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SOUTHERN COMPANY
Energy to Serve Your World℠

April 16, 2007

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NL-07-0153

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D. C. 20555-0001

Vogtle Electric Generating Plant
Third Interval Inservice Testing (IST) Program Update

Ladies and Gentlemen:

Pursuant to 10 CFR 50.55a(f)(5)(i), Southern Nuclear Operating Company (SNC) hereby submits the Third 10-Year Interval Inservice Testing (IST) Program for Vogtle Electric Generating Plant (VEGP) Units 1 and 2 for NRC review and approval. In accordance with 10 CFR 50.55a(f)(4)(ii), the updated IST program was written to meet the requirements of the ASME OM Code 2001 edition through 2003 addenda, except where proposed requests for alternatives and/or proposed requests for relief are documented in the Vogtle IST Program. The current IST Interval (second) began on June 1, 1997, and will end on May 31, 2007. The Third IST Interval begins on June 1, 2007 and ends on May 31, 2017.

SNC intends to utilize the guidance provided in NRC NUREG-1482, Revision 1, paragraph 3.3.3, when implementing the updated third Interval IST Program. A phase-in implementation is proposed because update of the IST Program results in the required revision of approximately 120 VEGP procedures. Using the NUREG guidance, SNC will phase-out the Second Interval IST requirements and phase-in the Third Interval IST requirements over a 12-month period according to the following schedule.

- SNC will revise affected IST surveillance procedures in accordance with a detailed phase-in schedule for VEGP Units 1 & 2.
    - The schedule requires approximately 25% of the procedures to be updated and made effective each quarter beginning June 1, 2007 and ending May 31, 2008.
- SNC will begin implementation of the updated VEGP IST Program on June 1, 2007 using a phased-in approach.
    - A combination of existing IST procedures and Third Interval procedures will be utilized during the phase-in period.
    - Existing IST procedures will be replaced with updated procedures in accordance with the schedule proposed above.

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- VEGP surveillance procedures will be updated and the Third Interval IST Program will be fully implemented by May 31, 2008.

SNC plans to implement the schedule as outlined above and as described in the second paragraph of "NRC Recommendations" in NUREG-1482, Revision 1, Section 3.3.3. This same type of phase-in implementation plan was previously approved by the NRC for the Edwin I. Hatch Nuclear Plant (HNP) in December 2005. The phase-in implementation plan for HNP was documented in SNC letter NL-05-2304.

This letter contains an SNC regulatory commitment. The NRC will be informed if VEGP deviates from the commitment described in this letter.

Enclosure 1 contains the Third 10-Year IST Program for VEGP Units 1 and 2. Enclosure 2 contains a detailed phase-in schedule for VEGP Units 1 and 2 affected procedures. Enclosure 3 contains an SNC regulatory commitment.

If you have any questions, please advise.

Sincerely,

B. J. George
Manager, Nuclear Licensing

BJG/DRG/daj

Enclosures:
1. VEGP Units 1 and 2 Third Interval IST Program
2. Detailed Phase-in Schedule for VEGP Units 1 & 2 Affected Procedures
3. SNC Regulatory Commitment

cc: Southern Nuclear Operating Company
Mr. J. T. Gasser, Executive Vice President
Mr. T. E. Tynan, Vice President - Vogtle
Mr. D. H. Jones, Vice President Engineering
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U. S. Nuclear Regulatory Commission
Dr. W. D. Travers, Regional Administrator
Mr. B. K. Singal, NRR Project Manager – Vogtle
Mr. G. J. McCoy, Senior Resident Inspector – Vogtle

Enclosure 1

Vogtle Electric Generating Plant
Third Interval Inservice Testing (IST) Program Update

VEGP Units 1 & 2 Third Interval IST Program

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1.0 IST PROGRAM INTRODUCTION

1.1 GENERAL

This document describes the Pump and Valve Inservice Testing (IST) Program for the Vogtle Electric Generating Plant (VEGP), Units 1 and 2. Provided below are important dates relative to the IST Program.

