			TP-01
	Valve Name	2B DG A Starting Air Comp Dsch Check Valve													
2E22-F369A	M-83-3	E6	3	C	0.75 x 1	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name	2B DG A Starting Air Receiver Relief Valve													
2E22-F369B	M-83-3	F6	3	C	0.75 x 1	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name	2B DG B Starting Air Receiver Relief Valve													
2E22-F370A	M-83-3	D6	3	C	0.75 x 1	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name	2B DG C Starting Air Receiver Relief Valve													
2E22-F370B	M-83-3	E6	3	C	0.75 x 1	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name	2B DG D Starting Air Receiver Relief Valve													
2E22-F381A	M-83-3	E3	NC	B	2	GA	AO	A	C	O	ET	M3			TP-09
	Valve Name	2B DG A/C Starting Air Motors Supply Control Valve													
2E22-F381B	M-83-3	F3	NC	B	2	GA	AO	A	C	O	ET	M3			TP-09
	Valve Name	2B DG B/D Starting Air Motors Supply Control Valve													
2E22-F382A	M-83-3	D4	NC	B	2	3W	SO	A	D	E/D	ET	M3			TP-09
	Valve Name	2B DG A/C Starting Air Motors Pinion Supply SOV													
2E22-F382B	M-83-3	E4	NC	B	2	3W	SO	A	D	E/D	ET	M3			TP-09
	Valve Name	2B DG B/D Starting Air Motors Pinion Supply SOV													
2E22-F383A	M-83-3	E3	NC	C	2	CK	SA	A	SYS	C	CC	M3			TP-09
	Valve Name	2B DG A/C Strting Air Mtrs Pinion Sup Bleed Off CV													
2E22-F383B	M-83-3	F3	NC	C	2	CK	SA	A	SYS	C	CC	M3			TP-09
	Valve Name	2B DG B/D Strting Air Mtrs Pinion Sup Bleed Off CV													

Diesel Fuel Oil

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
0DO002	M-85-1	D4	3	C	1.5	CK	SA	A	SYS	O	CO	M3			TP-09
	Valve Name	0 DG Fuel Transfer Pump Discharge Check Valve													
1DO002	M-85-1	D6	3	C	1.5	CK	SA	A	SYS	O	CO	M3			TP-09
	Valve Name	1A DG Fuel Transfer Pump Dsch Check Valve													
1DO012	M-85-1	D1	3	C	1.5	CK	SA	A	SYS	O	CO	M3			TP-09
	Valve Name	1B DG Fuel Transfer Pump Dsch Check Valve													
1DO021	M-85-1	B2	3	B	2	GL	M	A	C	C	ME	Y2			TP-04
	Valve Name	Diesel Fire Pump Fuel Transf Pump Suct Bypass Vlv													
2DO002	M-132	D6	3	C	1.5	CK	SA	A	SYS	O	CO	M3			TP-09
	Valve Name	2A DG Fuel Transfer Pump Dsch Check Valve													
2DO012	M-132	E4	3	C	1.5	CK	SA	A	SYS	O	CO	M3			TP-09
	Valve Name	2B DG Fuel Transfer Pump Dsch Check Valve													
2DO021	M-132	B2	3	B	2	GL	M	A	C	C	ME	Y2			TP-04
	Valve Name	Diesel Fire Pump Fuel Transf Pump Suct Bypass Vlv													

Fuel Pool Cooling

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1FC044A	M-87-2	E6	3	C	6	CK	SA	A	SYS	O	CC	M3			TP-01
											CO	M3			
	Valve Name	A Fuel Pool Emergency Makeup Pump Dsch Check Valve													
1FC044B	M-87-1	C6	3	C	6	CK	SA	A	C	O	CC	M3			TP-01
											CO	M3			
	Valve Name	B Fuel Pool Emergency Makeup Pump Dsch Check Valve													
1FC045A	M-87-2	E6	3	B	6	GA	M	A	C	O	ME	Y2			TP-04
	Valve Name	A Fuel Pool Emergency Makeup Pump Dsch Valve													
1FC045B	M-87-1	C6	3	B	6	GA	M	A	C	O	ME	Y2			TP-04
	Valve Name	B Fuel Pool Emergency Makeup Pump Dsch Valve													
1FC046A	M-87-2	E5	3	B	6	GA	M	A	O	C	ME	Y2			TP-04
	Valve Name	A Fuel Pool Emergency Makeup Pp Full Flow Test Vlv													
1FC046B	M-87-1	C5	3	B	6	GA	M	A	O	C	ME	Y2			TP-04
	Valve Name	B Fuel Pool Emergency Makeup Pp Full Flow Test Vlv													
1FC047A	M-87-2	E5	3	B	6	GA	M	A	O	O/C	ME	Y2			TP-04
	Valve Name	A Fuel Pool Emergency Makeup Supply Valve													
1FC047B	M-87-1	C5	3	B	6	GA	M	A	O	O/C	ME	Y2			TP-04
	Valve Name	B Fuel Pool Emergency Makeup Supply Valve													
1FC050A	M-98-1	E5	3	B	6	GL	M	A	C	O	ME	Y2			TP-04
	Valve Name	A Fuel Pool Emergency Makeup Supply Hose Conn Vlv													
1FC050B	M-98-1	D1	3	B	6	GL	M	A	C	O	ME	Y2			TP-04
	Valve Name	B Fuel Pool Emergency Makeup Supply Hose Conn Vlv													
1FC086	M-98-1	C7	2	A	10	GA	M	P	LC	C	LT-J	AppJ			
	Valve Name	Reactor Well Drain Header Downsteam Valve													
1FC113	M-98-1	D7	2	A	2	GL	M	P	LC	C	LT-J	AppJ			
	Valve Name	Cnmt Bellows Seal Cavity Drn Line Flushing Wtr Vlv													
1FC114	M-98-1	D7	2	A	2	GL	M	P	LC	C	LT-J	AppJ			
	Valve Name	Cnmt Bellows Seal Cavity Drn Line Flushing Wtr Vlv													
1FC115	M-98-1	C7	2	A	10	GA	M	P	LC	C	LT-J	AppJ			
	Valve Name	Reactor Well Drain Header Upstream Valve													
2FC044A	M-134-2	E6	3	C	6	CK	SA	A	SYS	O	CC	M3			TP-01
											CO	M3			
	Valve Name	A Fuel Pool Emergency Makeup Pump Dsch Check Valve													
2FC044B	M-134-1	C6	3	C	6	CK	SA	A	C	O	CC	M3			TP-01
											CO	M3			
	Valve Name	B Fuel Pool Emergency Makeup Pump Dsch Check Valve													
2FC045A	M-134-2	E6	3	B	6	GA	M	A	C	O	ME	Y2			TP-04
	Valve Name	A Fuel Pool Emergency Makeup Pump Dsch Valve													

Fuel Pool Cooling

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2FC045B	M-134-1	C6	3	B	6	GA	M	A	C	O	ME	Y2			TP-04
	Valve Name	B Fuel Pool Emergency Makeup Pump Dsch Valve													
2FC046A	M-134-2	E5	3	B	6	GA	M	A	O	C	ME	Y2			TP-04
	Valve Name	A Fuel Pool Emergency Makeup Pp Full Flow Test Vlv													
2FC046B	M-134-1	C5	3	B	6	GA	M	A	O	C	ME	Y2			TP-04
	Valve Name	B Fuel Pool Emergency Makeup Pp Full Flow Test Vlv													
2FC047A	M-134-2	E5	3	B	6	GA	M	A	O	O/C	ME	Y2			TP-04
	Valve Name	A Fuel Pool Emergency Makeup Supply Valve													
2FC047B	M-134-1	C5	3	B	6	GA	M	A	O	O/C	ME	Y2			TP-04
	Valve Name	B Fuel Pool Emergency Makeup Supply Valve													
2FC050A	M-144-1	E4	3	B	6	GL	M	A	C	O	ME	Y2			TP-04
	Valve Name	A Fuel Pool Emergency Makeup Supply Hose Conn Vlv													
2FC050B	M-144-1	D8	3	B	6	GL	M	A	C	O	ME	Y2			TP-04
	Valve Name	B Fuel Pool Emergency Makeup Supply Hose Conn Vlv													
2FC086	M-144-1	C2	2	A	10	GA	M	P	LC	C	LT-J	AppJ			
	Valve Name	Reactor Well Drain Header Downsteam Valve													
2FC113	M-144-1	D2	2	A	2	GL	M	P	LC	C	LT-J	AppJ			
	Valve Name	Cnmt Bellows Seal Cavity Drn Line Flushing Wtr Vlv													
2FC114	M-144-1	D2	2	A	2	GL	M	P	LC	C	LT-J	AppJ			
	Valve Name	Cnmt Bellows Seal Cavity Drn Line Flushing Wtr Vlv													
2FC115	M-144-1	C2	2	A	10	GA	M	P	LC	C	LT-J	AppJ			
	Valve Name	Reactor Well Drain Header Upstream Valve													

Feedwater

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1B21-F010A	M-57-1	B6	1	A/C	24	CK	SA	A	O	C	CC	CS		CS-07	
											CO	OP			TP-05, TP-01
											LT-J	AppJ			
	Valve Name	A Feedwater Line Inboard Check Valve													
1B21-F010B	M-57-1	C6	1	A/C	24	CK	SA	A	O	C	CC	CS		CS-07	
											CO	OP			TP-05, TP-01
											LT-J	AppJ			
	Valve Name	B Feedwater Line Inboard Check Valve													
1B21-F032A	M-57-1	B6	1	A/C	24	CK	AO	A	O	C	CC	CS		CS-09	
											CO	OP			TP-05, TP-01
											LT-J	AppJ			
											PIT	Y2			
	Valve Name	A Feedwater Line Otbd Testable Check Valve													
1B21-F032B	M-57-1	C6	1	A/C	24	CK	AO	A	O	C	CC	CS		CS-09	
											CO	OP			TP-05, TP-01
											LT-J	AppJ			
											PIT	Y2			
	Valve Name	B Feedwater Line Otbd Testable Check Valve													
1B21-F065A	M-57-1	B5	2	A	24	GA	MO	A	O	C	ET	Y2	RV-02		
											LT-J	AppJ			
											OMN-C	JOG	RV-02		
	Valve Name	A Feedwater Line Otbd Isolation Valve													
1B21-F065B	M-57-1	C5	2	A	24	GA	MO	A	O	C	ET	Y2	RV-02		
											LT-J	AppJ			
											OMN-C	JOG	RV-02		
	Valve Name	B Feedwater Line Otbd Isolation Valve													
2B21-F010A	M-118-1	B6	1	A/C	24	CK	SA	A	O	C	CC	CS		CS-07	
											CO	OP			TP-05, TP-01
											LT-J	AppJ			
	Valve Name	A Feedwater Line Inbd Check Valve													
2B21-F010B	M-118-1	C6	1	A/C	24	CK	SA	A	O	C	CC	CS		CS-07	
											CO	OP			TP-05, TP-01
											LT-J	AppJ			
	Valve Name	B Feedwater Line Inbd Check Valve													

Feedwater

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2B21-F032A	M-118-1	B6	1	A/C	24	CK	AO	A	O	C	CC	CS		CS-09	
											CO	OP			TP-05, TP-01
											LT-J	AppJ			
											PIT	Y2			
	Valve Name	A Feedwater Line Otbd Testable Check Valve													
2B21-F032B	M-118-1	C6	1	A/C	24	CK	AO	A	O	C	CC	CS		CS-09	
											CO	OP			TP-05, TP-01
											LT-J	AppJ			
											PIT	Y2			
	Valve Name	B Feedwater Line Otbd Testable Check Valve													
2B21-F065A	M-118-1	B5	2	A	24	GA	MO	A	O	C	ET	Y2	RV-02		
											LT-J	AppJ			
											OMN-C	JOG	RV-02		
	Valve Name	A Feedwater Line Otbd Isolation Valve													
2B21-F065B	M-118-1	C5	2	A	24	GA	MO	A	O	C	ET	Y2	RV-02		
											LT-J	AppJ			
											OMN-C	JOG	RV-02		
	Valve Name	B Feedwater Line Otbd Isolation Valve													

Containment Combustible Gas Control

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1HG001A	M-130-1	F7	2	A	4	GA	MO	A	C	O/C	ET	Y2	RV-02		
											LT-J	AppJ			
											OMN-C	JOG	RV-02		
											OMN-O	JOG	RV-02		
	Valve Name	U1 H2 Recombiner U1 DW Suct Upstrm Isol Valve													
1HG001B	M-130-1	E7	2	A	4	GA	MO	A	C	O/C	ET	Y2	RV-02		
											LT-J	AppJ			
											OMN-C	JOG	RV-02		
											OMN-O	JOG	RV-02		
	Valve Name	U2 H2 Recombiner U1 DW Suct Upstrm Isol Valve													
1HG002A	M-130-1	F7	2	A	4	GL	MO	A	C	O/C	ET	Y2	RV-02		
											LT-J	AppJ			
											OMN-C	JOG	RV-02		
											OMN-O	JOG	RV-02		
	Valve Name	U1 H2 Recombiner U1 DW Suct Dwnst Isol Valve													
1HG002B	M-130-1	E7	2	A	4	GL	MO	A	C	O/C	ET	Y2	RV-02		
											LT-J	AppJ			
											OMN-C	JOG	RV-02		
											OMN-O	JOG	RV-02		
	Valve Name	U2 H2 Recombiner U1 DW Suct Dwnst Isol Valve													
1HG003	M-130-1	C6	2	B	6	GA	MO	A	O	O/C	ET	Y2	RV-02		
											OMN-C	JOG	RV-02		
											OMN-O	JOG	RV-02		
	Valve Name	U1 H2 Recombiner U1 Sup Pool Return Valve													
1HG005A	M-130-1	B7	2	A	6	GA	MO	A	C	O/C	ET	Y2	RV-02		
											LT-J	AppJ			
											OMN-C	JOG	RV-02		
											OMN-O	JOG	RV-02		
	Valve Name	U1 H2 Recombiner U1 Sup Pool Rtrn Dwnst Isol Vlv													
1HG005B	M-130-1	A7	2	A	6	GA	MO	A	C	O/C	ET	Y2	RV-02		
											LT-J	AppJ			
											OMN-C	JOG	RV-02		
											OMN-O	JOG	RV-02		
	Valve Name	U2 H2 Recombiner U1 Sup Pool Rtrn Dwnst Isol Vlv													

Containment Combustible Gas Control

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1HG006A	M-130-1	B7	2	A	6	GA	MO	A	C	O/C	ET	Y2	RV-02		
											LT-J	AppJ			
											OMN-C	JOG	RV-02		
											OMN-O	JOG	RV-02		
	Valve Name	U1 H2 Recombiner U1 Sup Pool Rtrn Upstrm Isol Vlv													
1HG006B	M-130-1	A7	2	A	6	GA	MO	A	C	O/C	ET	Y2	RV-02		
											LT-J	AppJ			
											OMN-C	JOG	RV-02		
											OMN-O	JOG	RV-02		
	Valve Name	U2 H2 Recombiner U1 Sup Pool Rtrn Upstrm Isol Vlv													
1HG007	M-130-2	F6	2	C	4	CK	SA	A	C	O	CCD	CM			CM02
											COD	CM			CM02
											COF	RR			CM02
	Valve Name	U2 H2 Recombiner U1 DW Suct Check Valve													
1HG009	M-130-1	C6	2	B	6	GA	MO	A	C	O/C	ET	Y2	RV-02		
											OMN-C	JOG	RV-02		
											OMN-O	JOG	RV-02		
	Valve Name	U1 H2 Recombiner U2 Xtie Valve													
1HG016	M-130-1	F6	2	C	4	CK	SA	A	C	O	CCD	CM			CM02
											COD	CM			CM02
											COF	RR			CM02
	Valve Name	U1 H2 Recombiner U1 DW Suct Check Valve													
1HG025	M-130-1	D4	2	B	3	GL	MO	A	O	O	ET	Y2	RV-02		
											OMN-O	JOG	RV-02		
	Valve Name	U1 H2 Recombiner Inlet Valve													
2HG001A	M-130-2	F7	2	A	4	GA	MO	A	C	O/C	ET	Y2	RV-02		
											LT-J	AppJ			
											OMN-C	JOG	RV-02		
											OMN-O	JOG	RV-02		
	Valve Name	U2 H2 Recombiner U2 DW Suct Upstrm Isol Valve													
2HG001B	M-130-2	E7	2	A	4	GA	MO	A	C	O/C	ET	Y2	RV-02		
											LT-J	AppJ			
											OMN-C	JOG	RV-02		
											OMN-O	JOG	RV-02		
	Valve Name	U1 H2 Recombiner U2 DW Suct Upstrm Isol Valve													

Containment Combustible Gas Control

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2HG002A	M-130-2	F7	2	A	4	GL	MO	A	C	O/C	ET	Y2	RV-02		
											LT-J	AppJ			
											OMN-C	JOG	RV-02		
											OMN-O	JOG	RV-02		
	Valve Name	U2 H2 Recombiner U2 DW Suct Dwnst Isol Valve													
2HG002B	M-130-2	E7	2	A	4	GL	MO	A	C	O/C	ET	Y2	RV-02		
											LT-J	AppJ			
											OMN-C	JOG	RV-02		
											OMN-O	JOG	RV-02		
	Valve Name	U1 H2 Recombiner U2 DW Suct Dwnst Isol Valve													
2HG003	M-130-2	C6	2	B	6	GA	MO	A	O	O/C	ET	Y2	RV-02		
											OMN-C	JOG	RV-02		
											OMN-O	JOG	RV-02		
	Valve Name	U2 H2 Recombiner U2 Sup Pool Return Valve													
2HG005A	M-130-2	B7	2	A	6	GA	MO	A	C	O/C	ET	Y2	RV-02		
											LT-J	AppJ			
											OMN-C	JOG	RV-02		
											OMN-O	JOG	RV-02		
	Valve Name	U1 H2 Recombiner U2 Sup Pool Rtrn Dwnst Isol Vlv													
2HG005B	M-130-2	A7	2	A	6	GA	MO	A	C	O/C	ET	Y2	RV-02		
											LT-J	AppJ			
											OMN-C	JOG	RV-02		
											OMN-O	JOG	RV-02		
	Valve Name	U2 H2 Recombiner U2 Sup Pool Rtrn Dwnst Isol Vlv													
2HG006A	M-130-2	B7	2	A	6	GA	MO	A	C	O/C	ET	Y2	RV-02		
											LT-J	AppJ			
											OMN-C	JOG	RV-02		
											OMN-O	JOG	RV-02		
	Valve Name	U2 H2 Recombiner U2 Sup Pool Rtrn Upstrm Isol Vlv													
2HG006B	M-130-2	A7	2	A	6	GA	MO	A	C	O/C	ET	Y2	RV-02		
											LT-J	AppJ			
											OMN-C	JOG	RV-02		
											OMN-O	JOG	RV-02		
	Valve Name	U1 H2 Recombiner U2 Sup Pool Rtrn Upstrm Isol Vlv													
2HG007	M-130-1	F6	2	C	4	CK	SA	A	C	O	CCD	CM			CM02
											COD	CM			CM02
											COF	RR			CM02
	Valve Name	U1 H2 Recombiner U2 DW Suct Check Valve													

Containment Combustible Gas Control

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2HG009	M-130-2	C6	2	B	6	GA	MO	A	C	O/C	ET	Y2	RV-02		
											OMN-C	JOG	RV-02		
											OMN-O	JOG	RV-02		
	Valve Name	U2 H2 Recombiner U1 Xtie Valve													
2HG016	M-130-2	F6	2	C	4	CK	SA	A	C	O	CCD	CM			CM02
											COD	CM			CM02
											COF	RR			CM02
	Valve Name	U2 H2 Recombiner U2 DW Suct Check Valve													
2HG025	M-130-2	D4	2	B	3	GL	MO	A	O	O	ET	Y2	RV-02		
											OMN-O	JOG	RV-02		
	Valve Name	U2 H2 Recombiner Inlet Valve													

High Pressure Core Spray

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1E22-F004	M-95	D6	1	A	12	GA	MO	A	C	O/C	ET	Y2	RV-02		
											LT-J	AppJ			
											LT-S	Y2			
											OMN-C	JOG	RV-02		
											OMN-O	JOG	RV-02		
	Valve Name	HPCS Injection Isolation Valve													
1E22-F005	M-95	D7	1	A/C	12	CK	SA	A	C	O/C	CC	CS		CS-17	
											CO	CS		CS-17	
											LT-S	Y2			
	Valve Name	HPCS Injection Check Valve													
1E22-F007	M-95	D4	2	C	0.75	CK	SA	A	SYS	O/C	CC	M3			TP-07
											CO	M3			TP-07
	Valve Name	HPCS Water Leg Pump Discharge Check Valve													
1E22-F012	M-95	C3	2	B	4	GA	MO	A	C	O/C	ET	Y2	RV-02		
											OMN-C	JOG	RV-02		
											OMN-O	JOG	RV-02		
	Valve Name	HPCS Pump Minimum Flow Isolation Valve													
1E22-F014	M-95	B5	2	C	1 x 2	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name	HPCS Pump Suct Relief Valve													
1E22-F015	M-95	B6	2	B	18	GA	MO	A	O	O/C	ET	Y2	RV-02		
											OMN-C	JOG	RV-02		
											OMN-O	JOG	RV-02		
	Valve Name	HPCS Pump Sup Pool Suction Isolation Valve													
1E22-F023	M-95	C5	2	B	12	GL	MO	A	C	C	ET	Y2	RV-02		
											OMN-C	JOG	RV-02		
	Valve Name	HPCS Full Flow Test Isolation Valve													
1E22-F024	M-95	C3	2	C	16	CK	SA	A	SYS	O/C	CC	M3			
											CO	M3			
	Valve Name	HPCS Pump Dsch Check Valve													
1E22-F028	M-87-1	B6	3	C	10	CK	SA	A	SYS	O/C	CCD	CM			CM08
											COD	CM			CM08
											COF	M3			CM08
	Valve Name	1B DG Cooling Water Pump Dsch Check Valve													
1E22-F035	M-95	D2	2	C	.75 x 1	RV	SA	A	C	O/C	RVT	Y10			TP-08
	Valve Name	HPCS Pump Discharge Relief Valve													
1E22-F038	M-95	D7	1	B	12	GA	M	P	LO	O	PIT	Y2			
	Valve Name	HPCS Injection Hdr Manual Stop Valve													

High Pressure Core Spray

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1E22-F304	M-2095-1	B4	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	HPCS/Rx Vessel D/P Sw 1E22-N009 Excess Flow Check													
1E22-F319	M-87-1	B6	3	B	4	GA	MO	A	C	O/C	ST-C	Y2			TP-07
											ST-O	Y2			TP-07
	Valve Name	DG Cooling Water Strainer Backwash Valve													
1E22-F345	M-87-1	B4	3	C	.75 x 1	RV	SA	A	C	O/C	RVT	Y10			TP-08
	Valve Name	1B Dg Cooler Inlet Header Relief Valve													
2E22-F004	M-141	D6	1	A	12	GA	MO	A	C	O/C	ET	Y2	RV-02		
											LT-J	AppJ			
											LT-S	Y2			
											OMN-C	JOG	RV-02		
											OMN-O	JOG	RV-02		
	Valve Name	HPCS Injection Isolation Valve													
2E22-F005	M-141	D7	1	A/C	12	CK	SA	A	C	O/C	CC	CS		CS-17	
											CO	CS		CS-17	
											LT-S	Y2			
	Valve Name	HPCS Injection Check Valve													
2E22-F007	M-141	D4	2	C	0.75	CK	SA	A	SYS	O/C	CC	M3			TP-07
											CO	M3			TP-07
	Valve Name	HPCS Water Leg Pump Dsch Check Valve													
2E22-F012	M-141	C3	2	B	4	GA	MO	A	C	O/C	ET	Y2	RV-02		
											OMN-C	JOG	RV-02		
											OMN-O	JOG	RV-02		
	Valve Name	HPCS Pump Minimum Flow Isolation Valve													
2E22-F014	M-141	C5	2	C	1 x 2	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name	HPCS Pump Suction Relief Valve													
2E22-F015	M-141	B6	2	B	18	GA	MO	A	O	O/C	ET	Y2	RV-02		
											OMN-C	JOG	RV-02		
											OMN-O	JOG	RV-02		
	Valve Name	HPCS Pump Sup Pool Suction Isolation Valve													
2E22-F023	M-141	D5	2	B	12	GL	MO	A	C	C	ET	Y2	RV-02		
											OMN-C	JOG	RV-02		
	Valve Name	HPCS Full Flow Test Isolation Valve													
2E22-F024	M-141	D3	2	C	16	CK	SA	A	SYS	O/C	CC	M3			
											CO	M3			
	Valve Name	HPCS Pump Discharge Check Valve													

High Pressure Core Spray

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2E22-F028	M-134-1	B6	3	C	10	CK	SA	A	SYS	O/C	CCD	CM			CM08
											COD	CM			CM08
											COF	M3			CM08
	Valve Name	1B DG Cooling Water Pump Dsch Check Valve													
2E22-F035	M-141	D2	2	C	.75 x 1	RV	SA	A	C	O/C	RVT	Y10			TP-08
	Valve Name	HPCS Pump Discharge Relief Valve													
2E22-F038	M-141	D7	1	B	12	GA	M	P	LO	O	PIT	Y2			
	Valve Name	HPCS Injection Hdr Manual Stop Valve													
2E22-F304	M-2141-1	B4	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	HPCS/Rx Vessel D/P Sw 1E22-N009 Excess Flow Check													
2E22-F319	M-134-1	B6	3	B	4	GA	MO	A	C	O/C	ST-C	Y2			TP-07
											ST-O	Y2			TP-07
	Valve Name	DG Cooling Water Strainer Backwash Valve													
2E22-F345	M-134-1	B4	3	C	.75 x 1	RV	SA	A	C	O/C	RVT	Y10			TP-08
	Valve Name	1B Dg Cooler Inlet Header Relief Valve													

Instrument Air

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1B21-F029A	M-81-2	F5	3	C	0.75	CK	SA	A	SYS	C	CC	CS		CS-16	
											CO	CS			TP-01
	Valve Name	A Otbd MSIV Accum Inlet Check Valve													
1B21-F029B	M-81-2	F5	3	C	0.75	CK	SA	A	SYS	C	CC	CS		CS-16	
											CO	CS			TP-01
	Valve Name	B Otbd MSIV Accum Inlet Check Valve													
1B21-F029C	M-81-2	E5	3	C	0.75	CK	SA	A	SYS	C	CC	CS		CS-16	
											CO	CS			TP-01
	Valve Name	C Otbd MSIV Accum Inlet Check Valve													
1B21-F029D	M-81-2	F5	3	C	0.75	CK	SA	A	SYS	C	CC	CS		CS-16	
											CO	CS			TP-01
	Valve Name	D Otbd MSIV Accum Inlet Check Valve													
2B21-F029A	M-81-17	E5	3	C	0.75	CK	SA	A	SYS	C	CC	CS		CS-16	
											CO	CS			TP-01
	Valve Name	A Otbd MSIV Accum Inlet Check Valve													
2B21-F029B	M-81-17	E5	3	C	0.75	CK	SA	A	SYS	C	CC	CS		CS-16	
											CO	CS			TP-01
	Valve Name	B Otbd MSIV Accum Inlet Check Valve													
2B21-F029C	M-81-17	D5	3	C	0.75	CK	SA	A	SYS	C	CC	CS		CS-16	
											CO	CS			TP-01
	Valve Name	C Otbd MSIV Accum Inlet Check Valve													
2B21-F029D	M-81-17	E5	3	C	0.75	CK	SA	A	SYS	C	CC	CS		CS-16	
											CO	CS			TP-01
	Valve Name	D Otbd MSIV Accum Inlet Check Valve													