	VEGP-1	VEGP-2
Construction Permit:	06-28-74	06-28-74
Commercial Operation:	05-31-87	05-20-89
1st 10-Year Interval:	05-31-87 to 05-31-97	05-20-89 to 05-31-97*
2nd 10-Year Interval:	06-01-97 to 05-31-2007	06-01-97* to 05-31-2007
3rd 10-Year Interval:	06-01-2007 to 05-31-2017	06-01-2007 to 05-31-2017

* VEGP-2 was updated at the same time as VEGP-1 for the 2nd 10-Year Interval in order to utilize the same Code Edition for both units. Permission to establish concurrent intervals for VEGP-1 and 2 was requested via relief request RR-G-2 and granted by Nuclear Regulatory Commission (NRC) Safety Evaluation Report (SER) dated August 27, 1997. RR-G-2 was granted for the remainder of plant life and will not be included in the 3rd 10-Year Interval submittal.

The edition of 10 CFR 50.55a current on May 31, 2006, was used to determine the applicable Code(s) of record for this program update. 10 CFR 50.55a identified the ASME OM Code-2001 Edition with Addenda through OMb-2003, as the applicable Code. The NRC issued a final ruling amending 10 CFR 50.55a, Industry Codes and Standards, effective November 1, 2004 Federal Registry: October 1, 2004 (Volume 69, Number 190).

This program document includes IST requirements for safety-related ASME Code Class 1, 2 and 3 pumps and valves. NRC NUREG-1482, Rev.1, was used, to the extent practical, for guidance in the development of this program. The inservice testing of dynamic restraints (snubbers) Subsection ISTD of the OM Code is not included in this program and at the present time is considered to be part of the Plant Technical Specification and/or Inservice Inspection Program.

1.2 EFFECTIVE DATE

The IST Program, for the 3rd 10-Year Interval, will become effective on June 1, 2007 and will be utilized through May 31, 2017 unless federal regulations are revised otherwise.

1.3 SCOPE

This document is a description of the Pump and Valve IST Program to be implemented for Units 1 and 2 at VEGP. This document describes only the IST surveillance testing applicable to safety-related ASME Code Class 1, 2 and 3 pumps and valves included in the program.

1.4 COMPONENT UPGRADING

Plant components have been reviewed to determine the appropriate classification for inservice testing. Regulatory Guide 1.26 (September 1974) was used for guidance in determining component classifications.

Note that the classification of pumps and valves as ASME Class 1, 2, or 3 equivalent for this program does not imply that the components were designed in accordance with ASME requirements. Pump and valve design remains as stated in the FSAR.

1.5 SUBSEQUENT PROGRAM REVISIONS

It is anticipated that this document will be reviewed again near the end of the 120 month interval and compared to a later NRC approved version of the ASME Code applicable for IST. At that time, the program will be modified, if required, to comply to the extent practical with the latest Code edition endorsed by the NRC. Any additional relief requests for impractical requirements will be submitted in accordance with the applicable regulations.

1.6 RESPONSIBILITY

Southern Nuclear Operating Company (SNC) bears the overall responsibility for the implementation of the inservice testing activities contained in this program per the ASME OM Code-2001 Edition, through OMb-2003 Addenda, Subsection ISTA-1500.

1.7 RECORDS

Records and documentation of information and testing results, which provide the basis for evaluation and which facilitate comparison with results from previous and subsequent tests, will be maintained and available for the active life of the component or system in accordance with the ASME OM Code-2001 Edition, through OMb-2003 Addenda, Subsection ISTA-9000.

1.8 METHODS OF TESTING

The method of testing applicable to pumps and valves is listed adjacent to each component identification in the pump and valve test tables contained in this program. The OM Code does not stipulate any specific training/certification requirements for personnel involved in pump and valve testing. At Plant Vogtle, all pump and valve testing is performed by operations, maintenance or engineering department personnel who have been trained to perform specific testing tasks.

1.9 STANDARDS FOR TESTING EVALUATION

The acceptance criteria applicable for each pump and valve to be tested have been developed in accordance with OM Code requirements as modified by any applicable relief requests. Acceptance criteria are not provided in the IST Program, but are provided in the IST Basis document and the applicable surveillance testing procedures which are available for review at the plant site.