Instrument Nitrogen

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1B21-F024A	M-66-2	F6	3	C	0.75	CK	SA	A	SYS	C	CC	CS		CS-16	
											CO	CS			TP-01
	Valve Name	A Inbd MSIV Accum Inlet Check Valve													
1B21-F024B	M-66-2	F7	3	C	0.75	CK	SA	A	SYS	C	CC	CS		CS-16	
											CO	CS			TP-01
	Valve Name	B Inbd MSIV Accum Inlet Check Valve													
1B21-F024C	M-66-2	F4	3	C	0.75	CK	SA	A	SYS	C	CC	CS		CS-16	
											CO	CS			TP-01
	Valve Name	C Inbd MSIV Accum Inlet Check Valve													
1B21-F024D	M-66-2	F5	3	C	0.75	CK	SA	A	SYS	C	CC	CS		CS-16	
											CO	CS			TP-01
	Valve Name	D Inbd MSIV Accum Inlet Check Valve													
1B21-F036C	M-66-2	D2	3	C	0.5	CK	SA	A	SYS	C	CC	CS		CS-18	
											CO	CS		CS-18	TP-01
	Valve Name	SRV Accumulator 1B21-A004C Inlet Check Valve													
1B21-F036D	M-66-2	D4	3	C	0.5	CK	SA	A	SYS	C	CC	CS		CS-18	
											CO	CS		CS-18	TP-01
	Valve Name	SRV Accumulator 1B21-A004D Inlet Check Valve													
1B21-F036E	M-66-2	D7	3	C	0.5	CK	SA	A	SYS	C	CC	CS		CS-18	
											CO	CS		CS-18	TP-01
	Valve Name	SRV Accumulator 1B21-A004E Inlet Check Valve													
1B21-F036F	M-66-2	D5	3	C	0.5	CK	SA	A	SYS	C	CC	CS		CS-18	
											CO	CS		CS-18	TP-01
	Valve Name	SRV Accumulator 1B21-A004F Inlet Check Valve													
1B21-F036H	M-66-2	D2	3	C	0.5	CK	SA	A	SYS	C	CC	CS		CS-18	
											CO	CS		CS-18	TP-01
	Valve Name	SRV Accumulator 1B21-A004H Inlet Check Valve													
1B21-F036K	M-66-2	D5	3	C	0.5	CK	SA	A	SYS	C	CC	CS		CS-18	
											CO	CS		CS-18	TP-01
	Valve Name	SRV Accumulator 1B21-A004K Inlet Check Valve													
1B21-F036L	M-66-2	D7	3	C	0.5	CK	SA	A	SYS	C	CC	CS		CS-18	
											CO	CS		CS-18	TP-01
	Valve Name	SRV Accumulator 1B21-A004L Inlet Check Valve													
1B21-F036M	M-66-2	D6	3	C	0.5	CK	SA	A	SYS	C	CC	CS		CS-18	
											CO	CS		CS-18	TP-01
	Valve Name	SRV Accumulator 1B21-A004M Inlet Check Valve													

Instrument Nitrogen

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1B21-F036P	M-66-2	D4	3	C	0.5	CK	SA	A	SYS	C	CC	CS		CS-18	
											CO	CS		CS-18	TP-01
	Valve Name	SRV Accumulator 1B21-A004P Inlet Check Valve													
1B21-F036R	M-66-2	D7	3	C	0.5	CK	SA	A	SYS	C	CC	CS		CS-18	
											CO	CS		CS-18	TP-01
	Valve Name	SRV Accumulator 1B21-A004R Inlet Check Valve													
1B21-F036S	M-66-2	D6	3	C	0.5	CK	SA	A	SYS	C	CC	CS		CS-18	
											CO	CS		CS-18	TP-01
	Valve Name	SRV Accumulator 1B21-A004S Inlet Check Valve													
1B21-F036U	M-66-2	D3	3	C	0.5	CK	SA	A	SYS	C	CC	CS		CS-18	
											CO	CS		CS-18	TP-01
	Valve Name	SRV Accumulator 1B21-A004U Inlet Check Valve													
1B21-F036V	M-66-2	D5	3	C	0.5	CK	SA	A	SYS	C	CC	CS		CS-18	
											CO	CS		CS-18	TP-01
	Valve Name	SRV Accumulator 1B21-A004V Inlet Check Valve													
1B21-F040C	M-66-2	B2	3	C	0.5	CK	SA	A	SYS	O/C	CC	CS		CS-14	
											CO	CS		CS-14	
	Valve Name	SRV ADS Accumulator 1B21-A003C Inlet Check Valve													
1B21-F040D	M-66-2	B4	3	C	0.5	CK	SA	A	SYS	O/C	CC	CS		CS-14	
											CO	CS		CS-14	
	Valve Name	SRV ADS Accumulator 1B21-A003D Inlet Check Valve													
1B21-F040E	M-66-2	B7	3	C	0.5	CK	SA	A	SYS	O/C	CC	CS		CS-14	
											CO	CS		CS-14	
	Valve Name	SRV ADS Accumulator 1B21-A003E Inlet Check Valve													
1B21-F040R	M-66-2	B7	3	C	0.5	CK	SA	A	SYS	O/C	CC	CS		CS-14	
											CO	CS		CS-14	
	Valve Name	SRV ADS Accumulator 1B21-A003R Inlet Check Valve													
1B21-F040S	M-66-2	B6	3	C	0.5	CK	SA	A	SYS	O/C	CC	CS		CS-14	
											CO	CS		CS-14	
	Valve Name	SRV ADS Accumulator 1B21-A003S Inlet Check Valve													
1B21-F040U	M-66-2	B3	3	C	0.5	CK	SA	A	SYS	O/C	CC	CS		CS-14	
											CO	CS		CS-14	
	Valve Name	SRV ADS Accumulator 1B21-A003U Inlet Check Valve													
1B21-F040V	M-66-2	B5	3	C	0.5	CK	SA	A	SYS	O/C	CC	CS		CS-14	
											CO	CS		CS-14	
	Valve Name	SRV ADS Accumulator 1B21-A003V Inlet Check Valve													

Instrument Nitrogen

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1IN001A	M-66-1	F6	2	A	2	GL	AO	A	O	C	FS-C	RR		RJ-01	TP-03
											LT-J	AppJ			
											PIT	Y2			
											ST-C	RR		RJ-01	
	Valve Name	Drywell Inst N2 Suction Header Upstm Isolation Vlv													
1IN001B	M-66-1	F7	2	A	2	GL	AO	A	O	C	FS-C	RR		RJ-01	TP-03
											LT-J	AppJ			
											PIT	Y2			
											ST-C	RR		RJ-01	
	Valve Name	Drywell Inst N2 Suction Header Upstm Isolation Vlv													
1IN017	M-66-1	B3	2	A	1.5	GL	AO	A	O	C	FS-C	CS		CS-05	TP-03
											LT-J	AppJ			
											PIT	Y2			
											ST-C	CS		CS-05	
	Valve Name	DW Inst N2 Regulated Hdr Drywell Supply Valve													
1IN018	M-66-1	B3	2	A/C	2	CK	SA	A	SYS	C	CC	CM		RJ-04	CM09
											CO	CM		RJ-04	CM09
											LT-J	AppJ			
	Valve Name	DW Inst N2 Regulated Hdr Drywell Isol Check Valve													
1IN031	M-66-1	B5	2	A	0.75	GL	SO	A	O	C	FS-C	CS		CS-19	TP-03
											LT-J	AppJ			
											PIT	Y2			
											ST-C	CS		CS-19	
	Valve Name	Drywell Inst N2 TIP Indexer Purge Valve													
1IN043	M-66-7	D5	3	C	1	CK	SA	A	SYS	C	CC	RR		RJ-04	
											CO	RR		RJ-04	TP-01
	Valve Name	B ADS Accum Unregulated N2 Header Dw Supply CV													
1IN044	M-66-7	D8	3	C	1	CK	SA	A	SYS	C	CC	RR		RJ-04	
											CO	RR		RJ-04	TP-01
	Valve Name	A ADS Accum Unregulated N2 Header Dw Supply CV													
1IN045	M-66-7	E7	3	C	1 x 2	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name	A N2 Manifold Relief Valve													
1IN046	M-66-7	E6	3	C	1 x 2	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name	B N2 Manifold Relief Valve													

Instrument Nitrogen

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1IN074	M-66-1	E5	2	A	1.5	GL	AO	A	O	C	FS-C	CS		CS-04	TP-03
											LT-J	AppJ			
											PIT	Y2			
											ST-C	CS		CS-04	
	Valve Name	DW Inst N2 Dryer Purge Downstream Outlet Valve													
1IN075	M-66-1	E5	2	A	1.5	GL	AO	A	O	C	FS-C	CS		CS-04	TP-03
											LT-J	AppJ			
											PIT	Y2			
											ST-C	CS		CS-04	
	Valve Name	DW Inst N2 Dryer Purge Upstream Outlet Valve													
1IN100	M-66-7	C7	2	B	1	GL	SO	A	O	O/C	FS-O	CS		CS-06	TP-03
											PIT	Y2			
											ST-C	CS		CS-06	TP-11
											ST-O	CS		CS-06	TP-11
	Valve Name	A ADS Accum Unregulated N2 Header DW Isol Valve													
1IN101	M-66-7	C6	2	B	1	GL	SO	A	O	O/C	FS-O	CS		CS-06	TP-03
											PIT	Y2			
											ST-C	CS		CS-06	TP-11
											ST-O	CS		CS-06	TP-11
	Valve Name	B ADS Accum Unregulated N2 Header DW Isol Valve													
2B21-F024A	M-66-4	F4	3	C	0.75	CK	SA	A	SYS	C	CC	CS		CS-16	
											CO	CS			TP-01
	Valve Name	A Inbd MSIV Accum Inlet Check Valve													
2B21-F024B	M-66-4	F7	3	C	0.75	CK	SA	A	SYS	C	CC	CS		CS-16	
											CO	CS			TP-01
	Valve Name	B Inbd MSIV Accum Inlet Check Valve													
2B21-F024C	M-66-4	F1	3	C	0.75	CK	SA	A	SYS	C	CC	CS		CS-16	
											CO	CS			TP-01
	Valve Name	C Inbd MSIV Accum Inlet Check Valve													
2B21-F024D	M-66-4	F3	3	C	0.75	CK	SA	A	SYS	C	CC	CS		CS-16	
											CO	CS			TP-01
	Valve Name	D Inbd MSIV Accum Inlet Check Valve													
2B21-F036C	M-66-8	E2	3	C	0.5	CK	SA	A	SYS	C	CC	CS		CS-18	
											CO	CS		CS-18	TP-01
	Valve Name	SRV Accumulator 2B21-A004C Inlet Check Valve													
2B21-F036D	M-66-8	E7	3	C	0.5	CK	SA	A	SYS	C	CC	CS		CS-18	
											CO	CS		CS-18	TP-01
	Valve Name	SRV Accumulator 2B21-A004D Inlet Check Valve													

Instrument Nitrogen

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2B21-F036E	M-66-4	D6	3	C	0.5	CK	SA	A	SYS	C	CC	CS		CS-18	
											CO	CS		CS-18	TP-01
	Valve Name	SRV Accumulator 2B21-A004E Inlet Check Valve													
2B21-F036F	M-66-4	D2	3	C	0.5	CK	SA	A	SYS	C	CC	CS		CS-18	
											CO	CS		CS-18	TP-01
	Valve Name	SRV Accumulator 2B21-A004F Inlet Check Valve													
2B21-F036H	M-66-8	C2	3	C	0.5	CK	SA	A	SYS	C	CC	CS		CS-18	
											CO	CS		CS-18	TP-01
	Valve Name	SRV Accumulator 2B21-A004H Inlet Check Valve													
2B21-F036K	M-66-4	D3	3	C	0.5	CK	SA	A	SYS	C	CC	CS		CS-18	
											CO	CS		CS-18	TP-01
	Valve Name	SRV Accumulator 2B21-A004K Inlet Check Valve													
2B21-F036L	M-66-4	D5	3	C	0.5	CK	SA	A	SYS	C	CC	CS		CS-18	
											CO	CS		CS-18	TP-01
	Valve Name	SRV Accumulator 2B21-A004L Inlet Check Valve													
2B21-F036M	M-66-4	D4	3	C	0.5	CK	SA	A	SYS	C	CC	CS		CS-18	
											CO	CS		CS-18	TP-01
	Valve Name	SRV Accumulator 2B21-A004M Inlet Check Valve													
2B21-F036P	M-66-8	E8	3	C	0.5	CK	SA	A	SYS	C	CC	CS		CS-18	
											CO	CS		CS-18	TP-01
	Valve Name	SRV Accumulator 2B21-A004P Inlet Check Valve													
2B21-F036R	M-66-4	D7	3	C	0.5	CK	SA	A	SYS	C	CC	CS		CS-18	
											CO	CS		CS-18	TP-01
	Valve Name	SRV Accumulator 2B21-A004R Inlet Check Valve													
2B21-F036S	M-66-4	D4	3	C	0.5	CK	SA	A	SYS	C	CC	CS		CS-18	
											CO	CS		CS-18	TP-01
	Valve Name	SRV Accumulator 2B21-A004S Inlet Check Valve													
2B21-F036U	M-66-8	E4	3	C	0.5	CK	SA	A	SYS	C	CC	CS		CS-18	
											CO	CS		CS-18	TP-01
	Valve Name	SRV Accumulator 2B21-A004U Inlet Check Valve													
2B21-F036V	M-66-4	D1	3	C	0.5	CK	SA	A	SYS	C	CC	CS		CS-18	
											CO	CS		CS-18	TP-01
	Valve Name	SRV Accumulator 2B21-A004V Inlet Check Valve													
2B21-F040C	M-66-8	C3	3	C	0.5	CK	SA	A	SYS	O/C	CC	CS		CS-14	
											CO	CS		CS-14	
	Valve Name	SRV ADS Accumulator 2B21-A003C Inlet Check Valve													

Instrument Nitrogen

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2B21-F040D	M-66-8	C7	3	C	0.5	CK	SA	A	SYS	O/C	CC	CS		CS-14	
											CO	CS		CS-14	
	Valve Name	SRV ADS Accumulator 2B21-A003D Inlet Check Valve													
2B21-F040E	M-66-4	B6	3	C	0.5	CK	SA	A	SYS	O/C	CC	CS		CS-14	
											CO	CS		CS-14	
	Valve Name	SRV ADS Accumulator 2B21-A003E Inlet Check Valve													
2B21-F040R	M-66-4	B7	3	C	0.5	CK	SA	A	SYS	O/C	CC	CS		CS-14	
											CO	CS		CS-14	
	Valve Name	SRV ADS Accumulator 2B21-A003R Inlet Check Valve													
2B21-F040S	M-66-4	B4	3	C	0.5	CK	SA	A	SYS	O/C	CC	CS		CS-14	
											CO	CS		CS-14	
	Valve Name	SRV ADS Accumulator 2B21-A003S Inlet Check Valve													
2B21-F040U	M-66-8	C5	3	C	0.5	CK	SA	A	SYS	O/C	CC	CS		CS-14	
											CO	CS		CS-14	
	Valve Name	SRV ADS Accumulator 2B21-A003U Inlet Check Valve													
2B21-F040V	M-66-4	B1	3	C	0.5	CK	SA	A	SYS	O/C	CC	CS		CS-14	
											CO	CS		CS-14	
	Valve Name	SRV ADS Accumulator 2B21-A003V Inlet Check Valve													
2IN001A	M-66-3	F6	2	A	2	GL	AO	A	O	C	FS-C	RR		RJ-01	TP-03
											LT-J	AppJ			
											PIT	Y2			
											ST-C	RR		RJ-01	
	Valve Name	Drywell Inst N2 Suction Header Upstm Isolation Vlv													
2IN001B	M-66-3	F7	2	A	2	GL	AO	A	O	C	FS-C	RR		RJ-01	TP-03
											LT-J	AppJ			
											PIT	Y2			
											ST-C	RR		RJ-01	
	Valve Name	Drywell Inst N2 Suction Header Upstm Isolation Vlv													
2IN017	M-66-3	B3	2	A	1.5	GL	AO	A	O	C	FS-C	CS		CS-05	TP-03
											LT-J	AppJ			
											PIT	Y2			
											ST-C	CS		CS-05	
	Valve Name	DW Inst N2 Regulated Hdr Drywell Supply Valve													
2IN018	M-66-3	B3	2	A/C	2	CK	SA	A	SYS	C	CC	CM		RJ-04	CM09
											CO	CM		RJ-04	CM09
											LT-J	AppJ			
	Valve Name	DW Inst N2 Regulated Hdr Drywell Isol Check Valve													

Instrument Nitrogen

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2IN031	M-66-3	B5	2	A	0.75	GL	SO	A	O	C	FS-C	CS		CS-19	TP-03
											LT-J	AppJ			
											PIT	Y2			
											ST-C	CS		CS-19	
	Valve Name	Drywell Inst N2 TIP Indexer Purge Valve													
2IN043	M-66-7	D1	3	C	1	CK	SA	A	SYS	C	CC	RR		RJ-04	
											CO	RR		RJ-04	TP-01
	Valve Name	B ADS Accum Unregulated N2 Header Dw Supply CV													
2IN044	M-66-7	D4	3	C	1	CK	SA	A	SYS	C	CC	RR		RJ-04	
											CO	RR		RJ-04	TP-01
	Valve Name	A ADS Accum Unregulated N2 Header Dw Supply CV													
2IN045	M-66-7	E3	3	C	1 x 2	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name	A N2 Manifold Relief Valve													
2IN046	M-66-7	E2	3	C	1 x 2	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name	B N2 Manifold Relief Valve													
2IN074	M-66-3	E5	2	A	1.5	GL	AO	A	O	C	FS-C	CS		CS-04	TP-03
											LT-J	AppJ			
											PIT	Y2			
											ST-C	CS		CS-04	
	Valve Name	DW Inst N2 Dryer Purge Downstream Outlet Valve													
2IN075	M-66-3	E5	2	A	1.5	GL	AO	A	O	C	FS-C	CS		CS-04	TP-03
											LT-J	AppJ			
											PIT	Y2			
											ST-C	CS		CS-04	
	Valve Name	DW Inst N2 Dryer Purge Upstream Outlet Valve													
2IN100	M-66-7	C3	2	B	1	GL	SO	A	O	O/C	FS-O	CS		CS-06	TP-03
											PIT	Y2			
											ST-C	CS		CS-06	TP-11
											ST-O	CS		CS-06	TP-11
	Valve Name	A ADS Accum Unregulated N2 Header DW Isol Valve													
2IN101	M-66-7	C2	2	B	1	GL	SO	A	O	O/C	FS-O	CS		CS-06	TP-03
											PIT	Y2			
											ST-C	CS		CS-06	TP-11
											ST-O	CS		CS-06	TP-11
	Valve Name	B ADS Accum Unregulated N2 Header DW Isol Valve													

Low Pressure Core Spray

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1E21-F001	M-94	B6	2	B	24	GA	MO	A	O	O/C	ET	Y2	RV-02		
											OMN-C	JOG	RV-02		
											OMN-O	JOG	RV-02		
	Valve Name	LPCS Pump Suction Isolation Valve													
1E21-F003	M-94	C2	2	C	16	CK	SA	A	SYS	O/C	CC	M3			
											CO	M3			
	Valve Name	LPCS Pump Dsch Check Valve													
1E21-F005	M-94	D6	1	A	12	GA	MO	A	C	O/C	ET	Y2	RV-02		
											LT-J	AppJ			
											LT-S	Y2			
											OMN-C	JOG	RV-02		
											OMN-O	JOG	RV-02		
	Valve Name	LPCS Injection Isolation Valve													
1E21-F006	M-94	C6	1	A/C	12	CK	SA	A	C	O/C	CC	CS		CS-17	
											CO	CS		CS-17	
											LT-S	Y2			
	Valve Name	LPCS Injection Check Valve													
1E21-F011	M-94	C3	2	B	4	GA	MO	A	O	O/C	ET	Y2	RV-02		
											OMN-C	JOG	RV-02		
											OMN-O	JOG	RV-02		
	Valve Name	LPCS Pump Minimum Flow Isolation Valve													
1E21-F012	M-94	C5	2	B	14	GL	MO	A	C	C	ET	Y2	RV-02		
											OMN-C	JOG	RV-02		
	Valve Name	LPCS Pump Full Flow Test Isolation Valve													
1E21-F018	M-94	D5	2	C	3 x 4	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name	LPCS Pump Dsch Relief Valve													
1E21-F031	M-94	B4	2	C	1 x 2	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name	LPCS Pump Suct Relief Valve													
1E21-F033	M-94	C3	2	C	0.75	CK	SA	A	SYS	O/C	CC	M3			TP-07
											CO	M3			TP-07
	Valve Name	LPCS Water Leg Pump Dsch Check Valve													
1E21-F051	M-94	C7	1	B	12	GA	M	P	LO	O	PIT	Y2			
	Valve Name	LPCS Injection Hdr Manual Stop Valve													
1E21-F304	M-2094-1	B3	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	LPCS/RHR Integrity Excess Flow Check Valve													

Low Pressure Core Spray

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2E21-F001	M-140	B6	2	B	24	GA	MO	A	O	O/C	ET	Y2	RV-02		
											OMN-C	JOG	RV-02		
											OMN-O	JOG	RV-02		
	Valve Name	LPCS Pump Suction Isolation Valve													
2E21-F003	M-140	D2	2	C	16	CK	SA	A	SYS	O/C	CC	M3			
											CO	M3			
	Valve Name	LPCS Pump Dsch Check Valve													
2E21-F005	M-140	D6	1	A	12	GA	MO	A	C	O/C	ET	Y2	RV-02		
											LT-J	AppJ			
											LT-S	Y2			
											OMN-C	JOG	RV-02		
											OMN-O	JOG	RV-02		
	Valve Name	LPCS Injection Isolation Valve													
2E21-F006	M-140	D6	1	A/C	12	CK	SA	A	C	O/C	CC	CS		CS-17	
											CO	CS		CS-17	
											LT-S	Y2			
	Valve Name	LPCS Injection Check Valve													
2E21-F011	M-140	C3	2	B	4	GA	MO	A	O	O/C	ET	Y2	RV-02		
											OMN-C	JOG	RV-02		
											OMN-O	JOG	RV-02		
	Valve Name	LPCS Pump Minimum Flow Isolation Valve													
2E21-F012	M-140	C5	2	B	14	GL	MO	A	C	C	ET	Y2	RV-02		
											OMN-C	JOG	RV-02		
	Valve Name	LPCS Pump Full Flow Test Isolation Valve													
2E21-F018	M-140	E5	2	C	3 x 4	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name	LPCS Pump Dsch Relief Valve													
2E21-F031	M-140	C4	2	C	1 x 2	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name	LPCS Pump Suct Relief Valve													
2E21-F033	M-140	C3	2	C	0.75	CK	SA	A	SYS	O/C	CC	M3			TP-07
											CO	M3			TP-07
	Valve Name	LPCS Water Leg Pump Dsch Check Valve													
2E21-F051	M-140	D7	1	B	12	GA	M	P	LO	O	PIT	Y2			
	Valve Name	LPCS Injection Hdr Manual Stop Valve													
2E21-F304	M-2140-1	B3	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	LPCS/RHR Integrity Excess Flow Check Valve													

Main Steam

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1B21-F013C	M-55-1	E2	1	C	6	RV	AO	A	C	O/C	RVT	Y5	RV-01		
	Valve Name	C Main Steam Line Safety Relief Valve w/ADS													
1B21-F013D	M-55-1	B2	1	C	6	RV	AO	A	C	O/C	RVT	Y5	RV-01		
	Valve Name	B Main Steam Line Safety Relief Valve w/ADS													
1B21-F013E	M-55-1	E3	1	C	6	RV	AO	A	C	O/C	RVT	Y5	RV-01		
	Valve Name	C Main Steam Line Safety Relief Valve w/ADS													
1B21-F013F	M-55-1	B3	1	C	6	RV	AO	A	C	O/C	RVT	Y5	RV-01		
	Valve Name	B Main Steam Line Safety Relief Valve													
1B21-F013H	M-55-1	D4	1	C	6	RV	AO	A	C	O/C	RVT	Y5	RV-01		
	Valve Name	D Main Steam Line Safety Relief Valve													
1B21-F013K	M-55-1	B4	1	C	6	RV	AO	A	C	O/C	RVT	Y5	RV-01		
	Valve Name	B Main Steam Line Safety Relief Valve													
1B21-F013L	M-55-1	E6	1	C	6	RV	AO	A	C	O/C	RVT	Y5	RV-01		
	Valve Name	C Main Steam Line Safety Relief Valve													
1B21-F013M	M-55-1	B7	1	C	6	RV	AO	A	C	O/C	RVT	Y5	RV-01		
	Valve Name	B Main Steam Line Safety Relief Valve													
1B21-F013P	M-55-1	C6	1	C	6	RV	AO	A	C	O/C	RVT	Y5	RV-01		
	Valve Name	A Main Steam Line Safety Relief Valve													
1B21-F013R	M-55-1	E5	1	C	6	RV	AO	A	C	O/C	RVT	Y5	RV-01		
	Valve Name	C Main Steam Line Safety Relief Valve w/ADS													
1B21-F013S	M-55-1	B6	1	C	6	RV	AO	A	C	O/C	RVT	Y5	RV-01		
	Valve Name	B Main Steam Line Safety Relief Valve w/ADS													
1B21-F013U	M-55-1	D7	1	C	6	RV	AO	A	C	O/C	RVT	Y5	RV-01		
	Valve Name	D Main Steam Line Safety Relief Valve w/ADS													
1B21-F013V	M-55-1	C7	1	C	6	RV	AO	A	C	O/C	RVT	Y5	RV-01		
	Valve Name	A Main Steam Line Safety Relief Valve w/ADS													
1B21-F016	M-55-7	B7	1	A	3	GA	MO	A	O	C	ET	Y2	RV-02		
											LT-J	AppJ			
											OMN-C	JOG	RV-02		
	Valve Name	Inbd Main Steam Line Drain Header Inbd Isol Valve													
1B21-F019	M-55-7	B6	1	A	3	GA	MO	A	O	C	ET	Y2	RV-02		
											LT-J	AppJ			
											OMN-C	JOG	RV-02		
	Valve Name	Inbd Main Steam Line Drain Header Otbd Isol Valve													
1B21-F020	M-55-7	B5	NS	N/A	3	GL	MO	N/A	C	N/A	PIT	Y2			
											ST-C	RR		RJ-05	
											ST-O	RR		RJ-05	
	Valve Name	Main Steam Equalizing Header Upstrm Stop Valve													

Main Steam

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1B21-F021	M-55-7	A5	NS	N/A	3	GL	MO	N/A	C	N/A	PIT	Y2			
											ST-C	RR		RJ-05	
											ST-O	RR		RJ-05	
	Valve Name	Inbd Main Steam Line Header Orifice Bypass Valve													
1B21-F022A	M-55-2	C6	1	A	26	GL	AO	A	O	C	CP	M3			
											FS-C	CS		CS-03	TP-03
											LT-J	AppJ			
											PIT	Y2			
											ST-C	CS		CS-03	
	Valve Name	A Main Steam Line Inboard Isolation Valve													
1B21-F022B	M-55-2	B6	1	A	26	GL	AO	A	O	C	CP	M3			
											FS-C	CS		CS-03	TP-03
											LT-J	AppJ			
											PIT	Y2			
											ST-C	CS		CS-03	
	Valve Name	B Main Steam Line Inboard Isolation Valve													
1B21-F022C	M-55-2	F6	1	A	26	GL	AO	A	O	C	CP	M3			
											FS-C	CS		CS-03	TP-03
											LT-J	AppJ			
											PIT	Y2			
											ST-C	CS		CS-03	
	Valve Name	C Main Steam Line Inboard Isolation Valve													
1B21-F022D	M-55-2	D6	1	A	26	GL	AO	A	O	C	CP	M3			
											FS-C	CS		CS-03	TP-03
											LT-J	AppJ			
											PIT	Y2			
											ST-C	CS		CS-03	
	Valve Name	D Main Steam Line Inboard Isolation Valve													
1B21-F028A	M-55-2	C4	1	A	26	GL	AO	A	O	C	CP	M3			
											FS-C	CS		CS-03	TP-03
											LT-J	AppJ			
											PIT	Y2			
											ST-C	CS		CS-03	
	Valve Name	A Main Steam Line Outboard Isolation Valve													