ABBREVIATION	DEFINITION
A	Active (valve basis table)
A	OM Code Category "A" Valve (See OM Code)
AC	OM Code Category "AC" Valve (See OM Code)
Accum	Accumulator
ACCW	Auxiliary Component Cooling Water
Act	Actuation
Add	Addition
Admis	Admission
AFW	Auxiliary Feedwater
AI	As Is
AJ	Appendix J
Alt	Alternate
AN	Angle valve
AO	Air Operated
AOV	Air Operated Valve
AP	Category A, Passive Valve (See OM Code)
App-J	10 CFR 50, Appendix J
ARV	Atmospheric Relief valve
ASME	American Society of Mechanical Engineers
ASME OM Code	ASME on Operation and Maintenance of Nuclear Power Plants
AT	Actuator
Aux	Auxiliary
B	OM Code Category "B" Valve (See OM Code)
BDT	Bi-directional test
BDTC	Bi-directional test close (non-safety position test)
BDTO	Bi-directional test open (non-safety position test)
BFV	Butterfly Valve
BI	biannual
BIT	Boron Injection Tank
Bldg	Building
BU	Butterfly valve
BV	Ball Valve
C	OM Code Category "C" Valve (See OM Code)
C	Closed
Cat	Category
Cav	Cavity
CB	Control Building
cc	Cubic Centimeter
CC	Code Classification
CC	Code Class
CCW	Component Cooling Water
CFR	Code of Federal Regulations
CH	Check valve
Char	Charging
Chem	Chemical
Chlr	Chiller
CIV	Containment Isolation Valve
CKC	Check valve test close (safety position test)
CKO	Check valve test open (safety position test)
CKOP	Check valve open / partial test
Cond	Condensate
Cnmt	Containment
Coord	Coordinate

ABBREVIATION	DEFINITION
CPT	Comprehensive Pump Test
CS	Cold Shutdown
CS	Containment Spray
CSJ	Cold Shutdown Justification
Ctrl	Control
CV	Check Valve
CVCS	Chemical and Volume Control System
ΔP	Differential Pressure
Demin	Demineralized
Depress	Depressurization
DG	Diesel Generator
DI	Diaphragm valve
Disch	Discharge
DI	Disassemble, Inspect
Disch	Discharge
Disp	Dispersant
Drn	Drain
EH	Electro-hydraulic
Equip	Equipment
ESF	Engineered Safety Feature
ETC	Exercise test Close
ETO	Exercise test Open
Evap	Evaporator
Exh	Exhaust
Exp	Expansion
FP	Fail position
FS	Fail safe test
FST	Fail safe test
FSAR	Final Safety Analysis Report
FW	Feedwater
FW	Main Feedwater
Flr	Floor
GA	Gate valve
GDC	General Design Criteria
Gen	Generator
GL	Globe valve
gpm	Gallons per minute
GV	Gate Valve
H2	Hydrogen
Hdr	Header
HOV	Hydraulic Operated Valve
HVAC	Heating, Ventilating and Air Conditioning
Hx	Heat Exchanger
ID	Identification
Inbrd	Inboard
Inj	Injection
Inst	Instrument
IRC	Inside reactor Containment
ISI	Inservice Inspection
Iso	Isolation

ABBREVIATION	DEFINITION
IST	Inservice Testing
Jac	Jacket
LC	Locked Closed
LOSP	Loss of offsite power
LT	Leakage test
Ltdwn	Letdown
LTV	Leak Tight Valve (Other than OM Code or Appendix J)
Lub	Lube
MA	Manual
Maint	Maintenance
Max	Maximum
MFIV	Main Feedwater Isolation Valve
Min	Minimum or mini
min	Minute
MO	Motor Operated
Mon	Monitoring
Mot	Motor
MOV	Motor Operated Valve
MS	Main Steam
MSIV	Main Steam Isolation Valve
MSRV	Main Steam Relief Valve
Mtr	Motor
N	Pump Speed
N2	Nitrogen
NA	Not Applicable
NIT	Non-intrusive Testing
NP	Normal Position
NRC	Nuclear Regulatory Commission
NSCW	Nuclear Service Cooling Water
O	Open
O2	Oxygen
O/C	Open/Closed
OM	O&M - Operation and Maintenance
ORC	Outside reactor containment
Outbrd	Outboard
P	Passive
P&ID	Piping and Instrumentation Diagram
Pan	Panel
PAS	Passive
PC	Pneumatic Cylinder (actuator)
PC	Project Class
PCV	Pressure Control Valve
P_D	Discharge Pressure
PDP	Positive displacement pump
Pen	Penetration
Pi	Inlet Pressure
PI	Position Indication test
PIV	Pressure Isolation valve
Pmp	Pump