Main Steam

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1B21-F028B	M-55-2	B4	1	A	26	GL	AO	A	O	C	CP	M3			
											FS-C	CS		CS-03	TP-03
											LT-J	AppJ			
											PIT	Y2			
											ST-C	CS		CS-03	
	Valve Name	B Main Steam Line Outboard Isolation Valve													
1B21-F028C	M-55-2	F4	1	A	26	GL	AO	A	O	C	CP	M3			
											FS-C	CS		CS-03	TP-03
											LT-J	AppJ			
											PIT	Y2			
											ST-C	CS		CS-03	
	Valve Name	C Main Steam Line Outboard Isolation Valve													
1B21-F028D	M-55-2	D4	1	A	26	GL	AO	A	O	C	CP	M3			
											FS-C	CS		CS-03	TP-03
											LT-J	AppJ			
											PIT	Y2			
											ST-C	CS		CS-03	
	Valve Name	D Main Steam Line Outboard Isolation Valve													
1B21-F037C1	M-92-1	C4	3	C	6	CK	SA	A	SYS	O/C	CC	CS		CS-08	
											CO	CS		CS-08	
	Valve Name	C SRV Downcomer Vacuum Bkr Valve													
1B21-F037C2	M-92-1	C4	3	C	6	CK	SA	A	SYS	O/C	CC	CS		CS-08	
											CO	CS		CS-08	
	Valve Name	C SRV Downcomer Vacuum Bkr Valve													
1B21-F037D1	M-92-1	C4	3	C	6	CK	SA	A	SYS	O/C	CC	CS		CS-08	
											CO	CS		CS-08	
	Valve Name	D SRV Downcomer Vacuum Bkr Valve													
1B21-F037D2	M-92-1	C4	3	C	6	CK	SA	A	SYS	O/C	CC	CS		CS-08	
											CO	CS		CS-08	
	Valve Name	D SRV Downcomer Vacuum Bkr Valve													
1B21-F037E1	M-92-1	C4	3	C	6	CK	SA	A	SYS	O/C	CC	CS		CS-08	
											CO	CS		CS-08	
	Valve Name	E SRV Downcomer Vacuum Bkr Valve													
1B21-F037E2	M-92-1	C4	3	C	6	CK	SA	A	SYS	O/C	CC	CS		CS-08	
											CO	CS		CS-08	
	Valve Name	E SRV Downcomer Vacuum Bkr Valve													

Main Steam

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1B21-F037F1	M-92-1	C4	3	C	6	CK	SA	A	SYS	O/C	CC	CS		CS-08	
											CO	CS		CS-08	
	Valve Name	F SRV Downcomer Vacuum Bkr Valve													
1B21-F037F2	M-92-1	C4	3	C	6	CK	SA	A	SYS	O/C	CC	CS		CS-08	
											CO	CS		CS-08	
	Valve Name	F SRV Downcomer Vacuum Bkr Valve													
1B21-F037H1	M-92-1	C6	3	C	6	CK	SA	A	SYS	O/C	CC	CS		CS-08	
											CO	CS		CS-08	
	Valve Name	H SRV Downcomer Vacuum Bkr Valve													
1B21-F037H2	M-92-1	C6	3	C	6	CK	SA	A	SYS	O/C	CC	CS		CS-08	
											CO	CS		CS-08	
	Valve Name	H SRV Downcomer Vacuum Bkr Valve													
1B21-F037K1	M-92-1	C5	3	C	6	CK	SA	A	SYS	O/C	CC	CS		CS-08	
											CO	CS		CS-08	
	Valve Name	K SRV Downcomer Vacuum Bkr Valve													
1B21-F037K2	M-92-1	C5	3	C	6	CK	SA	A	SYS	O/C	CC	CS		CS-08	
											CO	CS		CS-08	
	Valve Name	K SRV Downcomer Vacuum Bkr Valve													
1B21-F037L1	M-92-1	C5	3	C	6	CK	SA	A	SYS	O/C	CC	CS		CS-08	
											CO	CS		CS-08	
	Valve Name	L SRV Downcomer Vacuum Bkr Valve													
1B21-F037L2	M-92-1	C5	3	C	6	CK	SA	A	SYS	O/C	CC	CS		CS-08	
											CO	CS		CS-08	
	Valve Name	L SRV Downcomer Vacuum Bkr Valve													
1B21-F037M1	M-92-1	C6	3	C	6	CK	SA	A	SYS	O/C	CC	CS		CS-08	
											CO	CS		CS-08	
	Valve Name	M SRV Downcomer Vacuum Bkr Valve													
1B21-F037M2	M-92-1	C6	3	C	6	CK	SA	A	SYS	O/C	CC	CS		CS-08	
											CO	CS		CS-08	
	Valve Name	M SRV Downcomer Vacuum Bkr Valve													
1B21-F037P1	M-92-1	C5	3	C	6	CK	SA	A	SYS	O/C	CC	CS		CS-08	
											CO	CS		CS-08	
	Valve Name	P SRV Downcomer Vacuum Bkr Valve													
1B21-F037P2	M-92-1	C5	3	C	6	CK	SA	A	SYS	O/C	CC	CS		CS-08	
											CO	CS		CS-08	
	Valve Name	P SRV Downcomer Vacuum Bkr Valve													

Main Steam

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1B21-F037R1	M-92-1	C5	3	C	6	CK	SA	A	SYS	O/C	CC	CS		CS-08	
											CO	CS		CS-08	
	Valve Name	R SRV Downcomer Vacuum Bkr Valve													
1B21-F037R2	M-92-1	C5	3	C	6	CK	SA	A	SYS	O/C	CC	CS		CS-08	
											CO	CS		CS-08	
	Valve Name	R SRV Downcomer Vacuum Bkr Valve													
1B21-F037S1	M-92-1	C5	3	C	6	CK	SA	A	SYS	O/C	CC	CS		CS-08	
											CO	CS		CS-08	
	Valve Name	S SRV Downcomer Vacuum Bkr Valve													
1B21-F037S2	M-92-1	C5	3	C	6	CK	SA	A	SYS	O/C	CC	CS		CS-08	
											CO	CS		CS-08	
	Valve Name	S SRV Downcomer Vacuum Bkr Valve													
1B21-F037U1	M-92-1	C6	3	C	6	CK	SA	A	SYS	O/C	CC	CS		CS-08	
											CO	CS		CS-08	
	Valve Name	U SRV Downcomer Vacuum Bkr Valve													
1B21-F037U2	M-92-1	C6	3	C	6	CK	SA	A	SYS	O/C	CC	CS		CS-08	
											CO	CS		CS-08	
	Valve Name	U SRV Downcomer Vacuum Bkr Valve													
1B21-F037V1	M-92-1	C5	3	C	6	CK	SA	A	SYS	O/C	CC	CS		CS-08	
											CO	CS		CS-08	
	Valve Name	V SRV Downcomer Vacuum Bkr Valve													
1B21-F037V2	M-92-1	C5	3	C	6	CK	SA	A	SYS	O/C	CC	CS		CS-08	
											CO	CS		CS-08	
	Valve Name	V SRV Downcomer Vacuum Bkr Valve													
1B21-F067A	M-55-7	E6	1	A	1.5	GA	MO	A	O	C	ET	Y2	RV-02		
											LT-J	AppJ			
											OMN-C	JOG	RV-02		
	Valve Name	A Otbd MSIV Below Seat Drain Valve													
1B21-F067B	M-55-7	E5	1	A	1.5	GA	MO	A	O	C	ET	Y2	RV-02		
											LT-J	AppJ			
											OMN-C	JOG	RV-02		
	Valve Name	B Otbd MSIV Below Seat Drain Valve													
1B21-F067C	M-55-7	E7	1	A	1.5	GA	MO	A	O	C	ET	Y2	RV-02		
											LT-J	AppJ			
											OMN-C	JOG	RV-02		
	Valve Name	C Otbd MSIV Below Seat Drain Valve													

Main Steam

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1B21-F067D	M-55-7	E6	1	A	1.5	GA	MO	A	O	C	ET	Y2	RV-02		
											LT-J	AppJ			
											OMN-C	JOG	RV-02		
	Valve Name	D Otbd MSIV Below Seat Drain Valve													
1B21-F070	M-55-7	B2	NS	N/A	3	GL	MO	N/A	C	N/A	PIT	Y2			
											ST-C	RR		RJ-05	
											ST-O	RR		RJ-05	
	Valve Name	Main Steamline Drain Upstr. Orifice Bypass Valve													
1B21-F071	M-55-7	C2	NS	N/A	1	GL	MO	N/A	O	N/A	PIT	Y2			
											ST-C	RR		RJ-05	
											ST-O	RR		RJ-05	
	Valve Name	Main Steamline Drain Upstr. Orifice Inlet Valve													
1B21-F072	M-55-7	C2	NS	N/A	3	GL	MO	N/A	C	N/A	PIT	Y2			
											ST-C	RR		RJ-05	
											ST-O	RR		RJ-05	
	Valve Name	Main Steamline Drain Dwnst. Orifice Bypass Valve													
1B21-F073	M-55-7	D2	NS	N/A	1	GL	MO	N/A	O	N/A	PIT	Y2			
											ST-C	RR		RJ-05	
											ST-O	RR		RJ-05	
	Valve Name	Main Steamline Drain Dwnst. Orifice Inlet Valve													
1B21-F325A	M-2055-4	F5	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	A MS Line Hi Flow D/P Inst 1E31-N008A/N008B Hi EFV													
1B21-F325B	M-2055-5	F5	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	B MS Hi Line Flow D/P Inst 1E31-N009A/N009B Hi EFV													
1B21-F325C	M-2055-6	F5	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	C MS Line Hi Flow D/P Sw 1E31-N010A/N010B Hi EFV													
1B21-F325D	M-2055-7	F5	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	D MS Line Hi Flow D/P Sw 1E31-N011A/N011B Hi EFV													

Main Steam

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1B21-F326A	M-2055-4	E5	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	A MS Line Hi Flow D/P Inst 1E31-N008A/N008B Lo EFV													
1B21-F326B	M-2055-5	E5	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	B MS Hi Line Flow D/P Inst 1E31-N009A/N009B Lo EFV													
1B21-F326C	M-2055-6	E5	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	C MS Line Hi Flow D/P Sw 1E31-N010A/N010B Lo EFV													
1B21-F326D	M-2055-7	E5	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	D MS Line Hi Flow D/P Sw 1E31-N011A/N011B Lo EFV													
1B21-F327A	M-2055-4	D5	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	A MS Line Hi Flow D/P Sw 1E31-N008D/N008C Lo EFV													
1B21-F327B	M-2055-5	D5	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	B MS Line Hi Flow D/P Sw 1E31-N009D/N009C Lo EFV													
1B21-F327C	M-2055-6	D5	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	C MS Line Hi Flow D/P Inst 1E31-N010C/N010D Lo EFV													
1B21-F327D	M-2055-7	C5	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	D MS Line Hi Flow D/P Inst 1E31-N011C/N011D Lo EFV													

Main Steam

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1B21-F328A	M-2055-4	C5	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	A MS Line Hi Flow D/P Sw 1E31-N008D/N008C Hi EFV													
1B21-F328B	M-2055-5	C5	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	B MS Line Hi Flow D/P Sw 1E31-N009D/N009C Hi EFV													
1B21-F328C	M-2055-6	C5	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	C MS Line Hi Flow D/P Inst 1E31-N010C/N010D Hi EFV													
1B21-F328D	M-2055-7	B5	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	D MS Line Hi Flow D/P Inst 1E31-N011C/N011D Hi EFV													
1B21-F418A	M-55-3	F7	NS	N/A	18	GA	MO	N/A	O	N/A	PIT	Y2			
											ST-C	RR		RJ-05	
											ST-O	RR		RJ-05	
	Valve Name	Main Steam Aux Supply Stop Valve													
1B21-F418B	M-55-3	B7	NS	N/A	18	GA	MO	N/A	O	N/A	PIT	Y2			
											ST-C	RR		RJ-05	
											ST-O	RR		RJ-05	
	Valve Name	Main Steam Aux Supply Stop Valve													
2B21-F013C	M-116-1	E2	1	C	6	RV	AO	A	C	O/C	RVT	Y5	RV-01		
	Valve Name	C Main Steam Line Safety Relief Valve w/ADS													
2B21-F013D	M-116-1	B2	1	C	6	RV	AO	A	C	O/C	RVT	Y5	RV-01		
	Valve Name	B Main Steam Line Safety Relief Valve w/ADS													
2B21-F013E	M-116-1	E3	1	C	6	RV	AO	A	C	O/C	RVT	Y5	RV-01		
	Valve Name	C Main Steam Line Safety Relief Valve w/ADS													
2B21-F013F	M-116-1	B3	1	C	6	RV	AO	A	C	O/C	RVT	Y5	RV-01		
	Valve Name	B Main Steam Line Safety Relief Valve													
2B21-F013H	M-116-1	D5	1	C	6	RV	AO	A	C	O/C	RVT	Y5	RV-01		
	Valve Name	D Main Steam Line Safety Relief Valve													
2B21-F013K	M-116-1	B5	1	C	6	RV	AO	A	C	O/C	RVT	Y5	RV-01		
	Valve Name	B Main Steam Line Safety Relief Valve													

Main Steam

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2B21-F013L	M-116-1	E6	1	C	6	RV	AO	A	C	O/C	RVT	Y5	RV-01		
	Valve Name	C Main Steam Line Safety Relief Valve													
2B21-F013M	M-116-1	B7	1	C	6	RV	AO	A	C	O/C	RVT	Y5	RV-01		
	Valve Name	B Main Steam Line Safety Relief Valve													
2B21-F013P	M-116-1	C6	1	C	6	RV	AO	A	C	O/C	RVT	Y5	RV-01		
	Valve Name	A Main Steam Line Safety Relief Valve													
2B21-F013R	M-116-1	E5	1	C	6	RV	AO	A	C	O/C	RVT	Y5	RV-01		
	Valve Name	C Main Steam Line Safety Relief Valve w/ADS													
2B21-F013S	M-116-1	B6	1	C	6	RV	AO	A	C	O/C	RVT	Y5	RV-01		
	Valve Name	B Main Steam Line Safety Relief Valve w/ADS													
2B21-F013U	M-116-1	D7	1	C	6	RV	AO	A	C	O/C	RVT	Y5	RV-01		
	Valve Name	D Main Steam Line Safety Relief Valve w/ADS													
2B21-F013V	M-116-1	C7	1	C	6	RV	AO	A	C	O/C	RVT	Y5	RV-01		
	Valve Name	A Main Steam Line Safety Relief Valve w/ADS													
2B21-F016	M-116-7	B7	1	A	3	GA	MO	A	O	C	ET	Y2	RV-02		
											LT-J	AppJ			
											OMN-C	JOG	RV-02		
	Valve Name	Inbd Main Steam Line Drain Header Inbd Isol Valve													
2B21-F019	M-116-7	B6	1	A	3	GA	MO	A	O	C	ET	Y2	RV-02		
											LT-J	AppJ			
											OMN-C	JOG	RV-02		
	Valve Name	Inbd Main Steam Line Drain Header Otbd Isol Valve													
2B21-F020	M-116-7	B5	NS	N/A	3	GL	MO	N/A	C	N/A	PIT	Y2			
											ST-C	RR		RJ-05	
											ST-O	RR		RJ-05	
	Valve Name	Main Steam Equalizing Header Upstrm Stop Valve													
2B21-F021	M-116-7	A5	NS	N/A	3	GL	MO	N/A	C	N/A	PIT	Y2			
											ST-C	RR		RJ-05	
											ST-O	RR		RJ-05	
	Valve Name	Inbd Main Steam Line Header Orifice Bypass Valve													
2B21-F022A	M-116-2	C6	1	A	26	GL	AO	A	O	C	CP	M3			
											FS-C	CS		CS-03	TP-03
											LT-J	AppJ			
											PIT	Y2			
											ST-C	CS		CS-03	
	Valve Name	A Main Steam Line Inboard Isolation Valve													

Main Steam

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2B21-F022B	M-116-2	B6	1	A	26	GL	AO	A	O	C	CP	M3			
											FS-C	CS		CS-03	TP-03
											LT-J	AppJ			
											PIT	Y2			
											ST-C	CS		CS-03	
	Valve Name	B Main Steam Line Inboard Isolation Valve													
2B21-F022C	M-116-2	F6	1	A	26	GL	AO	A	O	C	CP	M3			
											FS-C	CS		CS-03	TP-03
											LT-J	AppJ			
											PIT	Y2			
											ST-C	CS		CS-03	
	Valve Name	C Main Steam Line Inboard Isolation Valve													
2B21-F022D	M-116-2	D6	1	A	26	GL	AO	A	O	C	CP	M3			
											FS-C	CS		CS-03	TP-03
											LT-J	AppJ			
											PIT	Y2			
											ST-C	CS		CS-03	
	Valve Name	D Main Steam Line Inboard Isolation Valve													
2B21-F028A	M-116-2	C4	1	A	26	GL	AO	A	O	C	CP	M3			
											FS-C	CS		CS-03	TP-03
											LT-J	AppJ			
											PIT	Y2			
											ST-C	CS		CS-03	
	Valve Name	A Main Steam Line Outboard Isolation Valve													
2B21-F028B	M-116-2	B4	1	A	26	GL	AO	A	O	C	CP	M3			
											FS-C	CS		CS-03	TP-03
											LT-J	AppJ			
											PIT	Y2			
											ST-C	CS		CS-03	
	Valve Name	B Main Steam Line Outboard Isolation Valve													
2B21-F028C	M-116-2	F4	1	A	26	GL	AO	A	O	C	CP	M3			
											FS-C	CS		CS-03	TP-03
											LT-J	AppJ			
											PIT	Y2			
											ST-C	CS		CS-03	
	Valve Name	C Main Steam Line Outboard Isolation Valve													

Main Steam

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2B21-F028D	M-116-2	D4	1	A	26	GL	AO	A	O	C	CP	M3			
											FS-C	CS		CS-03	TP-03
											LT-J	AppJ			
											PIT	Y2			
											ST-C	CS		CS-03	
	Valve Name	D Main Steam Line Outboard Isolation Valve													
2B21-F037C1	M-138-1	C4	3	C	6	CK	SA	A	SYS	O/C	CC	CS		CS-08	
											CO	CS		CS-08	
	Valve Name	C SRV Downcomer Vacuum Bkr Valve													
2B21-F037C2	M-138-1	C4	3	C	6	CK	SA	A	SYS	O/C	CC	CS		CS-08	
											CO	CS		CS-08	
	Valve Name	C SRV Downcomer Vacuum Bkr Valve													
2B21-F037D1	M-138-1	C4	3	C	6	CK	SA	A	SYS	O/C	CC	CS		CS-08	
											CO	CS		CS-08	
	Valve Name	D SRV Downcomer Vacuum Bkr Valve													
2B21-F037D2	M-138-1	C4	3	C	6	CK	SA	A	SYS	O/C	CC	CS		CS-08	
											CO	CS		CS-08	
	Valve Name	D SRV Downcomer Vacuum Bkr Valve													
2B21-F037E1	M-138-1	C4	3	C	6	CK	SA	A	SYS	O/C	CC	CS		CS-08	
											CO	CS		CS-08	
	Valve Name	E SRV Downcomer Vacuum Bkr Valve													
2B21-F037E2	M-138-1	C4	3	C	6	CK	SA	A	SYS	O/C	CC	CS		CS-08	
											CO	CS		CS-08	
	Valve Name	E SRV Downcomer Vacuum Bkr Valve													
2B21-F037F1	M-138-1	C4	3	C	6	CK	SA	A	SYS	O/C	CC	CS		CS-08	
											CO	CS		CS-08	
	Valve Name	F SRV Downcomer Vacuum Bkr Valve													
2B21-F037F2	M-138-1	C4	3	C	6	CK	SA	A	SYS	O/C	CC	CS		CS-08	
											CO	CS		CS-08	
	Valve Name	F SRV Downcomer Vacuum Bkr Valve													
2B21-F037H1	M-138-1	C6	3	C	6	CK	SA	A	SYS	O/C	CC	CS		CS-08	
											CO	CS		CS-08	
	Valve Name	H SRV Downcomer Vacuum Bkr Valve													
2B21-F037H2	M-138-1	C6	3	C	6	CK	SA	A	SYS	O/C	CC	CS		CS-08	
											CO	CS		CS-08	
	Valve Name	H SRV Downcomer Vacuum Bkr Valve													

Main Steam

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2B21-F037K1	M-138-1	C5	3	C	6	CK	SA	A	SYS	O/C	CC	CS		CS-08	
											CO	CS		CS-08	
	Valve Name	K SRV Downcomer Vacuum Bkr Valve													
2B21-F037K2	M-138-1	C5	3	C	6	CK	SA	A	SYS	O/C	CC	CS		CS-08	
											CO	CS		CS-08	
	Valve Name	K SRV Downcomer Vacuum Bkr Valve													
2B21-F037L1	M-138-1	C5	3	C	6	CK	SA	A	SYS	O/C	CC	CS		CS-08	
											CO	CS		CS-08	
	Valve Name	L SRV Downcomer Vacuum Bkr Valve													
2B21-F037L2	M-138-1	C5	3	C	6	CK	SA	A	SYS	O/C	CC	CS		CS-08	
											CO	CS		CS-08	
	Valve Name	L SRV Downcomer Vacuum Bkr Valve													
2B21-F037M1	M-138-1	C6	3	C	6	CK	SA	A	SYS	O/C	CC	CS		CS-08	
											CO	CS		CS-08	
	Valve Name	M SRV Downcomer Vacuum Bkr Valve													
2B21-F037M2	M-138-1	C6	3	C	6	CK	SA	A	SYS	O/C	CC	CS		CS-08	
											CO	CS		CS-08	
	Valve Name	M SRV Downcomer Vacuum Bkr Valve													
2B21-F037P1	M-138-1	C5	3	C	6	CK	SA	A	SYS	O/C	CC	CS		CS-08	
											CO	CS		CS-08	
	Valve Name	P SRV Downcomer Vacuum Bkr Valve													
2B21-F037P2	M-138-1	C5	3	C	6	CK	SA	A	SYS	O/C	CC	CS		CS-08	
											CO	CS		CS-08	
	Valve Name	P SRV Downcomer Vacuum Bkr Valve													
2B21-F037R1	M-138-1	C5	3	C	6	CK	SA	A	SYS	O/C	CC	CS		CS-08	
											CO	CS		CS-08	
	Valve Name	R SRV Downcomer Vacuum Bkr Valve													
2B21-F037R2	M-138-1	C5	3	C	6	CK	SA	A	SYS	O/C	CC	CS		CS-08	
											CO	CS		CS-08	
	Valve Name	R SRV Downcomer Vacuum Bkr Valve													
2B21-F037S1	M-138-1	C5	3	C	6	CK	SA	A	SYS	O/C	CC	CS		CS-08	
											CO	CS		CS-08	
	Valve Name	S SRV Downcomer Vacuum Bkr Valve													
2B21-F037S2	M-138-1	C5	3	C	6	CK	SA	A	SYS	O/C	CC	CS		CS-08	
											CO	CS		CS-08	
	Valve Name	S SRV Downcomer Vacuum Bkr Valve													

Main Steam

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2B21-F037U1	M-138-1	C6	3	C	6	CK	SA	A	SYS	O/C	CC	CS		CS-08	
											CO	CS		CS-08	
	Valve Name	U SRV Downcomer Vacuum Bkr Valve													
2B21-F037U2	M-138-1	C6	3	C	6	CK	SA	A	SYS	O/C	CC	CS		CS-08	
											CO	CS		CS-08	
	Valve Name	U SRV Downcomer Vacuum Bkr Valve													
2B21-F037V1	M-138-1	C5	3	C	6	CK	SA	A	SYS	O/C	CC	CS		CS-08	
											CO	CS		CS-08	
	Valve Name	V SRV Downcomer Vacuum Bkr Valve													
2B21-F037V2	M-138-1	C5	3	C	6	CK	SA	A	SYS	O/C	CC	CS		CS-08	
											CO	CS		CS-08	
	Valve Name	V SRV Downcomer Vacuum Bkr Valve													
2B21-F067A	M-116-7	E6	1	A	1.5	GA	MO	A	O	C	ET	Y2	RV-02		
											LT-J	AppJ			
											OMN-C	JOG	RV-02		
	Valve Name	A Otbd MSIV Below Seat Drain Valve													
2B21-F067B	M-116-7	E5	1	A	1.5	GA	MO	A	O	C	ET	Y2	RV-02		
											LT-J	AppJ			
											OMN-C	JOG	RV-02		
	Valve Name	B Otbd MSIV Below Seat Drain Valve													
2B21-F067C	M-116-7	E7	1	A	1.5	GA	MO	A	O	C	ET	Y2	RV-02		
											LT-J	AppJ			
											OMN-C	JOG	RV-02		
	Valve Name	C Otbd MSIV Below Seat Drain Valve													
2B21-F067D	M-116-7	E6	1	A	1.5	GA	MO	A	O	C	ET	Y2	RV-02		
											LT-J	AppJ			
											OMN-C	JOG	RV-02		
	Valve Name	D Otbd MSIV Below Seat Drain Valve													
2B21-F070	M-116-7	B2	NS	N/A	3	GL	MO	N/A	C	N/A	PIT	Y2			
											ST-C	RR		RJ-05	
											ST-O	RR		RJ-05	
	Valve Name	Main Steamline Drain Upstr. Orifice Bypass Valve													
2B21-F071	M-116-7	C2	NS	N/A	1	GL	MO	N/A	O	N/A	PIT	Y2			
											ST-C	RR		RJ-05	
											ST-O	RR		RJ-05	
	Valve Name	Main Steamline Drain Upstr. Orifice Inlet Valve													

Main Steam

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2B21-F072	M-116-7	C2	NS	N/A	3	GL	MO	N/A	C	N/A	PIT	Y2			
											ST-C	RR		RJ-05	
											ST-O	RR		RJ-05	
	Valve Name	Main Steamline Drain Dwnst. Orifice Bypass Valve													
2B21-F073	M-116-7	D2	NS	N/A	1	GL	MO	N/A	O	N/A	PIT	Y2			
											ST-C	RR		RJ-05	
											ST-O	RR		RJ-05	
	Valve Name	Main Steamline Drain Dwnst. Orifice Inlet Valve													
2B21-F325A	M-2116-4	F5	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	A MS Line Hi Flow D/P Inst 2E31-N008A/N008B Hi Exc													
2B21-F325B	M-2116-5	F5	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	B MS Hi Line Flow D/P Inst 2E31-N009A/N009B Hi Exc													
2B21-F325C	M-2116-6	F5	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	C MS Line Hi Flow D/P Sw 2E31-N010A/N010B Hi EFV													
2B21-F325D	M-2116-7	F5	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	D MS Line Hi Flow D/P Sw 2E31-N011A/N011B Hi EFV													
2B21-F326A	M-2116-4	E5	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	A MS Line Hi Flow D/P Inst 2E31-N008A/N008B Lo Exc													
2B21-F326B	M-2116-5	E5	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	B MS Hi Line Flow D/P Inst 2E31-N009A/N009B Lo Exc													

Main Steam

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2B21-F326C	M-2116-6	E5	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	C MS Line Hi Flow D/P Sw 2E31-N010A/N010B Lo EFV													
2B21-F326D	M-2116-7	E5	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	D MS Line Hi Flow D/P Sw 2E31-N011A/N011B Lo EFV													
2B21-F327A	M-2116-4	C5	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	A MS Line Hi Flow D/P Sw 2E31-N008D/N008C Lo EFV													
2B21-F327B	M-2116-5	C5	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	B MS Line Hi Flow D/P Sw 2E31-N009D/N009C Lo EFV													
2B21-F327C	M-2116-6	C5	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	C MS Line Hi Flow D/P Inst 2E31-N010C/N010D Lo Exc													
2B21-F327D	M-2116-7	C5	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	D MS Line Hi Flow D/P Inst 2E31-N011C/N011D Lo Exc													
2B21-F328A	M-2116-4	B5	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	A MS Line Hi Flow D/P Sw 2E31-N008D/N008C Hi EFV													
2B21-F328B	M-2116-5	B5	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	B MS Line Hi Flow D/P Sw 2E31-N009D/N009C Hi EFV													

Main Steam

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2B21-F328C	M-2116-6	B5	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	C MS Line Hi Flow D/P Inst 2E31-N010C/N010D Hi Exc													
2B21-F328D	M-2116-7	B5	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	D MS Line Hi Flow D/P Inst 2E31-N011C/N011D Hi Exc													
2B21-F418A	M-116-3	B7	NS	N/A	18	GA	MO	N/A	O	N/A	PIT	Y2			
											ST-C	RR		RJ-05	
											ST-O	RR		RJ-05	
	Valve Name	Main Steam Aux Supply Stop Valve													
2B21-F418B	M-116-3	F6	NS	N/A	18	GA	MO	N/A	O	N/A	PIT	Y2			
											ST-C	RR		RJ-05	
											ST-O	RR		RJ-05	
	Valve Name	Main Steam Aux Supply Stop Valve													

Nuclear Boiler

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1B21-F001	M-93-4	E2	1	B	2	GL	MO	P	C	C	PIT	Y2			
	Valve Name	Reactor Head Vent Upstream Valve													
1B21-F002	M-93-4	E2	1	B	2	GL	MO	P	C	C	PIT	Y2			
	Valve Name	Reactor Head Vent Downstream Valve													
1B21-F344	M-93-3	B3	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	Jet Pump Developed Head D/p Ind 1B21-R005 EFV													
1B21-F346	M-93-3	B6	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	RPV Bottom Head Drain Flow EFV													
1B21-F348	M-93-3	A6	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	HPCS Rx Vsl Hi D/p E22-N009 EFV													
1B21-F350	M-93-3	A6	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	Rx Core D/p Xmtr B21-N032 EFV													
1B21-F353	M-93-4	A5	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	Rx Vsl Low Water Lvl Xmtr Inst EFV													
1B21-F355	M-93-4	B5	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	Rx Vsl Water Level Inst EFV													
1B21-F357	M-93-4	D5	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	Rx Water Lvl 2 HPCS Init Xmtr Inst EFV													

Nuclear Boiler

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1B21-F359	M-93-4	C5	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	Rx Hi Press Alarm/trip Press SW Inst EFV													
1B21-F361	M-93-4	D5	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	Rx Press/water Level Xmtr Inst EFV													
1B21-F363	M-93-4	C5	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	Rx Wtr Level Xmtr Inst EFV													
1B21-F370	M-93-5	B6	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	Rx Wtr Level 2 HPCS Init Inst Xmtr EFV													
1B21-F372	M-93-5	C6	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	Rx Vsl Water Level Xmtr Inst EFV													
1B21-F374	M-93-5	D6	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	Rx Water Level 1 RHR/LPCS/ADS Init Inst EFV													
1B21-F376	M-93-5	B6	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	Rx Water Level /Rx Alarm/trip Press Inst EFV													
1B21-F378	M-93-5	E6	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	Rx Water Level /Rx Alarm/trip Press Inst EFV													

Nuclear Boiler

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1B21-F437	M-93-3	E3	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	Rx Core Jet Pmp 1 Flow Xmtr B21-N034A Hi EFV													
1B21-F439	M-93-3	E3	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	Rx Core Jet Pmp 2 Flow Xmtr B21-N034C Hi EFV													
1B21-F441	M-93-3	D3	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	Jet Pump Flow EFV													
1B21-F443	M-93-3	D3	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	Jet Pump Flow EFV													
1B21-F445A	M-93-3	D3	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	Rx Jet Pmp 5 Flow Xmtr B21-N034J/N033A Hi EFV													
1B21-F445B	M-93-3	D3	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	Rx Jet Pmp Flow/Wtr Lvl B21-N033A/N044A EFV													
1B21-F447	M-93-3	D3	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	Rx Core Jet Pmp 6 Flow Xmtr B21-N034L Hi EFV													
1B21-F449	M-93-3	C3	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	Rx Core Jet Pmp 7 Flow Xmtr B21-N034N Hi EFV													

Nuclear Boiler

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1B21-F451	M-93-3	C3	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	Rx Core Jet Pmp 8 Flow Xmtr B21-N034R Hi EFV													
1B21-F453	M-93-3	C3	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	Rx Core Jet Pmp 9 Flow Xmtr B21-N034T Hi EFV													
1B21-F455A	M-93-3	B3	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	Rx Jet Pmp 5 Flow Xmtr B21-N033C/N034V Hi EFV													
1B21-F455B	M-93-3	B3	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	Rx Jet Pmp 10 Flow Xmtr B21-N033C Lo EFV													
1B21-F457	M-93-3	E6	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	Rx Core Jet Pmp 11 Flow Xmtr B21-N034B Hi EFV													
1B21-F459	M-93-3	E6	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	Rx Core Jet Pmp 12 Flow Xmtr B21-N034D Hi EFV													
1B21-F461	M-93-3	D6	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	Rx Core Jet Pmp 13 Flow Xmtr B21-N034F Hi EFV													
1B21-F463	M-93-3	D6	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	Rx Core Jet Pmp 14 Flow Xmtr B21-N034H Hi EFV													

Nuclear Boiler

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1B21-F465A	M-93-3	D6	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	Rx Core Jet Pmp 15 Flw Xmtr B21-N034K/N033B Hi EFV													
1B21-F465B	M-93-3	D6	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	Rx Jet Pmp Flow/Wtr Lvl B21-N033B/N044B EFV													
1B21-F467	M-93-3	D6	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	Rx Core Jet Pmp 16 Flow Xmtr B21-N034M Hi EFV													
1B21-F469	M-93-3	C6	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	Rx Core Jet Pmp 17 Flow Xmtr B21-N034P Hi EFV													
1B21-F471	M-93-3	C6	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	Rx Core Jet Pmp 18 Flow Xmtr B21-N034S Hi EFV													
1B21-F473	M-93-3	C6	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	Rx Core Jet Pmp 19 Flow Xmtr B21-N034U Hi EFV													
1B21-F475A	M-93-3	B6	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	Rx Core Jet Pmp 20 Flow Xmtr B21-N034W/N033D EFV													
1B21-F475B	M-93-3	B6	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	Rx Jet Pmp 20 Calibrated Flow Xmtr B21-N033D EFV													

Nuclear Boiler

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1B21-F570	M-93-4	C5	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	Reactor Water Level Xmtr Inst EFV													
1B21-F571	M-93-5	E6	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	Rx Wtr Lvl Xmtr B21-N026E/N026CA Inst EFV													
2B21-F001	M-139-4	E2	1	B	2	GL	MO	P	C	C	PIT	Y2			
	Valve Name	Reactor Head Vent Upstream Valve													
2B21-F002	M-139-4	E2	1	B	2	GL	MO	P	C	C	PIT	Y2			
	Valve Name	Reactor Head Vent Downstream Valve													
2B21-F344	M-139-3	B3	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	Jet Pump Developed Head D/p Ind 2B21-R005 EFV													
2B21-F346	M-139-3	B6	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	RPV Bottom Head Drain Flow EFV													
2B21-F348	M-139-3	A6	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	HPCS Rx Vsl Hi D/p E22-N009 EFV													
2B21-F350	M-139-3	A6	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	Rx Core D/p Xmtr B21-N032 EFV													
2B21-F353	M-139-4	A5	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	Rx Vsl Low Water Lvl Xmtr Inst EFV													

Nuclear Boiler

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2B21-F355	M-139-4	B5	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	Rx Vsl Water Level Inst EFV													
2B21-F357	M-139-4	D5	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	Rx Water Lvl 2 HPCS Init Xmtr Inst EFV													
2B21-F359	M-139-4	C5	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	Rx Hi Press Alarm/trip Press SW Inst EFV													
2B21-F361	M-139-4	E5	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	Rx Press/water Level Xmtr Inst EFV													
2B21-F363	M-139-4	C5	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	Rx Wtr Level Xmtr Inst EFV													
2B21-F370	M-139-5	B6	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	Rx Wtr Level 2 HPCS Init Inst Xmtr EFV													
2B21-F372	M-139-5	C6	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	Rx Vsl Water Level Xmtr Inst EFV													
2B21-F374	M-139-5	D6	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	Rx Water Level 1 RHR/LPCS/ADS Init Inst EFV													

Nuclear Boiler

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2B21-F376	M-139-5	B6	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	Rx Water Level /Rx Alarm/trip Press Inst EFV													
2B21-F378	M-139-5	E6	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	Rx Water Level /Rx Alarm/trip Press Inst EFV													
2B21-F437	M-139-3	E3	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	Rx Core Jet Pmp 1 Flow Xmtr B21-N034A Hi EFV													
2B21-F439	M-139-3	E3	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	Rx Core Jet Pmp 2 Flow Xmtr B21-N034C Hi EFV													
2B21-F441	M-139-3	E3	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	Jet Pump Flow EFV													
2B21-F443	M-139-3	D3	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	Jet Pump Flow EFV													
2B21-F445A	M-139-3	D3	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	Rx Jet Pmp 5 Flow Xmtr B21-N034J/N033A Hi EFV													
2B21-F445B	M-139-3	D3	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	Rx Jet Pmp Flow/Wtr Lvl B21-N033A/N044A EFV													

Nuclear Boiler

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2B21-F447	M-139-3	D3	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	Rx Core Jet Pmp 6 Flow Xmtr B21-N034L Hi EFV													
2B21-F449	M-139-3	C3	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	Rx Core Jet Pmp 7 Flow Xmtr B21-N034N Hi EFV													
2B21-F451	M-139-3	C3	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	Rx Core Jet Pmp 8 Flow Xmtr B21-N034R Hi EFV													
2B21-F453	M-139-3	C3	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	Rx Core Jet Pmp 9 Flow Xmtr B21-N034T Hi EFV													
2B21-F455A	M-139-3	B3	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	Rx Jet Pmp 5 Flow Xmtr B21-N033C/N034V Hi EFV													
2B21-F455B	M-139-3	B3	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	Rx Jet Pmp 10 Flow Xmtr B21-N033C Lo EFV													
2B21-F457	M-139-3	E6	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	Rx Core Jet Pmp 11 Flow Xmtr B21-N034B Hi EFV													
2B21-F459	M-139-3	E6	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	Rx Core Jet Pmp 12 Flow Xmtr B21-N034D Hi EFV													

Nuclear Boiler

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2B21-F461	M-139-3	E6	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	Rx Core Jet Pmp 13 Flow Xmtr B21-N034F Hi EFV													
2B21-F463	M-139-3	D6	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	Rx Core Jet Pmp 14 Flow Xmtr B21-N034H Hi EFV													
2B21-F465A	M-139-3	D6	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	Rx Core Jet Pmp 15 Flw Xmtr B21-N034K/N033B Hi EFV													
2B21-F465B	M-139-3	D6	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	Rx Jet Pmp Flow/Wtr Lvl B21-N033B/N044B EFV													
2B21-F467	M-139-3	D6	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	Rx Core Jet Pmp 16 Flow Xmtr B21-N034M Hi EFV													
2B21-F469	M-139-3	C6	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	Rx Core Jet Pmp 17 Flow Xmtr B21-N034P Hi EFV													
2B21-F471	M-139-3	C6	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	Rx Core Jet Pmp 18 Flow Xmtr B21-N034S Hi EFV													
2B21-F473	M-139-3	C6	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	Rx Core Jet Pmp 19 Flow Xmtr B21-N034U Hi EFV													

Nuclear Boiler

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2B21-F475A	M-139-3	B6	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	Rx Core Jet Pmp 20 Flow Xmtr B21-N034W/N033D EFV													
2B21-F475B	M-139-3	B6	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	Rx Jet Pmp 20 Calibrated Flow Xmtr B21-N033D EFV													
2B21-F570	M-139-4	C4	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	Reactor Water Level Xmtr Inst EFV													
2B21-F571	M-139-5	E6	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	Rx Wtr Lvl Xmtr B21-N026E/N026CA Inst EFV													

Neutron Monitoring

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1C51-J004A(BAL)	M-774-01	E6	NC	A	0.375	BAL	SO	A	C	C	FS-C	M3			TP-03
											LT-J	AppJ			
											PIT	Y2			
											ST-C	M3			
Valve Name	A TIP Drive Guide Tube Valve Assembly														
1C51-J004A(SHR)	M-774-01	E6	NC	D	0.375	SHR	EXP	A	O	C	DT	S2			
Valve Name	A TIP Drive Guide Tube Valve Assembly														
1C51-J004B(BAL)	M-774-01	D6	NC	A	0.375	BAL	SO	A	C	C	FS-C	M3			TP-03
											LT-J	AppJ			
											PIT	Y2			
											ST-C	M3			
Valve Name	B TIP Drive Guide Tube Valve Assembly														
1C51-J004B(SHR)	M-774-01	D6	NC	D	0.375	SHR	EXP	A	O	C	DT	S2			
Valve Name	B TIP Drive Guide Tube Valve Assembly														
1C51-J004C(BAL)	M-774-01	C6	NC	A	0.375	BAL	SO	A	C	C	FS-C	M3			TP-03
											LT-J	AppJ			
											PIT	Y2			
											ST-C	M3			
Valve Name	C TIP Drive Guide Tube Valve Assembly														
1C51-J004C(SHR)	M-774-01	C6	NC	D	0.375	SHR	EXP	A	O	C	DT	S2			
Valve Name	C TIP Drive Guide Tube Valve Assembly														
1C51-J004D(BAL)	M-774-01	D6	NC	A	0.375	BAL	SO	A	C	C	FS-C	M3			TP-03
											LT-J	AppJ			
											PIT	Y2			
											ST-C	M3			
Valve Name	D TIP Drive Guide Tube Valve Assembly														
1C51-J004D(SHR)	M-774-01	D6	NC	D	0.375	SHR	EXP	A	O	C	DT	S2			
Valve Name	D TIP Drive Guide Tube Valve Assembly														
1C51-J004E(BAL)	M-774-01	D6	NC	A	0.375	BAL	SO	A	C	C	FS-C	M3			TP-03
											LT-J	AppJ			
											PIT	Y2			
											ST-C	M3			
Valve Name	E TIP Drive Guide Tube Valve Assembly														
1C51-J004E(SHR)	M-774-01	D6	NC	D	0.375	SHR	EXP	A	O	C	DT	S2			
Valve Name	E TIP Drive Guide Tube Valve Assembly														

Neutron Monitoring

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2C51-J004A(BAL)	M-774-04	D6	NC	A	0.375	BAL	SO	A	C	C	FS-C	M3			TP-03
											LT-J	AppJ			
											PIT	Y2			
											ST-C	M3			
Valve Name		A TIP Drive Guide Tube Valve Assembly													
2C51-J004A(SHR)	M-774-04	D6	NC	D	0.375	SHR	EXP	A	O	C	DT	S2			
Valve Name		A TIP Drive Guide Tube Valve Assembly													
2C51-J004B(BAL)	M-774-04	D6	NC	A	0.375	BAL	SO	A	C	C	FS-C	M3			TP-03
											LT-J	AppJ			
											PIT	Y2			
											ST-C	M3			
Valve Name		B TIP Drive Guide Tube Valve Assembly													
2C51-J004B(SHR)	M-774-04	D6	NC	D	0.375	SHR	EXP	A	O	C	DT	S2			
Valve Name		B TIP Drive Guide Tube Valve Assembly													
2C51-J004C(BAL)	M-774-04	C6	NC	A	0.375	BAL	SO	A	C	C	FS-C	M3			TP-03
											LT-J	AppJ			
											PIT	Y2			
											ST-C	M3			
Valve Name		C TIP Drive Guide Tube Valve Assembly													
2C51-J004C(SHR)	M-774-04	C6	NC	D	0.375	SHR	EXP	A	O	C	DT	S2			
Valve Name		C TIP Drive Guide Tube Valve Assembly													
2C51-J004D(BAL)	M-774-04	C6	NC	A	0.375	BAL	SO	A	C	C	FS-C	M3			TP-03
											LT-J	AppJ			
											PIT	Y2			
											ST-C	M3			
Valve Name		D TIP Drive Guide Tube Valve Assembly													
2C51-J004D(SHR)	M-774-04	C6	NC	D	0.375	SHR	EXP	A	O	C	DT	S2			
Valve Name		D TIP Drive Guide Tube Valve Assembly													
2C51-J004E(BAL)	M-774-04	D6	NC	A	0.375	BAL	SO	A	C	C	FS-C	M3			TP-03
											LT-J	AppJ			
											PIT	Y2			
											ST-C	M3			
Valve Name		E TIP Drive Guide Tube Valve Assembly													
2C51-J004E(SHR)	M-774-04	D6	NC	D	0.375	SHR	EXP	A	O	C	DT	S2			
Valve Name		E TIP Drive Guide Tube Valve Assembly													

Primary Containment

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1PC001A	M-92-2	E6	2	A/C	24	CK	SA	A	C	O/C	CC	M3			
											CO	M3			
											LT-S	Y2			
											PIT	Y2			
											RVT	Y2			
	Valve Name	A Primary Containment Vacuum Breaker													
1PC001B	M-92-2	E7	2	A/C	24	CK	SA	A	C	O/C	CC	M3			
											CO	M3			
											LT-S	Y2			
											PIT	Y2			
											RVT	Y2			
	Valve Name	B Primary Containment Vacuum Breaker													
1PC001C	M-92-2	E4	2	A/C	24	CK	SA	A	C	O/C	CC	M3			
											CO	M3			
											LT-S	Y2			
											PIT	Y2			
											RVT	Y2			
	Valve Name	C Primary Containment Vacuum Breaker													
1PC001D	M-92-2	E3	2	A/C	24	CK	SA	A	C	O/C	CC	M3			
											CO	M3			
											LT-S	Y2			
											PIT	Y2			
											RVT	Y2			
	Valve Name	D Primary Containment Vacuum Breaker													
2PC001A	M-138-2	D6	2	A/C	24	CK	SA	A	C	O/C	CC	M3			
											CO	M3			
											LT-S	Y2			
											PIT	Y2			
											RVT	Y2			
	Valve Name	A Primary Containment Vacuum Breaker													
2PC001B	M-138-2	E6	2	A/C	24	CK	SA	A	C	O/C	CC	M3			
											CO	M3			
											LT-S	Y2			
											PIT	Y2			
											RVT	Y2			
	Valve Name	B Primary Containment Vacuum Breaker													

Primary Containment

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2PC001C	M-138-2	D3	2	A/C	24	CK	SA	A	C	O/C	CC	M3			
											CO	M3			
											LT-S	Y2			
											PIT	Y2			
											RVT	Y2			
	Valve Name	C Primary Containment Vacuum Breaker													
2PC001D	M-138-2	E3	2	A/C	24	CK	SA	A	C	O/C	CC	M3			
											CO	M3			
											LT-S	Y2			
											PIT	Y2			
											RVT	Y2			
	Valve Name	D Primary Containment Vacuum Breaker													

Control Rod Drive

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1C11-D001-114	M-100-3	E3	2	C	0.75	CK	SA	A	SYS	O	CO	RR			TP-09
	Valve Name	CRD HCU Scram Discharge Check Valve (Typ 185)													
1C11-D001-115	M-100-3	D7	NC	C	0.5	CK	SA	A	SYS	C	CC	CS			TP-09
	Valve Name	CRD HCU Charging Water Check Valve (Typ 185)													
1C11-D001-117	M-100-3	F3	NC	B	0.50	3W	SO	A	E	D	SD	RR			TP-09
	Valve Name	CRD HCU Scram Pilot Valve (Typ 185)													
1C11-D001-118	M-100-3	F3	NC	B	0.50	3W	SO	A	E	D	SD	RR			TP-09
	Valve Name	CRD HCU Scram Pilot Valve (Typ 185)													
1C11-D001-126	M-100-3	D6	NC	B	1	GA	AO	A	C	O	FS-O	RR			TP-09
											ST-O	RR			TP-09
	Valve Name	CRD HCU Scram Inlet Valve (Typ 185)													
1C11-D001-127	M-100-3	E3	NC	B	1	GA	AO	A	C	O	FS-O	RR			TP-09
											ST-O	RR			TP-09
	Valve Name	CRD HCU Scram Outlet Valve (Typ 185)													
1C11-D001-137	M-100-3	D5	NC	C	0.5	CK	SA	A	C	C	CC	M3			TP-09
	Valve Name	CRD HCU Drive Water Check Valve (Typ 185)													
1C11-D001-138	M-100-3	D5	NC	C	0.5	CK	SA	A	C	C	CC	M3			TP-09
	Valve Name	CRD HCU Cooling Water Check Valve (Typ 185)													
1C11-F380	M-100-2	D3	2	B	2	GL	AO	A	O	C	FS-C	M3			TP-03
											PIT	Y2			
											ST-C	M3			
	Valve Name	Scram Dsch Volume Hdr Dwnst Vent Valve													
1C11-F381	M-100-4	B1	NC	B	2	GL	AO	A	O	C	FS-C	M3			TP-03
											PIT	Y2			
											ST-C	M3			
	Valve Name	Scram Dsch Volume Hdr Dwnst Drain Valve													
1C11-F388	M-100-2	D3	2	B	2	GL	AO	A	O	C	FS-C	M3			TP-03
											PIT	Y2			
											ST-C	M3			
	Valve Name	Scram Dsch Volume Hdr Upstrm Vent Valve													
1C11-F389	M-100-4	B1	NC	B	2	GL	AO	A	O	C	FS-C	M3			TP-03
											PIT	Y2			
											ST-C	M3			
	Valve Name	Scram Dsch Volume Hdr Upstrm Drain Valve													
1C11-F422B	M-100-5	B4	2	A/C	0.375	CK	SA	A	SYS	C	CC	RR		RJ-03	
											CO	RR		RJ-03	TP-01
											LT-J	AppJ			
	Valve Name	Reactor Vsl Ref Leg CRD Backfill Pnl-3 Upstrm EFV													

Control Rod Drive

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1C11-F422D	M-100-5	E8	2	A/C	0.375	CK	SA	A	SYS	C	CC	RR		RJ-03	
											CO	RR		RJ-03	TP-01
											LT-J	AppJ			
	Valve Name		Reactor Vsl Ref Leg CRD Backfill Pnl-2 Upstrm EFV												
1C11-F422F	M-100-5	E4	2	A/C	0.375	CK	SA	A	SYS	C	CC	RR		RJ-03	
											CO	RR		RJ-03	TP-01
											LT-J	AppJ			
	Valve Name		Reactor Vsl Ref Leg CRD Backfill Pnl-5 Upstrm EFV												
1C11-F422G	M-100-5	E1	2	A/C	0.375	CK	SA	A	SYS	C	CC	RR		RJ-03	
											CO	RR		RJ-03	TP-01
											LT-J	AppJ			
	Valve Name		Reactor Vsl Ref Leg CRD Backfill Pnl-4 Upstrm EFV												
1C11-F423B	M-100-5	B4	2	A/C	0.375	CK	SA	A	SYS	C	CC	RR		RJ-03	
											CO	RR		RJ-03	TP-01
											LT-J	AppJ			
	Valve Name		Reactor Vsl Ref Leg CRD Backfill Pnl-3 Dwnst EFV												
1C11-F423D	M-100-5	E8	2	A/C	0.375	CK	SA	A	SYS	C	CC	RR		RJ-03	
											CO	RR		RJ-03	TP-01
											LT-J	AppJ			
	Valve Name		Reactor Vsl Ref Leg CRD Backfill Pnl-2 Dwnst EFV												
1C11-F423F	M-100-5	E4	2	A/C	0.375	CK	SA	A	SYS	C	CC	RR		RJ-03	
											CO	RR		RJ-03	TP-01
											LT-J	AppJ			
	Valve Name		Reactor Vsl Ref Leg CRD Backfill Pnl-5 Dwnst EFV												
1C11-F423G	M-100-5	E2	2	A/C	0.375	CK	SA	A	SYS	C	CC	RR		RJ-03	
											CO	RR		RJ-03	TP-01
											LT-J	AppJ			
	Valve Name		Reactor Vsl Ref Leg CRD Backfill Pnl-4 Dwnst EFV												
2C11-D001-114	M-146-3	E3	2	C	0.75	CK	SA	A	SYS	O	CO	RR			TP-09
	Valve Name		CRD HCU Scram Discharge Check Valve (Typ 185)												
2C11-D001-115	M-146-3	E7	NC	C	0.5	CK	SA	A	SYS	C	CC	CS			TP-09
	Valve Name		CRD HCU Charging Water Check Valve (Typ 185)												
2C11-D001-117	M-146-3	F3	NC	B	0.50	3W	SO	A	E	D	SD	RR			TP-09
	Valve Name		CRD HCU Scram Pilot Valve (Typ 185)												
2C11-D001-118	M-146-3	F3	NC	B	0.50	3W	SO	A	E	D	SD	RR			TP-09
	Valve Name		CRD HCU Scram Pilot Valve (Typ 185)												

Control Rod Drive

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2C11-D001-126	M-146-3	E6	NC	B	1	GA	AO	A	C	O	FS-O	RR			TP-09
											ST-O	RR			TP-09
	Valve Name		CRD HCU Scram Inlet Valve (Typ 185)												
2C11-D001-127	M-146-3	E4	NC	B	1	GA	AO	A	C	O	FS-O	RR			TP-09
											ST-O	RR			TP-09
	Valve Name		CRD HCU Scram Outlet Valve (Typ 185)												
2C11-D001-137	M-146-3	E5	NC	C	0.5	CK	SA	A	C	C	CC	M3			TP-09
	Valve Name		CRD HCU Drive Water Check Valve (Typ 185)												
2C11-D001-138	M-146-3	E6	NC	C	0.5	CK	SA	A	C	C	CC	M3			TP-09
	Valve Name		CRD HCU Cooling Water Check Valve (Typ 185)												
2C11-F380	M-146-2	D2	2	B	2	GL	AO	A	O	C	FS-C	M3			TP-03
											PIT	Y2			
											ST-C	M3			
	Valve Name		Scram Dsch Volume Hdr Dwnst Vent Valve												
2C11-F381	M-146-4	B2	NC	B	2	GL	AO	A	O	C	FS-C	M3			TP-03
											PIT	Y2			
											ST-C	M3			
	Valve Name		Scram Dsch Volume Hdr Dwnst Drain Valve												
2C11-F388	M-146-2	D3	2	B	2	GL	AO	A	O	C	FS-C	M3			TP-03
											PIT	Y2			
											ST-C	M3			
	Valve Name		Scram Dsch Volume Hdr Upstrm Vent Valve												
2C11-F389	M-146-4	B2	NC	B	2	GL	AO	A	O	C	FS-C	M3			TP-03
											PIT	Y2			
											ST-C	M3			
	Valve Name		Scram Dsch Volume Hdr Upstrm Drain Valve												
2C11-F422B	M-146-6	B4	2	A/C	0.375	CK	SA	A	SYS	C	CC	RR		RJ-03	
											CO	RR		RJ-03	TP-01
											LT-J	AppJ			
	Valve Name		Reactor Vsl Ref Leg CRD Backfill Pnl-3 Upstrm EFV												
2C11-F422D	M-146-6	E8	2	A/C	0.375	CK	SA	A	SYS	C	CC	RR		RJ-03	
											CO	RR		RJ-03	TP-01
											LT-J	AppJ			
	Valve Name		Reactor Vsl Ref Leg CRD Backfill Pnl-2 Upstrm EFV												
2C11-F422F	M-146-6	E4	2	A/C	0.375	CK	SA	A	SYS	C	CC	RR		RJ-03	
											CO	RR		RJ-03	TP-01
											LT-J	AppJ			
	Valve Name		Reactor Vsl Ref Leg CRD Backfill Pnl-5 Upstrm EFV												

Control Rod Drive

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2C11-F422G	M-146-6	E1	2	A/C	0.375	CK	SA	A	SYS	C	CC	RR		RJ-03	
											CO	RR		RJ-03	TP-01
											LT-J	AppJ			
	Valve Name	Reactor Vsl Ref Leg CRD Backfill Pnl-4 Upstrm EFV													
2C11-F423B	M-146-6	B4	2	A/C	0.375	CK	SA	A	SYS	C	CC	RR		RJ-03	
											CO	RR		RJ-03	TP-01
											LT-J	AppJ			
	Valve Name	Reactor Vsl Ref Leg CRD Backfill Pnl-3 Dwnst EFV													
2C11-F423D	M-146-6	E8	2	A/C	0.375	CK	SA	A	SYS	C	CC	RR		RJ-03	
											CO	RR		RJ-03	TP-01
											LT-J	AppJ			
	Valve Name	Reactor Vsl Ref Leg CRD Backfill Pnl-2 Dwnst EFV													
2C11-F423F	M-146-6	E4	2	A/C	0.375	CK	SA	A	SYS	C	CC	RR		RJ-03	
											CO	RR		RJ-03	TP-01
											LT-J	AppJ			
	Valve Name	Reactor Vsl Ref Leg CRD Backfill Pnl-5 Dwnst EFV													
2C11-F423G	M-146-6	E2	2	A/C	0.375	CK	SA	A	SYS	C	CC	RR		RJ-03	
											CO	RR		RJ-03	TP-01
											LT-J	AppJ			
	Valve Name	Reactor Vsl Ref Leg CRD Backfill Pnl-4 Dwnst EFV													