ABBREVIATION	DEFINITION
PORV	Power Operated Relief Valve
Press	Pressure
Proc	Processing
Prod	Products
Prot	Protection
PRT	Pressurizer Relief Tank
PRZR	Pressurizer
Pur	Purification
Purif	Purification
Q	Flowrate
Q	Quarterly
Qtr	Quarterly
RC	Reactor Coolant
RCDT	Reactor Coolant Drain Tank
RCP	Reactor Coolant Pump
RCS	Reactor Coolant System
RD	Rupture Disk
Recirc	Recirculation
Recom	Recombiner
Redun	Redundant
Reg	Regulating
Reqd	Required
Ret	Return
RF	Refueling
RHR	Residual Heat Removal
Rm	Room
RMW	Reactor Makeup water
RO	Refueling Outage
ROJ	Refueling Outage Justification
RPV	Reactor Pressure Vessel
RR	Relief Request
RV	Relief valve
RW	Radwaste
RWST	Refueling Water Storage Tank
RV	Relief Valve
Rx	Reactor
SA	Semi-Annual
SA	Self activating
Sam	Sample
SDC	Shutdown Cooling
Ser	Service
SER	Safety Evaluation Report
SFP	Spent Fuel Pool
SG	Steam Generator
SI	Safety Injection
SNC	Southern Nuclear Operating Company
SO	Solenoid
SOV	Solenoid Operated Valve
SP	Safety Position
SPC	Suppression Pool Cooling
SR	Surveillance Requirement
ST	Stroke Time
STC	Stroke Time close

ABBREVIATION	DEFINITION
STO	Stroke Time open
Stg	Storage
Stm	Steam
Stor	Storage
Suc	Suction
Suct	Suction
Sup	Supply
SW	Service Water
Sys	System
TBL	Table
TC	Temperature control
Test	Testable
Tran	Transfer
TRM	Technical Requirements Manual
TS	Technical Specifications
Turb	Turbine
UFSAR	Updated Final Safety Analysis Reports
V	Vibration
Vac	Vacuum
VB	Vacuum Breaker
VCT	Volume Control Tank
VEGP	Vogtle Electric Generating Plant
Vlv	Valve
Wkly	Weekly
Wtr	Water

3.0 INSERVICE TESTING OF PUMPS

3.1 GENERAL

The IST Program was developed to comply with the requirements of 10 CFR 50.55a(f). This section of the IST program delineates the testing requirements for ASME Class 1, 2, and 3 pumps included for inservice testing (IST) at Southern Nuclear Operating Company's (SNC) Vogtle Electric Generating Plant (VEGP) Unit 1 and 2. The Code of record required by 10 CFR 50.55a(b)(3) for 3rd Interval IST is the ASME OM Code - 2001 Edition with Addenda trough OMb-2003. The supplemental guidance of NRC NUREG-1482, Rev. 1, has been applied, to the extent practical, in the development of IST of pumps. For pumps which are within the scope of IST, as stipulated in 10 CFR 50.55a, where specific Code requirements can not be met, relief has been requested from the specific Code requirements.

As required by OM Code, ISTB-1300, pumps within the scope of this program shall be categorized as either Group A or Group B pumps.

Group A pumps are defined as pumps that are operated continuously or routinely during normal operation, cold shutdown, or refueling operation.

Group B pumps are defined as pumps in standby systems that are not operated routinely except for testing.

Group A and Group B pump testing is required quarterly. In addition to the quarterly Group A or Group B pump tests, the OM Code imposed a biennial Comprehensive Pump Test and a Preservice Pump Test for pumps that are overhauled or replaced. The IST Program Pump Tables list the parameters measured during Group A, Group B, and Comprehensive Pump Testing.

Preservice Testing is equivalent to Comprehensive Pump Testing, except Preservice Testing requires the development of a five point pump curve for centrifugal and vertical line shaft pumps in which flow and differential pressure is measured. Vibration measurements are only required to be taken at the reference value(s).

3.2. SCOPE

ASME Code Class 1, 2 and 3 pumps meeting the scope criteria of ASME OM Code ISTA-1100 and falling under the Regulatory Position of Regulatory Guide 1.26 (September 1974) are included within the scope of this program. Special scope features of the Vogtle IST Program are discussed below.