Reactor Building Equipment Drains & Floor Drains

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1RE024	M-91-4	B4	2	A	2	GL	AO	A	O	C	FS-C	M3			TP-03
											LT-J	AppJ			
											PIT	Y2			
											ST-C	M3			
	Valve Name	DWEDS Pump Suct Hdr Upstrm Valve													
1RE025	M-91-4	C4	2	A	2	GL	AO	A	O	C	FS-C	M3			TP-03
											LT-J	AppJ			
											PIT	Y2			
											ST-C	M3			
	Valve Name	DWEDS Pump Suct Hdr Dwnst Valve													
1RE026	M-91-4	D5	2	A	1	GL	AO	A	O	C	FS-C	M3			TP-03
											LT-J	AppJ			
											PIT	Y2			
											ST-C	M3			
	Valve Name	DWEDS Recirc Dwnst Valve													
1RE029	M-91-4	D5	2	A	1	GL	AO	A	O	C	FS-C	M3			TP-03
											LT-J	AppJ			
											PIT	Y2			
											ST-C	M3			
	Valve Name	DWEDS Recirc Upstrm Valve													
1RF012	M-91-4	A4	2	A	2	GL	AO	A	O	C	FS-C	M3			TP-03
											LT-J	AppJ			
											PIT	Y2			
											ST-C	M3			
	Valve Name	DWFDS Pump Suct Hdr Upstrm Valve													
1RF013	M-91-4	B4	2	A	2	GL	AO	A	O	C	FS-C	M3			TP-03
											LT-J	AppJ			
											PIT	Y2			
											ST-C	M3			
	Valve Name	DWFDS Pump Suct Hdr Dwnst Valve													
2RE024	M-137-4	B4	2	A	2	GL	AO	A	O	C	FS-C	M3			TP-03
											LT-J	AppJ			
											PIT	Y2			
											ST-C	M3			
	Valve Name	DWEDS Pump Suct Hdr Upstrm Valve													

Reactor Building Equipment Drains & Floor Drains

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2RE025	M-137-4	C4	2	A	2	GL	AO	A	O	C	FS-C	M3			TP-03
											LT-J	AppJ			
											PIT	Y2			
											ST-C	M3			
	Valve Name	DWEDS Pump Suct Hdr Dwnst Valve													
2RE026	M-137-4	D5	2	A	1	GL	AO	A	O	C	FS-C	M3			TP-03
											LT-J	AppJ			
											PIT	Y2			
											ST-C	M3			
	Valve Name	DWEDS Recirc Dwnst Valve													
2RE029	M-137-4	D5	2	A	1	GL	AO	A	O	C	FS-C	M3			TP-03
											LT-J	AppJ			
											PIT	Y2			
											ST-C	M3			
	Valve Name	DWEDS Recirc Upstrm Valve													
2RF012	M-137-4	A4	2	A	2	GL	AO	A	O	C	FS-C	M3			TP-03
											LT-J	AppJ			
											PIT	Y2			
											ST-C	M3			
	Valve Name	DWFDS Pump Suct Hdr Upstrm Valve													
2RF013	M-137-4	B4	2	A	2	GL	AO	A	O	C	FS-C	M3			TP-03
											LT-J	AppJ			
											PIT	Y2			
											ST-C	M3			
	Valve Name	DWFDS Pump Suct Hdr Dwnst Valve													

Residual Heat Removal

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
0E12-F300	M-87-1	F8	3	B	54	BTF	M	A	LC	O	ME	Y2			TP-04
	Valve Name	CSCS Water Tunnel Supply Traveling Screen Bypass													
1E12-F003A	M-96-4	D1	2	B	18	GA	MO	A	O	O	ET	Y2	RV-02		
											OMN-O	JOG	RV-02		
	Valve Name	A RHR HX Outlet Valve													
1E12-F003B	M-96-4	D8	2	B	18	GA	MO	A	O	O	ET	Y2	RV-02		
											OMN-O	JOG	RV-02		
	Valve Name	B RHR HX Outlet Valve													
1E12-F004A	M-96-1	A7	2	B	24	GA	MO	A	O	O/C	ET	Y2	RV-02		
											OMN-C	JOG	RV-02		
											OMN-O	JOG	RV-02		
	Valve Name	A RHR Pump Sup Pool Suct Isol Valve													
1E12-F004B	M-96-2	B7	2	B	24	GA	MO	A	O	O/C	ET	Y2	RV-02		
											OMN-C	JOG	RV-02		
											OMN-O	JOG	RV-02		
	Valve Name	B RHR Pump Sup Pool Suct Isol Valve													
1E12-F004C	M-96-3	B7	2	B	24	GA	MO	A	O	O/C	ET	Y2	RV-02		
											OMN-C	JOG	RV-02		
											OMN-O	JOG	RV-02		
	Valve Name	C RHR Pump Sup Pool Suct Isol Valve													
1E12-F005	M-96-3	C5	2	C	1 x 2	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name	RHR SDC Suction Header Relief Valve													
1E12-F006A	M-96-1	A6	2	B	18	GA	MO	A	C	C	ET	Y2	RV-02		
											OMN-C	JOG	RV-02		
	Valve Name	A RHR Pump SDC Suct Valve													
1E12-F006B	M-96-2	B6	2	B	18	GA	MO	A	C	C	ET	Y2	RV-02		
											OMN-C	JOG	RV-02		
	Valve Name	B RHR Pump SDC Suct Valve													
1E12-F008	M-96-3	D6	1	A	20	GA	MO	A	C	C	ET	Y2	RV-02		
											LT-J	AppJ			
											LT-S	Y2			
											OMN-C	JOG	RV-02		
	Valve Name	RHR SDC Suction Header Outboard Isolation Valve													
1E12-F009	M-96-3	D7	1	A	20	GA	MO	A	C	C	ET	Y2	RV-02		
											LT-J	AppJ			
											LT-S	Y2			
											OMN-C	JOG	RV-02		
	Valve Name	RHR SDC Suction Header Inboard Isolation Valve													

Residual Heat Removal

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1E12-F016A	M-96-1	E6	2	A	16	GA	MO	A	C	C	ET	Y2	RV-02		
											LT-J	AppJ			
											OMN-C	JOG	RV-02		
	Valve Name	A RHR Containment Spray Upstream Isolation Valve													
1E12-F016B	M-96-2	F5	2	A	16	GA	MO	A	C	C	ET	Y2	RV-02		
											LT-J	AppJ			
											OMN-C	JOG	RV-02		
	Valve Name	B RHR Containment Spray Upstream Isolation Valve													
1E12-F017A	M-96-1	E7	2	A	16	GA	MO	A	C	C	ET	Y2	RV-02		
											LT-J	AppJ			
											OMN-C	JOG	RV-02		
	Valve Name	A RHR Containment Spray Downstream Isolation Valve													
1E12-F017B	M-96-2	F6	2	A	16	GA	MO	A	C	C	ET	Y2	RV-02		
											LT-J	AppJ			
											OMN-C	JOG	RV-02		
	Valve Name	B RHR Containment Spray Downstream Isolation Valve													
1E12-F021	M-96-3	E5	2	B	18	GL	MO	A	C	C	ET	Y2	RV-02		
											OMN-C	JOG	RV-02		
	Valve Name	C RHR Pump Full Flow Test Isolation Valve													
1E12-F023	M-96-1	F6	1	A	6	GL	MO	A	C	C	ET	Y2	RV-02		
											LT-J	AppJ			
											OMN-C	JOG	RV-02		
	Valve Name	A RHR Rx Head Spray Outboard Isolation Valve													
1E12-F024A	M-96-1	D2	2	B	18	GL	MO	A	C	O/C	ET	Y2	RV-02		
											OMN-C	JOG	RV-02		
											OMN-O	JOG	RV-02		
	Valve Name	A RHR Pump Full Flow Test Isolation Valve													
1E12-F024B	M-96-2	E1	2	B	18	GL	MO	A	C	O/C	ET	Y2	RV-02		
											OMN-C	JOG	RV-02		
											OMN-O	JOG	RV-02		
	Valve Name	B RHR Pump Full Flow Test Isolation Valve													
1E12-F025A	M-96-1	E3	2	C	1 x 2	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name	A RHR Pump Discharge Relief Valve													
1E12-F025B	M-96-2	D5	2	C	1 x 2	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name	B RHR Pump Discharge Relief Valve													
1E12-F025C	M-96-3	C2	2	C	1 x 2	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name	C RHR Pump Discharge Relief Valve													

Residual Heat Removal

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1E12-F027A	M-96-1	C5	2	B	4	GA	MO	A	C	O/C	ET	Y2	RV-02		
											OMN-C	JOG	RV-02		
											OMN-O	JOG	RV-02		
	Valve Name	A RHR Sup Chbr Spray Isol Valve													
1E12-F027B	M-96-2	C4	2	B	4	GA	MO	A	C	O/C	ET	Y2	RV-02		
											OMN-C	JOG	RV-02		
											OMN-O	JOG	RV-02		
	Valve Name	B RHR Sup Chbr Spray Isol Valve													
1E12-F031A	M-96-1	A4	2	C	18	CK	SA	A	SYS	O/C	CC	M3			
											CO	M3			
	Valve Name	A RHR Pump Discharge Check Valve													
1E12-F031B	M-96-2	B3	2	C	18	CK	SA	A	SYS	O/C	CC	M3			
											CO	M3			
	Valve Name	B RHR Pump Discharge Check Valve													
1E12-F031C	M-96-3	B4	2	C	18	CK	SA	A	SYS	O/C	CC	M3			
											CO	M3			
	Valve Name	C RHR Pump Discharge Check Valve													
1E12-F036A	M-101-2	C6	2	C	4 x 6	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name	A RHR HX Steam Condensing RCIC Rtrn Hdr Relief Vlv													
1E12-F036B	M-101-2	B3	2	C	4 x 6	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name	B RHR HX Steam Condensing RCIC Rtrn Hdr Relief Vlv													
1E12-F040A	M-96-4	C1	2	B	3	GL	MO	A	C	C	ET	Y2	RV-02		
											OMN-C	JOG	RV-02		
	Valve Name	A RHR HX Blowdown Downstream Isolation Valve													
1E12-F040B	M-96-4	C8	2	B	3	GL	MO	A	C	C	ET	Y2	RV-02		
											OMN-C	JOG	RV-02		
	Valve Name	B RHR HX Blowdown Downstream Isolation Valve													
1E12-F041A	M-96-1	D7	1	A/C	12	CK	SA	A	SYS	O/C	CC	CS		CS-17	
											CO	CS		CS-17	
											LT-S	Y2			
	Valve Name	A RHR LPCI Check Valve													
1E12-F041B	M-96-2	E7	1	A/C	12	CK	SA	A	SYS	O/C	CC	CS		CS-17	
											CO	CS		CS-17	
											LT-S	Y2			
	Valve Name	B RHR LPCI Check Valve													

Residual Heat Removal

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1E12-F041C	M-96-3	E7	1	A/C	12	CK	SA	A	SYS	O/C	CC	CS		CS-17	
											CO	CS		CS-17	
											LT-S	Y2			
	Valve Name	C RHR LPCI Check Valve													
1E12-F042A	M-96-1	D5	1	A	12	GA	MO	A	C	O/C	ET	Y2	RV-02		
											LT-J	AppJ			
											LT-S	Y2			
											OMN-C	JOG	RV-02		
											OMN-O	JOG	RV-02		
	Valve Name	A RHR LPCI Injection Line Isolation Valve													
1E12-F042B	M-96-2	E6	1	A	12	GA	MO	A	C	O/C	ET	Y2	RV-02		
											LT-J	AppJ			
											LT-S	Y2			
											OMN-C	JOG	RV-02		
											OMN-O	JOG	RV-02		
	Valve Name	B RHR LPCI Injection Line Isolation Valve													
1E12-F042C	M-96-3	E6	1	A	12	GA	MO	A	C	O/C	ET	Y2	RV-02		
											LT-J	AppJ			
											LT-S	Y2			
											OMN-C	JOG	RV-02		
											OMN-O	JOG	RV-02		
	Valve Name	C RHR LPCI Injection Line Isolation Valve													
1E12-F046A	M-96-1	B5	2	C	8	CK	SA	A	SYS	O	CCD	CM			CM01
											COD	CM			CM01
											CP	M3			
	Valve Name	A RHR Pump Min Flow Line Check Valve													
1E12-F046B	M-96-2	C2	2	C	8	CK	SA	A	C	O/C	CCD	CM			CM01
											COD	CM			CM01
											CP	M3			
	Valve Name	B RHR Pump Min Flow Line Check Valve													
1E12-F046C	M-96-3	B3	2	C	8	CK	SA	A	C	O/C	CCD	CM			CM23
											COD	CM			CM23
											CP	M3			CM23
	Valve Name	C RHR Pump Min Flow Line Check Valve													
1E12-F047A	M-96-4	E4	2	B	18	GA	MO	A	O	O	ET	Y2	RV-02		
											OMN-O	JOG	RV-02		
	Valve Name	A RHR Heat Exchanger Inlet Valve													

Residual Heat Removal

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1E12-F047B	M-96-4	E5	2	B	18	GA	MO	A	O	O	ET	Y2	RV-02		
											OMN-O	JOG	RV-02		
	Valve Name	B RHR Heat Exchanger Inlet Valve													
1E12-F048A	M-96-4	E1	2	B	18	GL	MO	A	O	O/C	ET	M3	RV-02		
											OMN-C	JOG	RV-02		
											OMN-O	JOG	RV-02		
	Valve Name	A RHR Heat Exchanger Bypass Valve													
1E12-F048B	M-96-4	D8	2	B	18	GL	MO	A	O	O/C	ET	M3	RV-02		
											OMN-C	JOG	RV-02		
											OMN-O	JOG	RV-02		
	Valve Name	B RHR Heat Exchanger Bypass Valve													
1E12-F049A	M-96-4	C1	2	B	3	GA	MO	A	C	C	ET	Y2	RV-02		
											OMN-C	JOG	RV-02		
	Valve Name	A RHR HX Blowdown Upstream Isolation Valve													
1E12-F049B	M-96-4	C8	2	B	3	GA	MO	A	C	C	ET	Y2	RV-02		
											OMN-C	JOG	RV-02		
	Valve Name	B RHR HX Blowdown Upstream Isolation Valve													
1E12-F050A	M-96-1	D7	1	A/C	12	CK	SA	A	SYS	C	CC	CS		CS-10	TP-01
											CO	CS		CS-10	TP-01
											LT-S	Y2			
	Valve Name	A RHR SDC Return Check Valve													
1E12-F050B	M-96-2	D7	1	A/C	12	CK	SA	A	SYS	C	CC	CS		CS-10	TP-01
											CO	CS		CS-10	TP-01
											LT-S	Y2			
	Valve Name	B RHR SDC Return Check Valve													
1E12-F053A	M-96-1	D5	1	A	12	GL	MO	A	C	C	ET	Y2	RV-02		
											LT-J	AppJ			
											LT-S	Y2			
											OMN-C	JOG	RV-02		
	Valve Name	A RHR Shutdown Cooling Return Isolation Valve													
1E12-F053B	M-96-2	D6	1	A	12	GL	MO	A	C	C	ET	Y2	RV-02		
											LT-J	AppJ			
											LT-S	Y2			
											OMN-C	JOG	RV-02		
	Valve Name	B RHR Shutdown Cooling Return Isolation Valve													

Residual Heat Removal

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1E12-F060A	M-96-4	C2	2	B	0.75	GL	SO	A	C	C	FS-C	M3			TP-03
											PIT	Y2			
											ST-C	M3			
	Valve Name	A RHR HX Outlet Process Sample Upstream Isol Valve													
1E12-F060B	M-96-4	C7	2	B	0.75	GL	SO	A	C	C	FS-C	M3			TP-03
											PIT	Y2			
											ST-C	M3			
	Valve Name	B RHR HX Outlet Process Sample Upstream Isol Valve													
1E12-F064A	M-96-1	B5	2	B	4	GA	MO	A	O	O/C	ET	Y2	RV-02		
											OMN-C	JOG	RV-02		
											OMN-O	JOG	RV-02		
	Valve Name	A RHR Pump Min Flow Isolation Valve													
1E12-F064B	M-96-2	C3	2	B	4	GA	MO	A	O	O/C	ET	Y2	RV-02		
											OMN-C	JOG	RV-02		
											OMN-O	JOG	RV-02		
	Valve Name	B RHR Pump Min Flow Isolation Valve													
1E12-F064C	M-96-3	B4	2	B	4	GA	MO	A	O	O/C	ET	Y2	RV-02		
											OMN-C	JOG	RV-02		
											OMN-O	JOG	RV-02		
	Valve Name	C RHR Pump Min Flow Isolation Valve													
1E12-F068A	M-87-2	B3	3	B	20	GA	MO	A	C	O	ET	M3	RV-02		
											OMN-O	JOG	RV-02		
	Valve Name	A RHR HX Service Water Outlet Valve													
1E12-F068B	M-87-1	F1	3	B	20	GA	MO	A	C	O	ET	M3	RV-02		
											OMN-O	JOG	RV-02		
	Valve Name	B RHR HX Service Water Outlet Valve													
1E12-F073A	M-96-4	E3	2	B	0.75	GL	MO	P	C	C	PIT	Y2			
	Valve Name	A RHR HX Shell Side Downstream Vent Valve													
1E12-F073B	M-96-4	E5	2	B	0.75	GL	MO	P	C	C	PIT	Y2			
	Valve Name	B RHR HX Shell Side Downstream Vent Valve													
1E12-F074A	M-96-4	E3	2	B	0.75	GL	MO	P	C	C	PIT	Y2			
	Valve Name	A RHR HX Shell Side Upstream Vent Valve													
1E12-F074B	M-96-4	E6	2	B	0.75	GL	MO	P	C	C	PIT	Y2			
	Valve Name	B RHR HX Shell Side Upstream Vent Valve													
1E12-F075A	M-96-4	C2	2	B	0.75	GL	SO	A	C	C	FS-C	M3			TP-03
											PIT	Y2			
											ST-C	M3			
	Valve Name	A RHR HX Outlet Process Sample Downstream Isol Vlv													

Residual Heat Removal

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1E12-F075B	M-96-4	C7	2	B	0.75	GL	SO	A	C	C	FS-C	M3			TP-03
											PIT	Y2			
											ST-C	M3			
	Valve Name	B RHR HX Outlet Process Sample Downstream Isol Vlv													
1E12-F084A	M-96-1	B3	2	C	0.75	CK	SA	A	SYS	O/C	CC	M3			TP-07
											CO	M3			TP-07
	Valve Name	A RHR/LPCS Water Leg Pump A RHR Dsch Check Valve													
1E12-F084B	M-96-4	E5	2	C	0.75	CK	SA	A	SYS	O/C	CC	M3			TP-07
											CO	M3			TP-07
	Valve Name	B/C RHR Water Leg Pump B RHR Discharge Check Valve													
1E12-F084C	M-96-3	A7	2	C	0.75	CK	SA	A	SYS	O/C	CC	M3			TP-07
											CO	M3			TP-07
	Valve Name	B/C RHR Water Leg Pump C RHR Discharge Check Valve													
1E12-F088A	M-96-1	A6	2	C	1 x 2	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name	A RHR Pump Suction Relief Valve													
1E12-F088B	M-96-2	B5	2	C	1 x 2	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name	B RHR Pump Suction Relief Valve													
1E12-F088C	M-96-3	B7	2	C	1 x 2	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name	C RHR Pump Suction Relief Valve													
1E12-F089	M-96-4	F5	2	C	4	CK	SA	A	C	O/C	CCD	CM			CM06
											COD	CM			CM06
	Valve Name	B RHR Fuel Pool Emer Make Up Supply Testable Check													
1E12-F092A	M-96-1	D8	1	B	12	GA	M	P	LO	O	PIT	Y2			
	Valve Name	A RHR LPCI Hdr Manual Stop Valve													
1E12-F092B	M-96-2	E8	1	B	12	GA	M	P	LO	O	PIT	Y2			
	Valve Name	B RHR LPCI Header Manual Stop Valve													
1E12-F092C	M-96-3	E8	1	B	12	GA	M	P	LO	O	PIT	Y2			
	Valve Name	C RHR LPCI Header Manual Stop Valve													
1E12-F093	M-96-4	F4	2	B	4	GA	MO	A	C	O/C	ET	Y2	RV-02		
											OMN-C	JOG	RV-02		
											OMN-O	JOG	RV-02		
	Valve Name	B RHR Fuel Pool Emer MU Supply Downstream Valve													
1E12-F094	M-96-4	F3	3	B	4	GA	MO	A	C	O/C	ET	Y2	RV-02		
											OMN-C	JOG	RV-02		
											OMN-O	JOG	RV-02		
	Valve Name	B RHR Fuel Pool Emer MU Supply Upstream Valve													

Residual Heat Removal

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1E12-F097	M-96-4	F3	2	B	0.75	GL	SO	A	O	C	FS-C	M3			TP-03
											ST-C	M3			
	Valve Name	B RHR Fuel Pool Emer Make Up Supply Drain Valve													
1E12-F099A	M-96-1	C7	1	A	2	GL	MO	A	C	C	ET	Y2	RV-02		
											LT	Y2			
											OMN-C	JOG	RV-02		
	Valve Name	A RHR SDC Return Testable Check Bypass Valve													
1E12-F099B	M-96-2	C7	1	A	2	GL	MO	A	C	C	ET	Y2	RV-02		
											LT	Y2			
											OMN-C	JOG	RV-02		
	Valve Name	B RHR SDC Return Testable Check Bypass Valve													
1E12-F311A	M-96-4	D3	2	C	.75 x 1	RV	SA	A	C	O/C	RVT	Y10			TP-08
	Valve Name	A RHR Heat Exchanger Shell Side Relief Valve													
1E12-F311B	M-96-4	D6	2	C	.75 x 1	RV	SA	A	C	O/C	RVT	Y10			TP-08
	Valve Name	B RHR Heat Exchanger Shell Side Relief Valve													
1E12-F313A	M-91-3	C4	3	C	3 x 4	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name	A RHR Heat Exchanger Tube Side Relief Valve													
1E12-F313B	M-91-3	C3	3	C	3 x 4	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name	B RHR Heat Exchanger Tube Side Relief Valve													
1E12-F315	M-2096-4	E2	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	A RHR LPCI Inj Line Integrity Excess Flow CV													
1E12-F317	M-2096-4	E6	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	B RHR Inj Line Integrity Excess Flow Check Valve													
1E12-F319	M-2096-4	D6	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	C RHR Inj Line Integrity Excess Flow Check Valve													
1E12-F331A	M-87-2	B6	3	C	16	CK	SA	A	SYS	O/C	CC	M3			
											CO	M3			
	Valve Name	A RHR Service Water Pump Discharge Check Valve													
1E12-F331B	M-87-2	B6	3	C	16	CK	SA	A	SYS	O/C	CC	M3			
											CO	M3			
	Valve Name	B RHR Service Water Pump Discharge Check Valve													

Residual Heat Removal

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1E12-F331C	M-87-1	E6	3	C	16	CK	SA	A	SYS	O/C	CC	M3			
											CO	M3			
	Valve Name	C RHR Service Water Pump Discharge Check Valve													
1E12-F331D	M-87-1	F6	3	C	16	CK	SA	A	SYS	O/C	CC	M3			
											CO	M3			
	Valve Name	D RHR Service Water Pump Discharge Check Valve													
1E12-F336A	M-87-2	A5	3	B	4	GA	MO	A	C	O	ST-O	M3			
	Valve Name	RHR Service Water Strainer Backwash Valve													
1E12-F336B	M-87-1	E5	3	B	4	GA	MO	A	C	O	ST-O	M3			
	Valve Name	RHR Service Water Strainer Backwash Valve													
1E12-F359A	M-2096-5	C5	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	RHR SDC Suct Hdr D/p SW 1E31-N012aa Hi Side EFV													
1E12-F359B	M-2096-5	C5	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	RHR SDC Suct Hdr D/p SW 1E31-N012aa Lo Side EFV													
1E12-F360A	M-2096-5	B5	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	RHR SDC Suct Hdr D/p SW 1E31-N012ba Lo Side EFV													
1E12-F360B	M-2096-5	B5	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	RHR SDC Suct Hdr D/p SW 1E31-N012ba Hi Side EFV													
1E12-F460	M-96-3	C7	2	A/C	.75 x 1	RV	SA	A	C	O/C	LT-J	AppJ			
											RVT	Y10			TP-08
	Valve Name	RHR SDC Suct Header Cnmt Penetration Relief Valve													
2E12-F003A	M-142-4	D1	2	B	18	GA	MO	A	O	O	ET	Y2	RV-02		
											OMN-O	JOG	RV-02		
	Valve Name	A RHR HX Outlet Valve													
2E12-F003B	M-142-4	D8	2	B	18	GA	MO	A	O	O	ET	Y2	RV-02		
											OMN-O	JOG	RV-02		
	Valve Name	B RHR HX Outlet Valve													

Residual Heat Removal

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2E12-F004A	M-142-1	A7	2	B	24	GA	MO	A	O	O/C	ET	Y2	RV-02		
											OMN-C	JOG	RV-02		
											OMN-O	JOG	RV-02		
	Valve Name	A RHR Pump Sup Pool Suct Isol Valve													
2E12-F004B	M-142-2	B7	2	B	24	GA	MO	A	O	O/C	ET	Y2	RV-02		
											OMN-C	JOG	RV-02		
											OMN-O	JOG	RV-02		
	Valve Name	B RHR Pump Sup Pool Suct Isol Valve													
2E12-F004C	M-142-3	B7	2	B	24	GA	MO	A	O	O/C	ET	Y2	RV-02		
											OMN-C	JOG	RV-02		
											OMN-O	JOG	RV-02		
	Valve Name	C RHR Pump Sup Pool Suct Isol Valve													
2E12-F005	M-142-3	C5	2	C	1 x 2	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name	RHR SDC Suction Header Relief Valve													
2E12-F006A	M-142-1	A6	2	B	18	GA	MO	A	C	C	ET	Y2	RV-02		
											OMN-C	JOG	RV-02		
	Valve Name	A RHR Pump SDC Suct Valve													
2E12-F006B	M-142-2	B6	2	B	18	GA	MO	A	C	C	ET	Y2	RV-02		
											OMN-C	JOG	RV-02		
	Valve Name	B RHR Pump SDC Suct Valve													
2E12-F008	M-142-3	D6	1	A	20	GA	MO	A	C	C	ET	Y2	RV-02		
											LT-J	AppJ			
											LT-S	Y2			
											OMN-C	JOG	RV-02		
	Valve Name	RHR SDC Suction Header Outboard Isolation Valve													
2E12-F009	M-142-3	D7	1	A	20	GA	MO	A	C	C	ET	Y2	RV-02		
											LT-J	AppJ			
											LT-S	Y2			
											OMN-C	JOG	RV-02		
	Valve Name	RHR SDC Suction Header Inboard Isolation Valve													
2E12-F016A	M-142-1	E6	2	A	16	GA	MO	A	C	C	ET	Y2	RV-02		
											LT-J	AppJ			
											OMN-C	JOG	RV-02		
	Valve Name	A RHR Containment Spray Upstream Isolation Valve													
2E12-F016B	M-142-2	F5	2	A	16	GA	MO	A	C	C	ET	Y2	RV-02		
											LT-J	AppJ			
											OMN-C	JOG	RV-02		
	Valve Name	B RHR Containment Spray Upstream Isolation Valve													

Residual Heat Removal

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2E12-F017A	M-142-1	E6	2	A	16	GA	MO	A	C	C	ET	Y2	RV-02		
											LT-J	AppJ			
											OMN-C	JOG	RV-02		
	Valve Name	A RHR Containment Spray Downstream Isolation Valve													
2E12-F017B	M-142-2	F6	2	A	16	GA	MO	A	C	C	ET	Y2	RV-02		
											LT-J	AppJ			
											OMN-C	JOG	RV-02		
	Valve Name	B RHR Containment Spray Downstream Isolation Valve													
2E12-F021	M-142-3	F5	2	B	18	GL	MO	A	C	C	ET	Y2	RV-02		
											OMN-C	JOG	RV-02		
	Valve Name	C RHR Pump Full Flow Test Isolation Valve													
2E12-F023	M-142-1	F6	1	A	6	GL	MO	A	C	C	ET	Y2	RV-02		
											LT-J	AppJ			
											OMN-C	JOG	RV-02		
	Valve Name	A RHR Rx Head Spray Outboard Isolation Valve													
2E12-F024A	M-142-1	D2	2	B	18	GL	MO	A	C	O/C	ET	Y2	RV-02		
											OMN-C	JOG	RV-02		
											OMN-O	JOG	RV-02		
	Valve Name	A RHR Pump Full Flow Test Isolation Valve													
2E12-F024B	M-142-2	E2	2	B	18	GL	MO	A	C	O/C	ET	Y2	RV-02		
											OMN-C	JOG	RV-02		
											OMN-O	JOG	RV-02		
	Valve Name	B RHR Pump Full Flow Test Isolation Valve													
2E12-F025A	M-142-1	E3	2	C	1 x 2	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name	A RHR Pump Discharge Relief Valve													
2E12-F025B	M-142-2	D5	2	C	1 x 2	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name	B RHR Pump Discharge Relief Valve													
2E12-F025C	M-142-3	C2	2	C	1 x 2	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name	C RHR Pump Discharge Relief Valve													
2E12-F027A	M-142-1	C5	2	B	4	GA	MO	A	C	O/C	ET	Y2	RV-02		
											OMN-C	JOG	RV-02		
											OMN-O	JOG	RV-02		
	Valve Name	A RHR Sup Chbr Spray Isol Valve													
2E12-F027B	M-142-2	C4	2	B	4	GA	MO	A	C	O/C	ET	Y2	RV-02		
											OMN-C	JOG	RV-02		
											OMN-O	JOG	RV-02		
	Valve Name	B RHR Sup Chbr Spray Isol Valve													

Residual Heat Removal

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2E12-F031A	M-142-1	A4	2	C	18	CK	SA	A	SYS	O/C	CC	M3			
											CO	M3			
	Valve Name	A RHR Pump Discharge Check Valve													
2E12-F031B	M-142-2	B3	2	C	18	CK	SA	A	SYS	O/C	CC	M3			
											CO	M3			
	Valve Name	B RHR Pump Discharge Check Valve													
2E12-F031C	M-142-3	B4	2	C	18	CK	SA	A	SYS	O/C	CC	M3			
											CO	M3			
	Valve Name	C RHR Pump Discharge Check Valve													
2E12-F036A	M-147-2	C6	2	C	4 x 6	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name	A RHR HX Steam Condensing RCIC Rtrn Hdr Relief Vlv													
2E12-F036B	M-147-2	B3	2	C	4 x 6	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name	B RHR HX Steam Condensing RCIC Rtrn Hdr Relief Vlv													
2E12-F040A	M-142-4	C1	2	B	3	GL	MO	A	C	C	ET	Y2	RV-02		
											OMN-C	JOG	RV-02		
	Valve Name	A RHR HX Blowdown Downstream Isolation Valve													
2E12-F040B	M-142-4	C8	2	B	3	GL	MO	A	C	C	ET	Y2	RV-02		
											OMN-C	JOG	RV-02		
	Valve Name	B RHR HX Blowdown Downstream Isolation Valve													
2E12-F041A	M-142-1	D7	1	A/C	12	CK	SA	A	SYS	O/C	CC	CS		CS-17	
											CO	CS		CS-17	
											LT-S	Y2			
	Valve Name	A RHR LPCI Check Valve													
2E12-F041B	M-142-2	E7	1	A/C	12	CK	SA	A	SYS	O/C	CC	CS		CS-17	
											CO	CS		CS-17	
											LT-S	Y2			
	Valve Name	B RHR LPCI Check Valve													
2E12-F041C	M-142-3	E7	1	A/C	12	CK	SA	A	SYS	O/C	CC	CS		CS-17	
											CO	CS		CS-17	
											LT-S	Y2			
	Valve Name	C RHR LPCI Check Valve													
2E12-F042A	M-142-1	D5	1	A	12	GA	MO	A	C	O/C	ET	Y2	RV-02		
											LT-J	AppJ			
											LT-S	Y2			
											OMN-C	JOG	RV-02		
											OMN-O	JOG	RV-02		
	Valve Name	A RHR LPCI Injection Line Isolation Valve													

Residual Heat Removal

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2E12-F042B	M-142-2	E6	1	A	12	GA	MO	A	C	O/C	ET	Y2	RV-02		
											LT-J	AppJ			
											LT-S	Y2			
											OMN-C	JOG	RV-02		
											OMN-O	JOG	RV-02		
	Valve Name	B RHR LPCI Injection Line Isolation Valve													
2E12-F042C	M-142-3	E6	1	A	12	GA	MO	A	C	O/C	ET	Y2	RV-02		
											LT-J	AppJ			
											LT-S	Y2			
											OMN-C	JOG	RV-02		
											OMN-O	JOG	RV-02		
	Valve Name	C RHR LPCI Injection Line Isolation Valve													
2E12-F046A	M-142-1	B5	2	C	8	CK	SA	A	SYS	O	CCD	CM			CM01
											COD	CM			CM01
											CP	M3			
	Valve Name	A RHR Pump Min Flow Line Check Valve													
2E12-F046B	M-142-2	C2	2	C	8	CK	SA	A	C	O/C	CCD	CM			CM01
											COD	CM			CM01
											CP	M3			
	Valve Name	B RHR Pump Min Flow Line Check Valve													
2E12-F046C	M-142-3	B3	2	C	8	CK	SA	A	C	O/C	CCD	CM			CM23
											COD	CM			CM23
											CP	M3			CM23
	Valve Name	C RHR Pump Min Flow Line Check Valve													
2E12-F047A	M-142-4	E4	2	B	18	GA	MO	A	O	O	ET	Y2	RV-02		
											OMN-O	JOG	RV-02		
	Valve Name	A RHR Heat Exchanger Inlet Valve													
2E12-F047B	M-142-4	E5	2	B	18	GA	MO	A	O	O	ET	Y2	RV-02		
											OMN-O	JOG	RV-02		
	Valve Name	B RHR Heat Exchanger Inlet Valve													
2E12-F048A	M-142-4	E1	2	B	18	GL	MO	A	O	O/C	ET	M3	RV-02		
											OMN-C	JOG	RV-02		
											OMN-O	JOG	RV-02		
	Valve Name	A RHR Heat Exchanger Bypass Valve													
2E12-F048B	M-142-4	D8	2	B	18	GL	MO	A	O	O/C	ET	M3	RV-02		
											OMN-C	JOG	RV-02		
											OMN-O	JOG	RV-02		
	Valve Name	B RHR Heat Exchanger Bypass Valve													

Residual Heat Removal

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2E12-F049A	M-142-4	C1	2	B	3	GA	MO	A	C	C	ET	Y2	RV-02		
											OMN-C	JOG	RV-02		
	Valve Name	A RHR HX Blowdown Upstream Isolation Valve													
2E12-F049B	M-142-4	C8	2	B	3	GA	MO	A	C	C	ET	Y2	RV-02		
											OMN-C	JOG	RV-02		
	Valve Name	B RHR HX Blowdown Upstream Isolation Valve													
2E12-F050A	M-142-1	D7	1	A/C	12	CK	SA	A	SYS	C	CC	CS		CS-10	TP-01
											CO	CS		CS-10	TP-01
											LT-S	Y2			
	Valve Name	A RHR SDC Return Check Valve													
2E12-F050B	M-142-2	D7	1	A/C	12	CK	SA	A	SYS	C	CC	CS		CS-10	TP-01
											CO	CS		CS-10	TP-01
											LT-S	Y2			
	Valve Name	B RHR SDC Return Check Valve													
2E12-F053A	M-142-1	D5	1	A	12	GL	MO	A	C	C	ET	Y2	RV-02		
											LT-J	AppJ			
											LT-S	Y2			
											OMN-C	JOG	RV-02		
	Valve Name	A RHR Shutdown Cooling Return Isolation Valve													
2E12-F053B	M-142-2	D6	1	A	12	GL	MO	A	C	C	ET	Y2	RV-02		
											LT-J	AppJ			
											LT-S	Y2			
											OMN-C	JOG	RV-02		
	Valve Name	B RHR Shutdown Cooling Return Isolation Valve													
2E12-F060A	M-142-4	C-2	2	B	0.75	GL	SO	A	C	C	FS-C	M3			TP-03
											PIT	Y2			
											ST-C	M3			
	Valve Name	A RHR HX Outlet Process Sample Upstream Isol Valve													
2E12-F060B	M-142-4	C-7	2	B	0.75	GL	SO	A	C	C	FS-C	M3			TP-03
											PIT	Y2			
											ST-C	M3			
	Valve Name	B RHR HX Outlet Process Sample Upstream Isol Valve													
2E12-F064A	M-142-1	B5	2	B	4	GA	MO	A	O	O/C	ET	Y2	RV-02		
											OMN-C	JOG	RV-02		
											OMN-O	JOG	RV-02		
	Valve Name	A RHR Pump Min Flow Isolation Valve													

Residual Heat Removal

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2E12-F064B	M-142-2	C2	2	B	4	GA	MO	A	O	O/C	ET	Y2	RV-02		
											OMN-C	JOG	RV-02		
											OMN-O	JOG	RV-02		
	Valve Name	B RHR Pump Min Flow Isolation Valve													
2E12-F064C	M-142-3	B4	2	B	4	GA	MO	A	O	O/C	ET	Y2	RV-02		
											OMN-C	JOG	RV-02		
											OMN-O	JOG	RV-02		
	Valve Name	C RHR Pump Min Flow Isolation Valve													
2E12-F068A	M-134-2	B2	3	B	20	GA	MO	A	C	O	ET	M3	RV-02		
											OMN-O	JOG	RV-02		
	Valve Name	A RHR HX Service Water Outlet Valve													
2E12-F068B	M-134-1	F2	3	B	20	GA	MO	A	C	O	ET	M3	RV-02		
											OMN-O	JOG	RV-02		
	Valve Name	B RHR HX Service Water Outlet Valve													
2E12-F073A	M-142-4	E3	2	B	0.75	GL	MO	P	C	C	PIT	Y2			
	Valve Name	A RHR HX Shell Side Downstream Vent Valve													
2E12-F073B	M-142-4	E5	2	B	0.75	GL	MO	P	C	C	PIT	Y2			
	Valve Name	B RHR HX Shell Side Downstream Vent Valve													
2E12-F074A	M-142-4	E3	2	B	0.75	GL	MO	P	C	C	PIT	Y2			
	Valve Name	A RHR HX Shell Side Upstream Vent Valve													
2E12-F074B	M-142-4	E6	2	B	0.75	GL	MO	P	C	C	PIT	Y2			
	Valve Name	B RHR HX Shell Side Upstream Vent Valve													
2E12-F075A	M-142-4	C2	2	B	0.75	GL	SO	A	C	C	FS-C	M3			TP-03
											PIT	Y2			
											ST-C	M3			
	Valve Name	A RHR HX Outlet Process Sample Downstream Isol Vlv													
2E12-F075B	M-142-4	C-7	2	B	0.75	GL	SO	A	C	C	FS-C	M3			TP-03
											PIT	Y2			
											ST-C	M3			
	Valve Name	B RHR HX Outlet Process Sample Downstream Isol Vlv													
2E12-F084A	M-142-1	B3	2	C	0.75	CK	SA	A	SYS	O/C	CC	M3			TP-07
											CO	M3			TP-07
	Valve Name	A RHR/LPCS Water Leg Pump A RHR Dsch Check Valve													
2E12-F084B	M-142-4	E5	2	C	0.75	CK	SA	A	SYS	O/C	CC	M3			TP-07
											CO	M3			TP-07
	Valve Name	B/C RHR Water Leg Pump B RHR Discharge Check Valve													

Residual Heat Removal

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2E12-F084C	M-142-3	A7	2	C	0.75	CK	SA	A	SYS	O/C	CC	M3			TP-07
											CO	M3			TP-07
	Valve Name	B/C RHR Water Leg Pump B RHR Discharge Check Valve													
2E12-F088A	M-142-1	A6	2	C	1 x 2	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name	A RHR Pump Suction Relief Valve													
2E12-F088B	M-142-2	B5	2	C	1 x 2	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name	B RHR Pump Suction Relief Valve													
2E12-F088C	M-142-3	B6	2	C	1 x 2	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name	C RHR Pump Suction Relief Valve													
2E12-F089	M-142-4	F5	2	C	4	CK	SA	A	C	O/C	CCD	CM			CM06
											COD	CM			CM06
	Valve Name	B RHR Fuel Pool Emer Make Up Supply Testable Check													
2E12-F092A	M-142-1	D8	1	B	12	GA	M	P	LO	O	PIT	Y2			
	Valve Name	A RHR LPCI Hdr Manual Stop Valve													
2E12-F092B	M-142-2	E8	1	B	12	GA	M	P	LO	O	PIT	Y2			
	Valve Name	B RHR LPCI Header Manual Stop Valve													
2E12-F092C	M-142-3	E8	1	B	12	GA	M	P	LO	O	PIT	Y2			
	Valve Name	C RHR LPCI Header Manual Stop Valve													
2E12-F093	M-142-4	F4	2	B	4	GA	MO	A	C	O/C	ET	Y2	RV-02		
											OMN-C	JOG	RV-02		
											OMN-O	JOG	RV-02		
	Valve Name	B RHR Fuel Pool Emer MU Supply Downstream Valve													
2E12-F094	M-142-4	F3	3	B	4	GA	MO	A	C	O/C	ET	Y2	RV-02		
											OMN-C	JOG	RV-02		
											OMN-O	JOG	RV-02		
	Valve Name	B RHR Fuel Pool Emer MU Supply Upstream Valve													
2E12-F097	M-142-4	F2	2	B	0.75	GL	SO	A	O	C	FS-C	M3			TP-03
											ST-C	M3			
	Valve Name	B RHR Fuel Pool Emer Make Up Supply Drain Valve													
2E12-F099A	M-142-1	C7	1	A	2	GL	MO	A	C	C	ET	Y2	RV-02		
											LT	Y2			
											OMN-C	JOG	RV-02		
	Valve Name	A RHR SDC Return Testable Check Bypass Valve													
2E12-F099B	M-142-2	C7	1	A	2	GL	MO	A	C	C	ET	Y2	RV-02		
											LT	Y2			
											OMN-C	JOG	RV-02		
	Valve Name	B RHR SDC Return Testable Check Bypass Valve													

Residual Heat Removal

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2E12-F311A	M-142-4	D2	2	C	.75 x 1	RV	SA	A	C	O/C	RVT	Y10			TP-08
	Valve Name	A RHR Heat Exchanger Shell Side Relief Valve													
2E12-F311B	M-142-4	D6	2	C	.75 x 1	RV	SA	A	C	O/C	RVT	Y10			TP-08
	Valve Name	B RHR Heat Exchanger Shell Side Relief Valve													
2E12-F313A	M-137-3	C4	3	C	3 x 4	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name	A RHR Heat Exchanger Tube Side Relief Valve													
2E12-F313B	M-137-3	C3	3	C	3 x 4	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name	B RHR Heat Exchanger Tube Side Relief Valve													
2E12-F315	M-2142-4	E2	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	A RHR LPCI Inj Line Integrity Excess Flow CV													
2E12-F317	M-2142-4	E7	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	B RHR Inj Line Integrity Excess Flow Check Valve													
2E12-F319	M-2142-4	D7	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	C RHR Inj Line Integrity Excess Flow Check Valve													
2E12-F331A	M-134-2	B6	3	C	16	CK	SA	A	SYS	O/C	CC	M3			
											CO	M3			
	Valve Name	A RHR Service Water Pump Discharge Check Valve													
2E12-F331B	M-134-2	C6	3	C	16	CK	SA	A	SYS	O/C	CC	M3			
											CO	M3			
	Valve Name	B RHR Service Water Pump Discharge Check Valve													
2E12-F331C	M-134-1	E6	3	C	16	CK	SA	A	SYS	O/C	CC	M3			
											CO	M3			
	Valve Name	C RHR Service Water Pump Discharge Check Valve													
2E12-F331D	M-134-1	F6	3	C	16	CK	SA	A	SYS	O/C	CC	M3			
											CO	M3			
	Valve Name	D RHR Service Water Pump Discharge Check Valve													
2E12-F336A	M-134-2	A5	3	B	4	GA	MO	A	C	O	ST-O	M3			
	Valve Name	RHR Service Water Strainer Backwash Valve													
2E12-F336B	M-134-1	E5	3	B	4	GA	MO	A	C	O	ST-O	M3			
	Valve Name	RHR Service Water Strainer Backwash Valve													

Residual Heat Removal

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2E12-F359A	M-2142-5	C3	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	RHR SDC Suct Hdr D/p SW 2E31-N012aa Hi Side EFV													
2E12-F359B	M-2142-5	B3	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	RHR SDC Suct Hdr D/p SW 2E31-N012aa Lo Side EFV													
2E12-F360A	M-2142-5	B3	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	RHR SDC Suct Hdr D/p SW 2E31-N012ba Lo Side EFV													
2E12-F360B	M-2142-5	B3	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	RHR SDC Suct Hdr D/p SW 2E31-N012ba Hi Side EFV													
2E12-F460	M-142-3	C7	2	A/C	.75 x 1	RV	SA	A	C	O/C	LT-J	AppJ			
											RVT	Y10			TP-08
	Valve Name	RHR SDC Suct Header Cnmt Penetration Relief Valve													

Reactor Core Isolation Cooling

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1B21-F413A	M-2101-1	D3	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	MS RCIC Stm D/p Sw Hi Excs Flow Ck Valve													
1B21-F413B	M-2101-1	D3	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	MS RCIC Stm D/p Sw Lo Excs Flow Ck Valve													
1B21-F415A	M-2101-1	C3	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	MS RCIC Stm D/p Sw Hi Excs Flow Ck Valve													
1B21-F415B	M-2101-1	C3	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	MS RCIC Stm D/p Sw Lo Excs Flow Ck Valve													
1E51-D001	M-101-1	D1	2	D	6	RPD	SA	A	C	O	DT	Y5			
	Valve Name	RCIC Turbine Exhaust Upstrm Rupture Disc													
1E51-D002	M-101-1	D1	2	D	6	RPD	SA	A	C	O	DT	Y5			
	Valve Name	RCIC Turbine Exhaust Dwnst Rupture Disc													
1E51-F004	M-101-1	A6	2	B	2	GL	AO	A	O	C	FS-C	M3			TP-03
											PIT	Y2			
											ST-C	M3			
	Valve Name	RCIC Cndsr Cond Pmp Dsch Upstm Equip Drn Sump Rtn													
1E51-F005	M-101-1	A5	2	B	2	GL	AO	A	C	C	FS-C	M3			TP-03
											PIT	Y2			
											ST-C	M3			
	Valve Name	RCIC Cndsr Cond Pmp Dsch Dwnstm Equip Drn Sump Rtn													
1E51-F008	M-101-1	E7	1	A	4	GA	MO	A	O	O/C	ET	Y2	RV-02		
											LT-J	AppJ			
											OMN-C	JOG	RV-02		
											OMN-O	JOG	RV-02		
	Valve Name	RCIC Steam Supply Outboard Isolation													

Reactor Core Isolation Cooling

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1E51-F010	M-101-2	B4	2	B	8	GA	MO	A	O	O/C	ET	Y2	RV-02		
											OMN-C	JOG	RV-02		
											OMN-O	JOG	RV-02		
	Valve Name	RCIC Pump Cycled CST Suction Valve													
1E51-F011	M-101-2	B3	2	C	8	CK	SA	A	SYS	O/C	CC	M3			
											CO	M3			
	Valve Name	RCIC Pump Cycled CST Suction Check Valve													
1E51-F013	M-101-2	C7	1	A	6	GA	MO	A	C	O/C	ET	Y2	RV-02		
											LT-J	AppJ			
											OMN-C	JOG	RV-02		
											OMN-O	JOG	RV-02		
	Valve Name	RCIC Injection Outboard Isol Valve													
1E51-F017	M-101-2	B2	2	C	0.75 x 1	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name	RCIC Pump Suction Relief Valve													
1E51-F018	M-101-2	F3	2	C	1.5 x 3	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name	RCIC Lube Oil Cooler Inlet Relief Valve													
1E51-F019	M-101-2	B5	2	B	2	GL	MO	A	C	O/C	ET	Y2	RV-02		
											OMN-C	JOG	RV-02		
											OMN-O	JOG	RV-02		
	Valve Name	RCIC Pump Min Flow Isolation Valve													
1E51-F021	M-101-2	B4	2	C	2	CK	SA	A	C	O	CCD	CM			CM05
											COD	CM			CM05
	Valve Name	RCIC Pump Min Flow Check Valve													
1E51-F022	M-101-2	E6	2	A	4	GL	MO	A	C	C	ET	Y2	RV-02		
											LT-J	AppJ			
											OMN-C	JOG	RV-02		
	Valve Name	RCIC Full Flow Test Upstream Valve													
1E51-F025	M-101-1	D6	2	B	2	GL	AO	A	O	C	FS-C	M3			TP-03
											PIT	Y2			
											ST-C	M3			
	Valve Name	RCIC Steam Supply Drain Pot Upstrm Outlet Valve													
1E51-F026	M-101-1	D6	2	B	2	GL	AO	A	O	C	FS-C	M3			TP-03
											PIT	Y2			
											ST-C	M3			
	Valve Name	RCIC Steam Supply Drain Pot Dwnst Outlet Valve													

Reactor Core Isolation Cooling

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1E51-F028	M-101-1	B6	2	A/C	1.25	CK	SA	A	SYS	C	CCD	CM			CM10
											CO	M3			CM10
											COD	CM			CM10
											LT-J	AppJ			
	Valve Name	RCIC Cndsr Vacuum Pump Dsch Check Valve													
1E51-F030	M-101-2	B6	2	C	8	CK	SA	A	C	O/C	CC	M3			
											CO	RR		RJ-06	
	Valve Name	RCIC Pump Sup Pool Suction Check Valve													
1E51-F031	M-101-2	B7	2	B	8	GA	MO	A	C	O/C	ET	Y2	RV-02		
											OMN-C	JOG	RV-02		
											OMN-O	JOG	RV-02		
	Valve Name	RCIC Pump Sup Pool Suction Isol Valve													
1E51-F040	M-101-1	B7	2	A/C	10	CK	SA	A	C	O/C	CC	CM		CS-12	CM11
											CO	CM		CS-12	CM11
											LT-J	AppJ			
	Valve Name	RCIC Turbine Exhaust Check Valve													
1E51-F045	M-101-1	D5	2	B	4	GL	MO	A	C	O	ET	Y2	RV-02		
											OMN-C	JOG	RV-02		
											OMN-O	JOG	RV-02		
	Valve Name	RCIC Turbine Steam Supply Stop valve													
1E51-F046	M-101-2	D3	2	B	2	GL	MO	A	C	O	ET	Y2	RV-02		
											OMN-O	JOG	RV-02		
	Valve Name	RCIC Turbine Lube Oil Cooler Inlet Valve													
1E51-F047	M-101-1	A6	2	C	2	CK	SA	A	C	C	CC	M3			
											CO	M3			TP-01
	Valve Name	RCIC Cndsr Cond Pump Discharge Check Valve													
1E51-F059	M-101-2	E5	2	A	4	GA	MO	A	C	C	ET	Y2	RV-02		
											LT-J	AppJ			
											OMN-C	JOG	RV-02		
	Valve Name	RCIC Full Flow Test Downstream Valve													
1E51-F060	M-101-2	A4	2	B	2	GL	M	A	LO	O/C	ME	Y2			TP-04
	Valve Name	RCIC Water Leg Pump Cycled CST Suction Valve													
1E51-F061	M-101-2	A3	2	C	0.75	CK	SA	A	SYS	O/C	CC	M3			TP-07
											CO	M3			TP-07
	Valve Name	RCIC Water Leg Pump Discharge Check Valve													

Reactor Core Isolation Cooling

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1E51-F063	M-101-1	E8	1	A	10	GA	MO	A	O	O/C	ET	M3	RV-02		
											LT-J	AppJ			
											OMN-C	JOG	RV-02		
											OMN-O	JOG	RV-02		
	Valve Name	RCIC Steam Supply Inboard Isolation Valve													
1E51-F065	M-101-2	C7	1	A/C	6	CK	AO	A	SYS	O/C	CC	CS		CS-13	
											CO	CS		CS-13	
											LT-S	Y2			
											PIT	Y2			
	Valve Name	RCIC Injection Otbd Testable Check Valve													
1E51-F066	M-101-2	C8	1	A/C	6	CK	AO	A	SYS	O/C	CC	CS		CS-13	
											CO	CS		CS-13	
											LT-S	Y2			
	Valve Name	RCIC Injection Inbd Testable Check Valve													
1E51-F068	M-101-1	B7	2	A	10	GA	MO	A	O	O/C	ET	Y2	RV-02		
											LT-J	AppJ			
											OMN-C	JOG	RV-02		
											OMN-O	JOG	RV-02		
	Valve Name	RCIC Turbine Exhaust Isolation Valve													
1E51-F069	M-101-1	B7	2	A	1.25	GL	MO	A	O	C	ET	Y2	RV-02		
											LT-J	AppJ			
											OMN-C	JOG	RV-02		
	Valve Name	RCIC Cndsr Vacuum Pump Dsch Isolation Valve													
1E51-F076	M-101-1	E8	1	A	1	GL	MO	A	C	C	ET	Y2	RV-02		
											LT-J	AppJ			
											OMN-C	JOG	RV-02		
	Valve Name	RCIC Steam Supply Inbd Isol Bypass/warmup Valve													
1E51-F080	M-101-1	C7	2	A	2	GL	MO	A	O	O/C	ET	Y2	RV-02		
											LT-J	AppJ			
											OMN-C	JOG	RV-02		
											OMN-O	JOG	RV-02		
	Valve Name	RCIC Turbine Exhaust Vacuum Bkr Dwnst Isol Valve													
1E51-F082	M-101-1	D7	2	C	2	CK	SA	A	SYS	O/C	CCF	CM			CM24
											CO	CM			CM24
	Valve Name	RCIC Turbine Exhaust Vacuum Bkr Dwnst Check Valve													
1E51-F084	M-101-1	D7	2	C	2	CK	SA	A	SYS	O/C	CCF	CM			CM24
											CO	CM			CM24
	Valve Name	RCIC Turbine Exhaust Vacuum Bkr Upstrm Check Valve													

Reactor Core Isolation Cooling

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1E51-F086	M-101-1	C7	2	A	2	GL	MO	A	O	O/C	ET	Y2	RV-02		
											LT-J	AppJ			
											OMN-C	JOG	RV-02		
											OMN-O	JOG	RV-02		
	Valve Name	RCIC Turbine Exhaust Vacuum Bkr Upstrm Isol Valve													
1E51-F360	M-101-1	D4	2	B	3	GA	MO	A	O	O/C	ST-C	M3			TP-09?
											ST-O	M3			TP-09?
	Valve Name	RCIC Turbine Trip/Throttle Valve													
1E51-F362	M-101-2	F7	2	A	4	GA	M	P	C	C	LT-J	AppJ			
	Valve Name	RCIC Full Flow Test Sup Pool Upstrm Return Valve													
1E51-F363	M-101-2	F7	2	A	4	GA	M	P	C	C	LT-J	AppJ			
	Valve Name	RCIC Full Flow Test Sup Pool Dwnst Return Valve													
1E51-F370	M-101-2	A4	2	B	2	GL	M	A	C	O/C	ST-C	Y2			
											ST-O	Y2			
	Valve Name	RCIC Water Leg Pump Sup Pool Suct Valve													
2B21-F413A	M-2147-1	D3	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	MS RCIC Stm D/p Sw Hi Excs Flow Ck Valve													
2B21-F413B	M-2147-1	D3	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	MS RCIC Stm D/p Sw Lo Excs Flow Ck Valve													
2B21-F415A	M-2147-1	C3	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	MS RCIC Stm D/p Sw Hi Excs Flow Ck Valve													
2B21-F415B	M-2147-1	C3	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	MS RCIC Stm D/p Sw Lo Excs Flow Ck Valve													
2E51-D001	M-147-1	D1	2	D	6	RPD	SA	A	C	O	DT	Y5			
	Valve Name	RCIC Turbine Exhaust Upstrm Rupture Disc													
2E51-D002	M-147-1	D1	2	D	6	RPD	SA	A	C	O	DT	Y5			
	Valve Name	RCIC Turbine Exhaust Dwnst Rupture Disc													

Reactor Core Isolation Cooling

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2E51-F004	M-147-1	A5	2	B	2	GL	AO	A	O	C	FS-C	M3			TP-03
											PIT	Y2			
											ST-C	M3			
	Valve Name	RCIC Cndsr Cond Pmp Dsch Upstm Equip Drn Sump Rtn													
2E51-F005	M-147-1	A5	2	B	2	GL	AO	A	C	C	FS-C	M3			TP-03
											PIT	Y2			
											ST-C	M3			
	Valve Name	RCIC Cndsr Cond Pmp Dsch Dwnstm Equip Drn Sump Rtn													
2E51-F008	M-147-1	E7	1	A	4	GA	MO	A	O	O/C	ET	Y2	RV-02		
											LT-J	AppJ			
											OMN-C	JOG	RV-02		
											OMN-O	JOG	RV-02		
	Valve Name	RCIC Steam Supply Outboard Isolation													
2E51-F010	M-147-2	B4	2	B	8	GA	MO	A	O	O/C	ET	Y2	RV-02		
											OMN-C	JOG	RV-02		
											OMN-O	JOG	RV-02		
	Valve Name	RCIC Pump Cycled CST Suction Valve													
2E51-F011	M-147-2	B3	2	C	8	CK	SA	A	SYS	O/C	CC	M3			
											CO	M3			
	Valve Name	RCIC Pump Cycled CST Suction Check Valve													
2E51-F013	M-147-2	C7	1	A	6	GA	MO	A	C	O/C	ET	Y2	RV-02		
											LT-J	AppJ			
											OMN-C	JOG	RV-02		
											OMN-O	JOG	RV-02		
	Valve Name	RCIC Injection Outboard Isol Valve													
2E51-F017	M-147-2	C2	2	C	0.75 x 1	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name	RCIC Pump Suction Relief Valve													
2E51-F018	M-147-2	F3	2	C	1.5 x 3	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name	RCIC Lube Oil Cooler Inlet Relief Valve													
2E51-F019	M-147-2	C5	2	B	2	GL	MO	A	C	O/C	ET	Y2	RV-02		
											OMN-C	JOG	RV-02		
											OMN-O	JOG	RV-02		
	Valve Name	RCIC Pump Min Flow Isolation Valve													
2E51-F021	M-147-2	C4	2	C	2	CK	SA	A	C	O	CCD	CM			CM05
											COD	CM			CM05
	Valve Name	RCIC Pump Min Flow Check Valve													

Reactor Core Isolation Cooling

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2E51-F022	M-147-2	E6	2	A	4	GL	MO	A	C	C	ET	Y2	RV-02		
											LT-J	AppJ			
											OMN-C	JOG	RV-02		
	Valve Name	RCIC Full Flow Test Upstream Valve													
2E51-F025	M-147-1	D6	2	B	2	GL	AO	A	O	C	FS-C	M3			TP-03
											PIT	Y2			
											ST-C	M3			
	Valve Name	RCIC Steam Supply Drain Pot Upstrm Outlet Valve													
2E51-F026	M-147-1	D6	2	B	2	GL	AO	A	O	C	FS-C	M3			TP-03
											PIT	Y2			
											ST-C	M3			
	Valve Name	RCIC Steam Supply Drain Pot Dwnst Outlet Valve													
2E51-F028	M-147-1	B6	2	A/C	1.25	CK	SA	A	SYS	C	CCD	CM			CM10
											CO	M3			CM10
											COD	CM			CM10
											LT-J	AppJ			
	Valve Name	RCIC Cndsr Vacuum Pump Dsch Check Valve													
2E51-F030	M-147-2	B5	2	C	8	CK	SA	A	C	O/C	CC	M3			
											CO	RR		RJ-06	
	Valve Name	RCIC Pump Sup Pool Suction Check Valve													
2E51-F031	M-147-2	B7	2	B	8	GA	MO	A	C	O/C	ET	Y2	RV-02		
											OMN-C	JOG	RV-02		
											OMN-O	JOG	RV-02		
	Valve Name	RCIC Pump Sup Pool Suction Isol Valve													
2E51-F040	M-147-1	B7	2	A/C	10	CK	SA	A	C	O/C	CC	CM		CS-12	CM11
											CO	CM		CS-12	CM11
											LT-J	AppJ			
	Valve Name	RCIC Turbine Exhaust Check Valve													
2E51-F045	M-147-1	D5	2	B	4	GL	MO	A	C	O	ET	Y2	RV-02		
											OMN-C	JOG	RV-02		
											OMN-O	JOG	RV-02		
	Valve Name	RCIC Turbine Steam Supply Stop valve													
2E51-F046	M-147-2	D3	2	B	2	GL	MO	A	C	O	ET	Y2	RV-02		
											OMN-O	JOG	RV-02		
	Valve Name	RCIC Turbine Lube Oil Cooler Inlet Valve													
2E51-F047	M-147-1	B6	2	C	2	CK	SA	A	C	C	CC	M3			
											CO	M3			TP-01
	Valve Name	RCIC Cndsr Cond Pump Discharge Check Valve													

Reactor Core Isolation Cooling

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2E51-F059	M-147-2	E5	2	A	4	GA	MO	A	C	C	ET	Y2	RV-02		
											LT-J	AppJ			
											OMN-C	JOG	RV-02		
	Valve Name	RCIC Full Flow Test Downstream Valve													
2E51-F060	M-147-2	A4	2	B	2	GL	M	A	LO	O/C	ME	Y2			TP-04
	Valve Name	RCIC Water Leg Pump Cycled CST Suction Valve													
2E51-F061	M-147-2	A3	2	C	0.75	CK	SA	A	SYS	O/C	CC	M3			TP-07
											CO	M3			TP-07
	Valve Name	RCIC Water Leg Pump Discharge Check Valve													
2E51-F063	M-147-1	E8	1	A	10	GA	MO	A	O	O/C	ET	M3	RV-02		
											LT-J	AppJ			
											OMN-C	JOG	RV-02		
											OMN-O	JOG	RV-02		
	Valve Name	RCIC Steam Supply Inboard Isolation Valve													
2E51-F065	M-147-2	D7	1	A/C	6	CK	AO	A	SYS	O/C	CC	CS		CS-13	
											CO	CS		CS-13	
											LT-S	Y2			
											PIT	Y2			
	Valve Name	RCIC Injection Otbd Testable Check Valve													
2E51-F066	M-147-2	D8	1	A/C	6	CK	AO	A	SYS	O/C	CC	CS		CS-13	
											CO	CS		CS-13	
											LT-S	Y2			
	Valve Name	RCIC Injection Inbd Testable Check Valve													
2E51-F068	M-147-1	B7	2	A	10	GA	MO	A	O	O/C	ET	Y2	RV-02		
											LT-J	AppJ			
											OMN-C	JOG	RV-02		
											OMN-O	JOG	RV-02		
	Valve Name	RCIC Turbine Exhaust Isolation Valve													
2E51-F069	M-147-1	B7	2	A	1.25	GL	MO	A	O	C	ET	Y2	RV-02		
											LT-J	AppJ			
											OMN-C	JOG	RV-02		
	Valve Name	RCIC Cndsr Vacuum Pump Dsch Isolation Valve													
2E51-F076	M-147-1	E8	1	A	1	GL	MO	A	C	C	ET	Y2	RV-02		
											LT-J	AppJ			
											OMN-C	JOG	RV-02		
	Valve Name	RCIC Steam Supply Inbd Isol Bypass/warmup Valve													

Reactor Core Isolation Cooling

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2E51-F080	M-147-1	C7	2	A	2	GL	MO	A	O	O/C	ET	Y2	RV-02		
											LT-J	AppJ			
											OMN-C	JOG	RV-02		
											OMN-O	JOG	RV-02		
	Valve Name	RCIC Turbine Exhaust Vacuum Bkr Dwnst Isol Valve													
2E51-F082	M-147-1	C7	2	C	2	CK	SA	A	SYS	O/C	CCF	CM			CM24
											CO	CM			CM24
	Valve Name	RCIC Turbine Exhaust Vacuum Bkr Dwnst Check Valve													
2E51-F084	M-147-1	C7	2	C	2	CK	SA	A	SYS	O/C	CCF	CM			CM24
											CO	CM			CM24
	Valve Name	RCIC Turbine Exhaust Vacuum Bkr Upstrm Check Valve													
2E51-F086	M-147-1	C7	2	A	2	GL	MO	A	O	O/C	ET	Y2	RV-02		
											LT-J	AppJ			
											OMN-C	JOG	RV-02		
											OMN-O	JOG	RV-02		
	Valve Name	RCIC Turbine Exhaust Vacuum Bkr Upstrm Isol Valve													
2E51-F360	M-147-1	D4	2	B	3	GA	MO	A	O	O/C	ST-C	M3			TP-09?
											ST-O	M3			TP-09?
	Valve Name	RCIC Turbine Trip/Throttle Valve													
2E51-F362	M-147-2	F6	2	A	4	GA	M	P	C	C	LT-J	AppJ			
	Valve Name	RCIC Full Flow Test Sup Pool Upstrm Return Valve													
2E51-F363	M-147-2	F7	2	A	4	GA	M	P	C	C	LT-J	AppJ			
	Valve Name	RCIC Full Flow Test Sup Pool Dwnst Return Valve													
2E51-F370	M-147-2	A4	2	B	2	GL	M	A	C	O/C	ME	Y2			TP-04
	Valve Name	RCIC Water Leg Pump Sup Pool Suct Valve													

Reactor Recirculation

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1B33-F013A	M-93-1	B7	2	A/C	0.75	CK	SA	A	SYS	C	CC	RR		RJ-02	
											CO	OP			TP-05, TP-01
											LT-J	AppJ			
	Valve Name	A Rx Recirc Pump Seal Purge Supply Inbd Check Vlv													
1B33-F013B	M-93-2	B7	2	A/C	0.75	CK	SA	A	SYS	C	CC	RR		RJ-02	
											CO	OP			TP-05, TP-01
											LT-J	AppJ			
	Valve Name	B Rx Recirc Pump Seal Purge Supply Inbd Check Vlv													
1B33-F017A	M-93-1	B7	2	A/C	0.75	CK	SA	A	SYS	C	CC	RR		RJ-02	
											CO	OP			TP-05, TP-01
											LT-J	AppJ			
	Valve Name	A Rx Recirc Pump Seal Purge Supply Otbd Check Vlv													
1B33-F017B	M-93-2	B7	2	A/C	0.75	CK	SA	A	SYS	C	CC	RR		RJ-02	
											CO	OP			TP-05, TP-01
											LT-J	AppJ			
	Valve Name	B Rx Recirc Pump Seal Purge Supply Otbd Check Vlv													
1B33-F019	M-93-2	E6	2	A	0.75	GL	AO	A	O	C	FS-C	M3			TP-03
											LT-J	AppJ			
											PIT	Y2			
											ST-C	M3			
	Valve Name	B Rx Recirc Loop Process Sampling Inbd Isol Valve													
1B33-F020	M-93-2	E8	2	A	0.75	GL	AO	A	O	C	FS-C	M3			TP-03
											LT-J	AppJ			
											PIT	Y2			
											ST-C	M3			
	Valve Name	B Rx Recirc Loop Process Sampling Otbd Isol Valve													
1B33-F301A	M-93-1	D8	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	A Rx Recirc Pump Suct Press RHR Intlk EFV													
1B33-F301B	M-93-2	C8	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	B Rx Recirc Pump Suct Press RHR Intlk EFV													

Reactor Recirculation

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1B33-F305A	M-2093-1	E3	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	A Rx Recirc Pump Flow Hi Side Check Valve													
1B33-F305B	M-2093-1	D3	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	A Rx Recirc Pump Flow Hi Side Check Valve													
1B33-F305C	M-2093-1	C3	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	A Rx Recirc Pump Flow Hi Side Check Valve													
1B33-F305D	M-2093-1	B3	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	A Rx Recirc Pump Flow Lo Side Check Valve													
1B33-F307A	M-2093-1	E3	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	A Rx Recirc Pump Flow Lo Side Check Valve													
1B33-F307B	M-2093-1	D3	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	A Rx Recirc Pump Flow Lo Side Check Valve													
1B33-F307C	M-2093-1	C3	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	A Rx Recirc Pump Flow Lo Side Check Valve													
1B33-F307D	M-2093-1	B3	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	A Rx Recirc Pump Flow Hi Side Check Valve													

Reactor Recirculation

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1B33-F311A	M-2093-2	E3	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	B Rx Recirc Pump Flow Lo Side Check Valve													
1B33-F311B	M-2093-2	D3	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	B Rx Recirc Pump Flow Lo Side Check Valve													
1B33-F311C	M-2093-2	D3	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	B Rx Recirc Pump Flow Lo Side Check Valve													
1B33-F311D	M-2093-2	C3	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	B Rx Recirc Pump Flow Hi Side Check Valve													
1B33-F313A	M-2093-2	F3	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	B Rx Recirc Pump Flow Hi Side Check Valve													
1B33-F313B	M-2093-2	E3	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	B Rx Recirc Pump Flow Hi Side Check Valve													
1B33-F313C	M-2093-2	C3	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	B Rx Recirc Pump Flow Hi Side Check Valve													
1B33-F313D	M-2093-2	B3	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	B Rx Recirc Pump Flow Lo Side Check Valve													

Reactor Recirculation

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1B33-F315A	M-2093-3	D2	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	A Rx Recirc Pump D/p Lo Side Check Valve													
1B33-F315B	M-2093-3	D2	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	A Rx Recirc Pump D/p Hi Side Check Valve													
1B33-F315C	M-2093-4	C2	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	A Rx Recirc Pump D/p Lo Side Check Valve													
1B33-F315D	M-2093-4	B2	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	A Rx Recirc Pump D/p Hi Side Check Valve													
1B33-F317A	M-2093-8	D3	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	A Rx Recirc Pump Seal Cav 2 Press Inst CV													
1B33-F317B	M-2093-8	B3	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	B Rx Recirc Pump Seal Cav 2 Press Inst CV													
1B33-F319A	M-2093-8	D3	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	A Rx Recirc Pump Seal Cav 1 Press Inst CV													
1B33-F319B	M-2093-8	B3	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	B Rx Recirc Pump Seal Cav 1 Press Inst CV													

Reactor Recirculation

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1B33-F338A	M-93-1	E2	2	B	0.75	GL	SO	A	O	C	FS-C	CS		CS-01	TP-03
											PIT	Y2			
											ST-C	CS		CS-01	
	Valve Name	A RR Pump Discharge FCV ACT Retract INBD Vlv													
1B33-F338B	M-93-2	E2	2	B	0.75	GL	SO	A	O	C	FS-C	CS		CS-01	TP-03
											PIT	Y2			
											ST-C	CS		CS-01	
	Valve Name	B RR Pump Discharge FCV ACT Retract INBD Vlv													
1B33-F339A	M-93-1	E1	2	B	0.75	GL	SO	A	O	C	FS-C	CS		CS-01	TP-03
											PIT	Y2			
											ST-C	CS		CS-01	
	Valve Name	A RR Pump Discharge FCV ACT Retract OTBD Vlv													
1B33-F339B	M-93-2	E1	2	B	0.75	GL	SO	A	O	C	FS-C	CS		CS-01	TP-03
											PIT	Y2			
											ST-C	CS		CS-01	
	Valve Name	B RR Pump Discharge FCV ACT Retract OTBD Vlv													
1B33-F340A	M-93-1	E2	2	B	0.5	GL	SO	A	O	C	FS-C	CS		CS-01	TP-03
											PIT	Y2			
											ST-C	CS		CS-01	
	Valve Name	A RR Pump Discharge FCV ACT Lockout INBD Vlv													
1B33-F340B	M-93-2	D2	2	B	0.5	GL	SO	A	O	C	FS-C	CS		CS-01	TP-03
											PIT	Y2			
											ST-C	CS		CS-01	
	Valve Name	B RR Pump Discharge FCV ACT Lockout INBD Vlv													
1B33-F341A	M-93-1	E1	2	B	0.5	GL	SO	A	O	C	FS-C	CS		CS-01	TP-03
											PIT	Y2			
											ST-C	CS		CS-01	
	Valve Name	A RR Pump Discharge FCV ACT Lockout OTBD Vlv													
1B33-F341B	M-93-2	D1	2	B	0.5	GL	SO	A	O	C	FS-C	CS		CS-01	TP-03
											PIT	Y2			
											ST-C	CS		CS-01	
	Valve Name	B RR Pump Discharge FCV ACT Lockout OTBD Vlv													
1B33-F342A	M-93-1	D2	2	B	0.5	GL	SO	A	O	C	FS-C	CS		CS-01	TP-03
											PIT	Y2			
											ST-C	CS		CS-01	
	Valve Name	A RR Pump Discharge FCV ACT Seal Return INBD Vlv													

Reactor Recirculation

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1B33-F342B	M-93-2	C2	2	B	0.5	GL	SO	A	O	C	FS-C	CS		CS-01	TP-03
											PIT	Y2			
											ST-C	CS		CS-01	
	Valve Name	B RR Pump Discharge FCV ACT Seal Return INBD Vlv													
1B33-F343A	M-93-1	D1	2	B	0.5	GL	SO	A	O	C	FS-C	CS		CS-01	TP-03
											PIT	Y2			
											ST-C	CS		CS-01	
	Valve Name	A RR Pump Discharge FCV ACT Seal Return OTBD Vlv													
1B33-F343B	M-93-2	C1	2	B	0.5	GL	SO	A	O	C	FS-C	CS		CS-01	TP-03
											PIT	Y2			
											ST-C	CS		CS-01	
	Valve Name	B RR Pump Discharge FCV ACT Seal Return OTBD Vlv													
1B33-F344A	M-93-1	C2	2	B	0.75	GL	SO	A	O	C	FS-C	CS		CS-01	TP-03
											PIT	Y2			
											ST-C	CS		CS-01	
	Valve Name	A Rx Recirc Pump Dsch FCV Hyd Actuator Inbd Vlv													
1B33-F344B	M-93-2	C2	2	B	0.75	GL	SO	A	O	C	FS-C	CS		CS-01	TP-03
											PIT	Y2			
											ST-C	CS		CS-01	
	Valve Name	B Rx Recirc Pump Dsch FCV Hyd Actuator Inbd Vlv													
1B33-F345A	M-93-1	C1	2	B	0.75	GL	SO	A	O	C	FS-C	CS		CS-01	TP-03
											PIT	Y2			
											ST-C	CS		CS-01	
	Valve Name	A Rx Recirc Pump Dsch FCV Hyd Actuator Otbd Vlv													
1B33-F345B	M-93-2	C1	2	B	0.75	GL	SO	A	O	C	FS-C	CS		CS-01	TP-03
											PIT	Y2			
											ST-C	CS		CS-01	
	Valve Name	B Rx Recirc Pump Dsch FCV Hyd Actuator Otbd Vlv													
1B33-F395	M-93-2	E6	2	A/C	0.75	CK	SA	A	C	O/C	CC	CM		CS-15	CM07
											CO	CM		CS-15	CM07
											LT-J	AppJ			
	Valve Name	Rx Recirc Loop Process Sampling Inbd Bypass Vlv													
2B33-F013A	M-139-1	B7	2	A/C	0.75	CK	SA	A	SYS	C	CC	RR		RJ-02	
											CO	OP			TP-05, TP-01
											LT-J	AppJ			
	Valve Name	A Rx Recirc Pump Seal Purge Supply Inbd Check Vlv													

Reactor Recirculation

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2B33-F013B	M-139-2	B7	2	A/C	0.75	CK	SA	A	SYS	C	CC	RR		RJ-02	
											CO	OP			TP-05, TP-01
											LT-J	AppJ			
	Valve Name	B Rx Recirc Pump Seal Purge Supply Inbd Check Vlv													
2B33-F017A	M-139-1	B7	2	A/C	0.75	CK	SA	A	SYS	C	CC	RR		RJ-02	
											CO	OP			TP-05, TP-01
											LT-J	AppJ			
	Valve Name	A Rx Recirc Pump Seal Purge Supply Otbd Check Vlv													
2B33-F017B	M-139-2	B7	2	A/C	0.75	CK	SA	A	SYS	C	CC	RR		RJ-02	
											CO	OP			TP-05, TP-01
											LT-J	AppJ			
	Valve Name	B Rx Recirc Pump Seal Purge Supply Otbd Check Vlv													
2B33-F019	M-139-2	E6	2	A	0.75	GL	AO	A	O	C	FS-C	M3			TP-03
											LT-J	AppJ			
											PIT	Y2			
											ST-C	M3			
	Valve Name	B Rx Recirc Loop Process Sampling Inbd Isol Valve													
2B33-F020	M-139-2	E8	2	A	0.75	GL	AO	A	O	C	FS-C	M3			TP-03
											LT-J	AppJ			
											PIT	Y2			
											ST-C	M3			
	Valve Name	B Rx Recirc Loop Process Sampling Otbd Isol Valve													
2B33-F301A	M-139-1	D8	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	A Rx Recirc Pump Suct Press RHR Intlk EFV													
2B33-F301B	M-139-2	C8	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	B Rx Recirc Pump Suct Press RHR Intlk EFV													
2B33-F305A	M-2139-1	E3	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	A Rx Recirc Pump Flow Hi Side Check Valve													

Reactor Recirculation

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2B33-F305B	M-2139-1	D3	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	A Rx Recirc Pump Flow Hi Side Check Valve													
2B33-F305C	M-2139-1	C3	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	A Rx Recirc Pump Flow Hi Side Check Valve													
2B33-F305D	M-2139-1	B3	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	A Rx Recirc Pump Flow Lo Side Check Valve													
2B33-F307A	M-2139-1	E3	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	A Rx Recirc Pump Flow Lo Side Check Valve													
2B33-F307B	M-2139-1	D3	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	A Rx Recirc Pump Flow Lo Side Check Valve													
2B33-F307C	M-2139-1	C3	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	A Rx Recirc Pump Flow Lo Side Check Valve													
2B33-F307D	M-2139-1	B3	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	A Rx Recirc Pump Flow Hi Side Check Valve													
2B33-F311A	M-2139-2	E3	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	B Rx Recirc Pump Flow Lo Side Check Valve													

Reactor Recirculation

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2B33-F311B	M-2139-2	E3	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	B Rx Recirc Pump Flow Lo Side Check Valve													
2B33-F311C	M-2139-2	C3	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	B Rx Recirc Pump Flow Lo Side Check Valve													
2B33-F311D	M-2139-2	C3	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	B Rx Recirc Pump Flow Hi Side Check Valve													
2B33-F313A	M-2139-2	F3	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	B Rx Recirc Pump Flow Hi Side Check Valve													
2B33-F313B	M-2139-2	E3	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	B Rx Recirc Pump Flow Hi Side Check Valve													
2B33-F313C	M-2139-2	D3	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	B Rx Recirc Pump Flow Hi Side Check Valve													
2B33-F313D	M-2139-2	C3	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	B Rx Recirc Pump Flow Lo Side Check Valve													
2B33-F315A	M-2139-3	D2	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	A Rx Recirc Pump D/p Lo Side Check Valve													

Reactor Recirculation

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2B33-F315B	M-2139-3	D2	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	A Rx Recirc Pump D/p Hi Side Check Valve													
2B33-F315C	M-2139-4	D3	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	A Rx Recirc Pump D/p Lo Side Check Valve.													
2B33-F315D	M-2139-4	D3	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	A Rx Recirc Pump D/p Hi Side Check Valve													
2B33-F317A	M-2139-8	F5	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	A Rx Recirc Pump Seal Cav 2 Press Inst CV													
2B33-F317B	M-2139-8	C5	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	B Rx Recirc Pump Seal Cav 2 Press Inst CV													
2B33-F319A	M-2139-8	E5	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	A Rx Recirc Pump Seal Cav 1 Press Inst CV													
2B33-F319B	M-2139-8	C5	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	B Rx Recirc Pump Seal Cav 1 Press Inst CV													
2B33-F338A	M-139-1	E2	2	B	0.75	GL	SO	A	O	C	FS-C	CS		CS-01	TP-03
											PIT	Y2			
											ST-C	CS		CS-01	
	Valve Name	A Rx Recirc Pump Dsch FCV Hyd Actuator Inbd Vlv													

Reactor Recirculation

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2B33-F338B	M-139-2	E2	2	B	0.75	GL	SO	A	O	C	FS-C	CS		CS-01	TP-03
											PIT	Y2			
											ST-C	CS		CS-01	
	Valve Name	B Rx Recirc Pump Dsch FCV Hyd Actuator Inbd Vlv													
2B33-F339A	M-139-1	E1	2	B	0.75	GL	SO	A	O	C	FS-C	CS		CS-01	TP-03
											PIT	Y2			
											ST-C	CS		CS-01	
	Valve Name	A Rx Recirc Pump Dsch FCV Hyd Actuator Otbd Vlv													
2B33-F339B	M-139-2	E1	2	B	0.75	GL	SO	A	O	C	FS-C	CS		CS-01	TP-03
											PIT	Y2			
											ST-C	CS		CS-01	
	Valve Name	B Rx Recirc Pump Dsch FCV Hyd Actuator Otbd Vlv													
2B33-F340A	M-139-1	E2	2	B	0.5	GL	SO	A	O	C	FS-C	CS		CS-01	TP-03
											PIT	Y2			
											ST-C	CS		CS-01	
	Valve Name	A Rx Recirc Pump Dsch FCV Hyd Act Lockout Inbd Vlv													
2B33-F340B	M-139-2	D2	2	B	0.5	GL	SO	A	O	C	FS-C	CS		CS-01	TP-03
											PIT	Y2			
											ST-C	CS		CS-01	
	Valve Name	B Rx Recirc Pump Dsch FCV Hyd Act Lockout Inbd Vlv													
2B33-F341A	M-139-1	E1	2	B	0.5	GL	SO	A	O	C	FS-C	CS		CS-01	TP-03
											PIT	Y2			
											ST-C	CS		CS-01	
	Valve Name	A Rx Recirc Pump Dsch FCV Hyd Act Lockout Otbd Vlv													
2B33-F341B	M-139-2	D1	2	B	0.5	GL	SO	A	O	C	FS-C	CS		CS-01	TP-03
											PIT	Y2			
											ST-C	CS		CS-01	
	Valve Name	B Rx Recirc Pump Dsch FCV Hyd Act Lockout Otbd Vlv													
2B33-F342A	M-139-1	D2	2	B	0.5	GL	SO	A	O	C	FS-C	CS		CS-01	TP-03
											PIT	Y2			
											ST-C	CS		CS-01	
	Valve Name	A Rx Recirc Pump Dsch FCV Hyd Actuator Inbd Isol V													
2B33-F342B	M-139-2	D2	2	B	0.5	GL	SO	A	O	C	FS-C	CS		CS-01	TP-03
											PIT	Y2			
											ST-C	CS		CS-01	
	Valve Name	B Rx Recirc Pump Dsch FCV Hyd Actuator Inbd Vlv													

Reactor Recirculation

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2B33-F343A	M-139-1	D1	2	B	0.5	GL	SO	A	O	C	FS-C	CS		CS-01	TP-03
											PIT	Y2			
											ST-C	CS		CS-01	
	Valve Name	A Rx Recirc Pump Dsch FCV Hyd Actuator Otbd Vlv													
2B33-F343B	M-139-2	D1	2	B	0.5	GL	SO	A	O	C	FS-C	CS		CS-01	TP-03
											PIT	Y2			
											ST-C	CS		CS-01	
	Valve Name	B Rx Recirc Pump Dsch FCV Hyd Actuator Otbd Vlv													
2B33-F344A	M-139-1	C2	2	B	0.75	GL	SO	A	O	C	FS-C	CS		CS-01	TP-03
											PIT	Y2			
											ST-C	CS		CS-01	
	Valve Name	A Rx Recirc Pump Dsch FCV Hyd Actuator Inbd Vlv													
2B33-F344B	M-139-2	C2	2	B	0.75	GL	SO	A	O	C	FS-C	CS		CS-01	TP-03
											PIT	Y2			
											ST-C	CS		CS-01	
	Valve Name	B Rx Recirc Pump Dsch FCV Hyd Actuator Inbd Vlv													
2B33-F345A	M-139-1	C1	2	B	0.75	GL	SO	A	O	C	FS-C	CS		CS-01	TP-03
											PIT	Y2			
											ST-C	CS		CS-01	
	Valve Name	A Rx Recirc Pump Dsch FCV Hyd Actuator Otbd Vlv													
2B33-F345B	M-139-2	C1	2	B	0.75	GL	SO	A	O	C	FS-C	CS		CS-01	TP-03
											PIT	Y2			
											ST-C	CS		CS-01	
	Valve Name	B Rx Recirc Pump Dsch FCV Hyd Actuator Otbd Vlv													
2B33-F395	M-139-2	E7	2	A/C	0.75	CK	SA	A	C	O/C	CC	CM		CS-15	CM07
											CO	CM		CS-15	CM07
											LT-J	AppJ			
	Valve Name	Rx Recirc Loop Process Sampling Inbd Bypass Vlv													

Reactor Water Cleanup

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1G33-F001	M-97-1	E8	1	A	6	GA	MO	A	O	C	ET	CS	RV-02	CS-02	
											LT-J	AppJ			
											OMN-C	JOG	RV-02		
	Valve Name	RWCU Inboard Isolation Valve													
1G33-F004	M-97-1	E7	1	A	6	GA	MO	A	O	C	ET	CS	RV-02	CS-02	
											LT-J	AppJ			
											OMN-C	JOG	RV-02		
	Valve Name	RWCU Outboard Isolation Valve													
1G33-F040	M-97-1	F4	2	A	4	GA	MO	A	O	C	ET	Y2	RV-02		
											LT-J	AppJ			
											OMN-C	JOG	RV-02		
	Valve Name	RWCU Return To Feedwater Stop Valve													
1G33-F309	M-2097-1	C4	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	Rx Vsl Bottom Head Drn Excess Flow Check Valve													
1G33-F312A	M-2097-2	C4	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	RWCU Sys Inlt Lo Side Excess Flow Check Valve													
1G33-F312B	M-2097-2	C4	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	RWCU Sys Inlt Hi Side Excess Flow Check Valve													
2G33-F001	M-143-1	E8	1	A	6	GA	MO	A	O	C	ET	CS	RV-02	CS-02	
											LT-J	AppJ			
											OMN-C	JOG	RV-02		
	Valve Name	RWCU Inboard Isolation Valve													
2G33-F004	M-143-1	E7	1	A	6	GA	MO	A	O	C	ET	CS	RV-02	CS-02	
											LT-J	AppJ			
											OMN-C	JOG	RV-02		
											OMN-O	JOG	RV-02		
	Valve Name	RWCU Outboard Isolation Valve													
2G33-F040	M-143-1	F4	2	A	4	GA	MO	A	O	C	ET	Y2	RV-02		
											LT-J	AppJ			
											OMN-C	JOG	RV-02		
	Valve Name	RWCU Return To Feedwater Stop Valve													

Reactor Water Cleanup

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2G33-F309	M-2143-1	D5	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	Rx Vsl Bottom Head Drn Excess Flow Check Valve													
2G33-F312A	M-2143-2	C4	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	RWCU Sys Inlt Lo Side Excess Flow Check Valve													
2G33-F312B	M-2143-2	C4	2	C	0.75	XFC	SA	A	O	C	CC	RR		RJ-07	TP-10
											CO	OP			TP-05, TP-01
											PIT	Y2			
	Valve Name	RWCU Sys Inlt Hi Side Excess Flow Check Valve													

Standby Liquid Control

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1C41-F001A	M-99	C3	2	B	3	GL	MO	A	C	O	ET	Y2	RV-02		
											OMN-O	JOG	RV-02		
	Valve Name	SBLC Storage Tank A Outlet Valve													
1C41-F001B	M-99	B3	2	B	3	GL	MO	A	C	O	ET	Y2	RV-02		
											OMN-O	JOG	RV-02		
	Valve Name	SBLC Storage Tank B Outlet Valve													
1C41-F004A	M-99	C5	1	A/D	1.5	SHR	EXP	A	C	O/C	DT	S2			
											LT-J	AppJ			
	Valve Name	A SBLC Injection Squib Valve													
1C41-F004B	M-99	B5	1	A/D	1.5	SHR	EXP	A	C	O/C	DT	S2			
											LT-J	AppJ			
	Valve Name	B SBLC Injection Squib Valve													
1C41-F006	M-99	D6	1	C	1.5	CK	SA	A	C	O/C	CC	Y2		CS-11	
											CO	Y2		CS-11	
	Valve Name	SBLC Injection Line Outboard Check Valve													
1C41-F007	M-99	D7	1	A/C	1.5	CK	SA	A	C	O/C	CC	Y2		CS-11	
											CO	Y2		CS-11	
											LT-J	AppJ			
	Valve Name	SBLC Injection Line Inboard Check Valve													
1C41-F008	M-99	D7	1	B	1.5	GA	M	P	LO	O	PIT	Y2			
	Valve Name	SBLC Injection Line Manual Stop Valve													
1C41-F029A	M-99	D4	2	C	.75 x 1	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name	A SBLC Pump Discharge Relief Valve													
1C41-F029B	M-99	C4	2	C	.75 x 1	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name	B SBLC Pump Discharge Relief Valve													
1C41-F031	M-99	E3	2	B	3	GL	M	P	LC	C	PIT	Y2			
	Valve Name	SBLC Test Tank Outlet Valve													
1C41-F033A	M-99	C5	2	C	1.5	CK	SA	A	SYS	O/C	CC	M3			
											CO	M3			
	Valve Name	A SBLC Pump Discharge Check Valve													
1C41-F033B	M-99	B4	2	C	1.5	CK	SA	A	SYS	O/C	CC	M3			
											CO	M3			
	Valve Name	B SBLC Pump Discharge Check Valve													
2C41-F001A	M-145	C2	2	B	3	GL	MO	A	C	O	ET	Y2	RV-02		
											OMN-O	JOG	RV-02		
	Valve Name	SBLC Storage Tank A Outlet Valve													

Standby Liquid Control

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2C41-F001B	M-145	B2	2	B	3	GL	MO	A	C	O	ET	Y2	RV-02		
											OMN-O	JOG	RV-02		
	Valve Name	SBLC Storage Tank B Outlet Valve													
2C41-F004A	M-145	C5	1	A/D	1.5	SHR	EXP	A	C	O/C	DT	S2			
											LT-J	AppJ			
	Valve Name	A SBLC Injection Squib Valve													
2C41-F004B	M-145	B5	1	A/D	1.5	SHR	EXP	A	C	O/C	DT	S2			
											LT-J	AppJ			
	Valve Name	B SBLC Injection Squib Valve													
2C41-F006	M-145	D6	1	C	1.5	CK	SA	A	C	O/C	CC	Y2		CS-11	
											CO	Y2		CS-11	
	Valve Name	SBLC Injection Line Outboard Check Valve													
2C41-F007	M-145	D7	1	A/C	1.5	CK	SA	A	C	O/C	CC	Y2		CS-11	
											CO	Y2		CS-11	
											LT-J	AppJ			
	Valve Name	SBLC Injection Line Inboard Check Valve													
2C41-F008	M-145	D7	1	B	1.5	GA	M	P	LO	O	PIT	Y2			
	Valve Name	SBLC Injection Line Manual Stop Valve													
2C41-F029A	M-145	D4	2	C	.75 x 1	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name	A SBLC Pump Discharge Relief Valve													
2C41-F029B	M-145	C4	2	C	.75 x 1	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name	B SBLC Pump Discharge Relief Valve													
2C41-F031	M-145	E3	2	B	3	GL	M	P	LC	C	PIT	Y2			
	Valve Name	SBLC Test Tank Outlet Valve													
2C41-F033A	M-145	C4	2	C	1.5	CK	SA	A	SYS	O/C	CC	M3			
											CO	M3			
	Valve Name	A SBLC Pump Discharge Check Valve													
2C41-F033B	M-145	B4	2	C	1.5	CK	SA	A	SYS	O/C	CC	M3			
											CO	M3			
	Valve Name	B SBLC Pump Discharge Check Valve													

Standby Gas Treatment

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1VG001	M-89	A7	NC	B	20	BTF	MO	A	C	O/C	PIT	Y2			
											ST-O	M3			TP-11
	Valve Name	SBGT Equipment Train Inlet Damper													
1VG003	M-89	C2	3	B	20	BTF	MO	A	C	O/C	PIT	Y2			
											ST-O	M3			TP-11
	Valve Name	SBGT Equipment Train Outlet Damper													
2VG001	M-89	E7	NC	B	20	BTF	MO	A	C	O/C	PIT	Y2			
											ST-O	M3			TP-11
	Valve Name	SBGT Equipment Train Inlet Damper													
2VG003	M-89	E2	3	B	20	BTF	MO	A	C	O/C	PIT	Y2			
											ST-O	M3			TP-11
	Valve Name	SBGT Equipment Train Outlet Damper													
2VG024A	M-89	E1	3	C	0.75	CK	SA	A	SYS	C	CCD	CM			CM03
											COD	CM			CM03
											OPR				CM03
	Valve Name	SBGT Service Air Inlet Downstream Check Valve													
2VG025A	M-89	E1	3	C	0.75	CK	SA	A	SYS	C	CCD	CM			CM03
											COD	CM			CM03
											OPR				CM03
	Valve Name	SBGT Service Air Inlet Upstream Check Valve													

Primary Containment Chilled Water

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1VP053A	M-86-1	E2	2	A	8	GA	MO	A	SYS	C	ET	Y2	RV-02		
											LT-J	AppJ			
											OMN-C	JOG	RV-02		
	Valve Name	A DW Cooler Outlet Otbd Isol Valve													
1VP053B	M-86-1	C2	2	A	8	GA	MO	A	SYS	C	ET	Y2	RV-02		
											LT-J	AppJ			
											OMN-C	JOG	RV-02		
	Valve Name	B DW Cooler Outlet Otbd Isol Valve													
1VP063A	M-86-1	D2	2	A	8	GA	MO	A	SYS	C	ET	Y2	RV-02		
											LT-J	AppJ			
											OMN-C	JOG	RV-02		
	Valve Name	A DW Cooler Inlet Otbd Isol Valve													
1VP063B	M-86-1	B2	2	A	8	GA	MO	A	SYS	C	ET	Y2	RV-02		
											LT-J	AppJ			
											OMN-C	JOG	RV-02		
	Valve Name	B DW Cooler Inlet Otbd Isol Valve													
1VP113A	M-86-1	D2	2	A	8	BTF	MO	A	O	C	LT-J	AppJ			
											PIT	Y2			
											ST-C	M3			
	Valve Name	A DW Cooler Inlet Inbd Isol Valve													
1VP113B	M-86-1	B2	2	A	8	BTF	MO	A	O	C	LT-J	AppJ			
											PIT	Y2			
											ST-C	M3			
	Valve Name	B DW Cooler Inlet Inbd Isol Valve													
1VP114A	M-86-1	E2	2	A	8	BTF	MO	A	O	C	LT-J	AppJ			
											PIT	Y2			
											ST-C	M3			
	Valve Name	A DW Cooler Outlet Inbd Isol Valve													
1VP114B	M-86-1	C2	2	A	8	BTF	MO	A	O	C	LT-J	AppJ			
											PIT	Y2			
											ST-C	M3			
	Valve Name	B DW Cooler Outlet Inbd Isol Valve													
1VP197A	M-86-1	F1	2	A/C	0.75	RV	SA	A	C	O/C	LT-J	AppJ			
											RVT	Y10			TP-08
	Valve Name	A DW Cooler Outlet Relief Valve													
1VP197B	M-86-1	C2	2	A/C	0.75	RV	SA	A	C	O/C	LT-J	AppJ			
											RVT	Y10			TP-08
	Valve Name	B DW Cooler Outlet Relief Valve													

Primary Containment Chilled Water

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1VP198A	M-86-1	E2	2	A/C	0.75	RV	SA	A	C	O/C	LT-J	AppJ			
											RVT	Y10			TP-08
	Valve Name	A DW Cooler Inlet Relief Valve													
1VP198B	M-86-1	A2	2	A/C	0.75	RV	SA	A	C	O/C	LT-J	AppJ			
											RVT	Y10			TP-08
	Valve Name	B DW Cooler Inlet Relief Valve													
2VP053A	M-133-1	E2	2	A	8	GA	MO	A	SYS	C	ET	Y2	RV-02		
											LT-J	AppJ			
											OMN-C	JOG	RV-02		
	Valve Name	A DW Cooler Outlet Otbd Isol Valve													
2VP053B	M-133-1	C2	2	A	8	GA	MO	A	SYS	C	ET	Y2	RV-02		
											LT-J	AppJ			
											OMN-C	JOG	RV-02		
	Valve Name	B DW Cooler Outlet Otbd Isol Valve													
2VP063A	M-133-1	D2	2	A	8	GA	MO	A	SYS	C	ET	Y2	RV-02		
											LT-J	AppJ			
											OMN-C	JOG	RV-02		
	Valve Name	A DW Cooler Inlet Otbd Isol Valve													
2VP063B	M-133-1	B2	2	A	8	GA	MO	A	SYS	C	ET	Y2	RV-02		
											LT-J	AppJ			
											OMN-C	JOG	RV-02		
	Valve Name	B DW Cooler Inlet Otbd Isol Valve													
2VP113A	M-133-1	D2	2	A	8	BTF	MO	A	O	C	LT-J	AppJ			
											PIT	Y2			
											ST-C	M3			
	Valve Name	A DW Cooler Inlet Inbd Isol Valve													
2VP113B	M-133-1	B2	2	A	8	BTF	MO	A	O	C	LT-J	AppJ			
											PIT	Y2			
											ST-C	M3			
	Valve Name	B DW Cooler Inlet Inbd Isol Valve													
2VP114A	M-133-1	E2	2	A	8	BTF	MO	A	O	C	LT-J	AppJ			
											PIT	Y2			
											ST-C	M3			
	Valve Name	A DW Cooler Outlet Inbd Isol Valve													
2VP114B	M-133-1	C2	2	A	8	BTF	MO	A	O	C	LT-J	AppJ			
											PIT	Y2			
											ST-C	M3			
	Valve Name	B DW Cooler Outlet Inbd Isol Valve													

Primary Containment Chilled Water

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2VP197A	M-133-1	F1	2	A/C	0.75	RV	SA	A	C	O/C	LT-J	AppJ			
											RVT	Y10			TP-08
	Valve Name	A DW Cooler Outlet Relief Valve													
2VP197B	M-133-1	B5	2	A/C	0.75	RV	SA	A	C	O/C	LT-J	AppJ			
											RVT	Y10			TP-08
	Valve Name	B DW Cooler Outlet Relief Valve													
2VP198A	M-133-1	A5	2	A/C	0.75	RV	SA	A	C	O/C	LT-J	AppJ			
											RVT	Y10			TP-08
	Valve Name	A DW Cooler Inlet Relief Valve													
2VP198B	M-133-1	A2	2	A/C	0.75	RV	SA	A	C	O/C	LT-J	AppJ			
											RVT	Y10			TP-08
	Valve Name	B DW Cooler Inlet Relief Valve													

Primary Containment Purge

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1VQ026	M-92-1	C2	2	A	26	BTF	AO	A	C	C	FS-C	M3			TP-03
											LT-J	AppJ			
											PIT	Y2			
											ST-C	M3			
	Valve Name	Suppression Chamber Vent/Purge Inlet Upstream Isol													
1VQ027	M-92-1	C3	2	A	26	BTF	AO	A	C	C	FS-C	M3			TP-03
											LT-J	AppJ			
											PIT	Y2			
											ST-C	M3			
	Valve Name	Suppression Chamber Vent/Purge Inlet Downstrm Isol													
1VQ029	M-92-1	D2	2	A	26	BTF	AO	A	C	C	FS-C	M3			TP-03
											LT-J	AppJ			
											PIT	Y2			
											ST-C	M3			
	Valve Name	D/W Vent/Purge Inlet Upstream Isolation													
1VQ030	M-92-1	D3	2	A	26	BTF	AO	A	C	C	FS-C	M3			TP-03
											LT-J	AppJ			
											PIT	Y2			
											ST-C	M3			
	Valve Name	D/W Vent/Purge Inlet Downstream Isolation													
1VQ031	M-92-1	C7	2	A	26	BTF	AO	A	C	C	FS-C	M3			TP-03
											LT-J	AppJ			
											PIT	Y2			
											ST-C	M3			
	Valve Name	Suppression Chamber Vent/Purge Upstream Isolation													
1VQ032	M-92-1	C7	2	A	2	GL	MO	A	C	C	ET	Y2	RV-02		
											LT-J	AppJ			
											OMN-C	JOG	RV-02		
	Valve Name	Supp Chamber Vent/Purge Outlet Upstrm Isol Bypass													
1VQ034	M-92-1	E6	2	A	26	BTF	AO	A	C	C	FS-C	M3			TP-03
											LT-J	AppJ			
											PIT	Y2			
											ST-C	M3			
	Valve Name	D/W Vent/Purge Upstream Outlet Isolation													
1VQ035	M-92-1	E6	2	A	2	GL	MO	A	C	C	ET	Y2	RV-02		
											LT-J	AppJ			
											OMN-C	JOG	RV-02		
	Valve Name	D/W Vent/Purge Upstream Outlet Isolation Bypass													

Primary Containment Purge

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1VQ036	M-92-1	E7	2	A	26	BTF	AO	A	C	C	FS-C	M3			TP-03
											LT-J	AppJ			
											PIT	Y2			
											ST-C	M3			
	Valve Name	D/W Vent/Purge Outlet Downstream Isolation													
1VQ037	M-92-1	B8	NC	B	26	BTF	MO	A	C	C	PIT	Y2			
											ST-C	M3			
	Valve Name	Primary Contain Purge Air Filter Unit Upstrm Isol													
1VQ038	M-92-1	B7	NC	B	26	BTF	MO	A	C	C	PIT	Y2			
											ST-C	M3			
	Valve Name	Primary Contain Purge Air Filter Unit Dwnstrm Isol													
1VQ040	M-92-1	C8	2	A	26	BTF	AO	A	C	C	FS-C	M3			TP-03
											LT-J	AppJ			
											PIT	Y2			
											ST-C	M3			
	Valve Name	Supp Chamber Vent/Purge Outlet Downstream Isol													
1VQ042	M-92-1	D2	2	A	8	BTF	AO	A	C	C	FS-C	M3			TP-03
											LT-J	AppJ			
											PIT	Y2			
											ST-C	M3			
	Valve Name	Dw N2 Inerting Supply Valve													
1VQ043	M-92-1	C2	2	A	8	BTF	AO	A	C	C	FS-C	M3			TP-03
											LT-J	AppJ			
											PIT	Y2			
											ST-C	M3			
	Valve Name	Sup Chbr N2 Inerting Supply Valve													
1VQ047	M-92-1	D3	2	A	1.5	GL	MO	A	O	C	ET	Y2	RV-02		
											LT-J	AppJ			
											OMN-C	JOG	RV-02		
	Valve Name	Dw N2 Makeup Dwnst Isol Valve													
1VQ048	M-92-1	D3	2	A	1.5	GL	MO	A	O	C	ET	Y2	RV-02		
											LT-J	AppJ			
											OMN-C	JOG	RV-02		
	Valve Name	Dw N2 Makeup Upstrm Isol Valve													
1VQ050	M-92-1	C3	2	A	1.5	GL	MO	A	O	O	ET	Y2	RV-02		
											LT-J	AppJ			
											OMN-C	JOG	RV-02		
	Valve Name	Sup Chbr N2 Makeup Dwnst Isol Valve													

Primary Containment Purge

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1VQ051	M-92-1	C3	2	A	1.5	GL	MO	A	O	O	ET	Y2	RV-02		
											LT-J	AppJ			
											OMN-C	JOG	RV-02		
	Valve Name	Sup Chbr N2 Makeup Upstrm Isol Valve													
1VQ068	M-92-1	E7	2	A	2	GL	MO	A	C	C	ET	Y2	RV-02		
											LT-J	AppJ			
											OMN-C	JOG	RV-02		
	Valve Name	DW Vent/purge Outlet Dwnst Isol Byp Valve													
2VQ026	M-138-1	C2	2	A	26	BTF	AO	A	C	C	FS-C	M3			TP-03
											LT-J	AppJ			
											PIT	Y2			
											ST-C	M3			
	Valve Name	Suppression Chamber Vent/Purge Inlet Upstream Isol													
2VQ027	M-138-1	C3	2	A	26	BTF	AO	A	C	C	FS-C	M3			TP-03
											LT-J	AppJ			
											PIT	Y2			
											ST-C	M3			
	Valve Name	Suppression Chamber Vent/Purge Inlet Downstrm Isol													
2VQ029	M-138-1	D2	2	A	26	BTF	AO	A	C	C	FS-C	M3			TP-03
											LT-J	AppJ			
											PIT	Y2			
											ST-C	M3			
	Valve Name	D/W Vent/Purge Inlet Upstream Isolation													
2VQ030	M-138-1	D3	2	A	26	BTF	AO	A	C	C	FS-C	M3			TP-03
											LT-J	AppJ			
											PIT	Y2			
											ST-C	M3			
	Valve Name	D/W Vent/Purge Inlet Downstream Isolation													
2VQ031	M-138-1	C7	2	A	26	BTF	AO	A	C	C	FS-C	M3			TP-03
											LT-J	AppJ			
											PIT	Y2			
											ST-C	M3			
	Valve Name	Suppression Chamber Vent/Purge Upstream Isolation													
2VQ032	M-138-1	C7	2	A	2	GL	MO	A	C	C	ET	Y2	RV-02		
											LT-J	AppJ			
											OMN-C	JOG	RV-02		
	Valve Name	Supp Chamber Vent/Purge Outlet Upstrm Isol Bypass													

Primary Containment Purge

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2VQ034	M-138-1	E6	2	A	26	BTF	AO	A	C	C	FS-C	M3			TP-03
											LT-J	AppJ			
											PIT	Y2			
											ST-C	M3			
	Valve Name	D/W Vent/Purge Upstream Outlet Isolation													
2VQ035	M-138-1	E6	2	A	2	GL	MO	A	C	C	ET	Y2	RV-02		
											LT-J	AppJ			
											OMN-C	JOG	RV-02		
	Valve Name	D/W Vent/Purge Upstream Outlet Isolation Bypass													
2VQ036	M-138-1	E7	2	A	26	BTF	AO	A	C	C	FS-C	M3			TP-03
											LT-J	AppJ			
											PIT	Y2			
											ST-C	M3			
	Valve Name	D/W Vent/Purge Outlet Downstream Isolation													
2VQ037	M-138-1	B8	NC	B	26	BTF	MO	A	C	C	PIT	Y2			
											ST-C	M3			
	Valve Name	Primary Contain Purge Air Filter Unit Upstrm Isol													
2VQ038	M-138-1	B7	NC	B	26	BTF	MO	A	C	C	PIT	Y2			
											ST-C	M3			
	Valve Name	Primary Contain Purge Air Filter Unit Dwnstrm Isol													
2VQ040	M-138-1	C8	2	A	26	BTF	AO	A	C	C	FS-C	M3			TP-03
											LT-J	AppJ			
											PIT	Y2			
											ST-C	M3			
	Valve Name	Supp Chamber Vent/Purge Outlet Downstream Isol													
2VQ042	M-138-1	D2	2	A	8	BTF	AO	A	C	C	FS-C	M3			TP-03
											LT-J	AppJ			
											PIT	Y2			
											ST-C	M3			
	Valve Name	Dw N2 Inerting Supply Valve													
2VQ043	M-138-1	C2	2	A	8	BTF	AO	A	C	C	FS-C	M3			TP-03
											LT-J	AppJ			
											PIT	Y2			
											ST-C	M3			
	Valve Name	Sup Chbr N2 Inerting Supply Valve													

Primary Containment Purge

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2VQ047	M-138-1	D3	2	A	1.5	GL	MO	A	O	C	ET	Y2	RV-02		
											LT-J	AppJ			
											OMN-C	JOG	RV-02		
	Valve Name	Dw N2 Makeup Dwnst Isol Valve													
2VQ048	M-138-1	D3	2	A	1.5	GL	MO	A	O	C	ET	Y2	RV-02		
											LT-J	AppJ			
											OMN-C	JOG	RV-02		
	Valve Name	Dw N2 Makeup Upstrm Isol Valve													
2VQ050	M-138-1	C3	2	A	1.5	GL	MO	A	O	O	ET	Y2	RV-02		
											LT-J	AppJ			
											OMN-C	JOG	RV-02		
	Valve Name	Sup Chbr N2 Makeup Dwnst Isol Valve													
2VQ051	M-138-1	C3	2	A	1.5	GL	MO	A	O	O	ET	Y2	RV-02		
											LT-J	AppJ			
											OMN-C	JOG	RV-02		
	Valve Name	Sup Chbr N2 Makeup Upstrm Isol Valve													
2VQ068	M-138-1	E7	2	A	2	GL	MO	A	C	C	ET	Y2	RV-02		
											LT-J	AppJ			
											OMN-C	JOG	RV-02		
	Valve Name	DW Vent/Purge Outlet Dwnst Isol Byp Valve													

Reactor Building Closed Cooling Water

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1WR029	M-90-2	A7	2	A	6	GA	MO	A	O	C	ET	Y2	RV-02		
											LT-J	AppJ			
											OMN-C	JOG	RV-02		
	Valve Name	RBCCW Supply Outboard Isolation Valve													
1WR040	M-90-2	B4	2	A	6	GA	MO	A	O	C	ET	Y2	RV-02		
											LT-J	AppJ			
											OMN-C	JOG	RV-02		
	Valve Name	RBCCW Return Outboard Isolation Valve													
1WR179	M-90-2	B7	2	A	6	GA	MO	A	O	C	ET	Y2	RV-02		
											LT-J	AppJ			
											OMN-C	JOG	RV-02		
	Valve Name	RBCCW Supply Inboard Isolation Valve													
1WR180	M-90-2	B4	2	A	6	GA	MO	A	O	C	ET	Y2	RV-02		
											LT-J	AppJ			
											OMN-C	JOG	RV-02		
	Valve Name	RBCCW Return Inboard Isolation Valve													
1WR225	M-90-2	B7	2	A/C	.75 x 1	RV	SA	A	C	O/C	LT-J	AppJ			
											RVT	Y10			TP-08
	Valve Name	DW Equip RBCCW Supply Relief Valve													
1WR226	M-90-2	B4	2	A/C	.75 x 1	RV	SA	A	C	O/C	LT-J	AppJ			
											RVT	Y10			TP-08
	Valve Name	DW Equip RBCCW Return Relief Valve													
2WR029	M-136-2	B7	2	A	6	GA	MO	A	O	C	ET	Y2	RV-02		
											LT-J	AppJ			
											OMN-C	JOG	RV-02		
	Valve Name	RBCCW Supply Outboard Isolation Valve													
2WR040	M-136-2	B4	2	A	6	GA	MO	A	O	C	ET	Y2	RV-02		
											LT-J	AppJ			
											OMN-C	JOG	RV-02		
	Valve Name	RBCCW Return Outboard Isolation Valve													
2WR179	M-136-2	B7	2	A	6	GA	MO	A	O	C	ET	Y2	RV-02		
											LT-J	AppJ			
											OMN-C	JOG	RV-02		
	Valve Name	RBCCW Supply Inboard Isolation Valve													
2WR180	M-136-2	B4	2	A	6	GA	MO	A	O	C	ET	Y2	RV-02		
											LT-J	AppJ			
											OMN-C	JOG	RV-02		
	Valve Name	RBCCW Return Inboard Isolation Valve													

Reactor Building Closed Cooling Water

Valve EPN	P&ID	P&ID Coor.	Code Class	IST Category	Valve Size	Valve Type	ACT. Type	Active / Passive	Normal Position	Safety Position	Test Rqmt	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2WR225	M-136-2	B8	2	A/C	.75 x 1	RV	SA	A	C	O/C	LT-J	AppJ			
											RVT	Y10			TP-08
	Valve Name	DW Equip RBCCW Supply Relief Valve													
2WR226	M-136-2	B4	2	A/C	.75 x 1	RV	SA	A	C	O/C	LT-J	AppJ			
											RVT	Y10			TP-08
	Valve Name	DW Equip RBCCW Return Relief Valve													