It was recognized that 10 CFR 50, Appendix A, General Design Criteria 1 (GDC-1), and Appendix B, Criterion XI, intended that all pumps necessary for safe operation of the plant be tested to demonstrate that they will perform satisfactorily in service. The testing is to be performed to a level commensurate with the safety significance of the

pump. This testing is generally performed per the requirements of the plant Technical Specifications or other requirements. In cases where Code requirements are impractical for certain pumps, or an alternate testing method is considered an improvement over OM Code requirements, a relief request has been developed. Pump relief requests, if developed, are located under a separate tab.

The Spent Fuel Pool Pumps have not been included in this Program because they are not credited with performing a safety-related function; and because there are three sources of makeup available. The reactor makeup water storage tank serves as the Seismic Category 1 makeup source for the spent fuel pool; makeup water can also be pumped or gravity fed into the discharge line from spent fuel pump A. Demineralized water can be pumped directly into the Safety Class 3 return lines of each spent fuel cooling loop. The cooling water return lines of the cooling loops transport the reactor makeup water, refueling water or demineralized water into the spent fuel pool.

The Diesel Fuel Oil Transfer Pumps are constructed to RG 1.26 Quality Group 3 requirements but are not Safety Class 3 and have not been included in this Program. Satisfactory pump operation is demonstrated during testing required by Technical Specification 3.8.1.

4.0 PUMP NOTES

NONE

VEGP-1 PUMP TEST TABLE
Quarterly Group A and Group B Pump Tests

Nuclear Service Cooling Water - System 1202

I.D. Number	CC/PC	P&ID-Sheet No.	Coord.	Description	Group	Measured Parameters & Frequency					RR/Remarks
						Po (psig)	ΔP (psi)	Q (gpm)	V (in/sec)	N (rpm)	
1-1202-P4-001	3/313	1X4DB133-1	C-7	NSCW Pump	A	NA	QTR	QTR	QTR	NA	None
1-1202-P4-002	3/313	1X4DB133-2	C-8	NSCW Pump	A	NA	QTR	QTR	QTR	NA	None
1-1202-P4-003	3/313	1X4DB133-1	C-5	NSCW Pump	A	NA	QTR	QTR	QTR	NA	None
1-1202-P4-004	3/313	1X4DB133-2	C-5	NSCW Pump	A	NA	QTR	QTR	QTR	NA	None
1-1202-P4-005	3/313	1X4DB133-1	C-6	NSCW Pump	A	NA	QTR	QTR	QTR	NA	None
1-1202-P4-006	3/313	1X4DB133-2	C-7	NSCW Pump	A	NA	QTR	QTR	QTR	NA	None
1-1202-P4-007	3/313	1X4DB133-1	C-6	NSCW Transfer Pump	A	NA	QTR	QTR	QTR	NA	None
1-1202-P4-008	3/313	1X4DB133-2	C-6	NSCW Transfer Pump	A	NA	QTR	QTR	QTR	NA	None

Test Frequency: QTR = Quarterly Pump Test

VEGP-1 PUMP TEST TABLE
Quarterly Group A and Group B Pump Tests

Component Cooling Water - System 1203

I.D. Number	CC/PC	P&ID-Sheet No.	Coord.	Description	Group	Measured Parameters & Frequency Po (psig)	ΔP (psi)	Q (gpm)	V (in/sec)	N (rpm)	RR/Remarks
1-1203-P4-001	3/313	1X4DB136	G-4	CCW Pump	A	NA	QTR	QTR	QTR	NA	None
1-1203-P4-002	3/313	1X4DB136	D-4	CCW Pump	A	NA	QTR	QTR	QTR	NA	None
1-1203-P4-003	3/313	1X4DB136	G-4	CCW Pump	A	NA	QTR	QTR	QTR	NA	None
1-1203-P4-004	3/313	1X4DB136	C-4	CCW Pump	A	NA	QTR	QTR	QTR	NA	None
1-1203-P4-005	3/313	1X4DB136	F-4	CCW Pump	A	NA	QTR	QTR	QTR	NA	None
1-1203-P4-006	3/313	1X4DB136	B-4	CCW Pump	A	NA	QTR	QTR	QTR	NA	None

Test Frequency: QTR = Quarterly Pump Test

VEGP-1 PUMP TEST TABLE
Quarterly Group A and Group B Pump Tests

Safety Injection - System 1204

I.D. Number	CC/PC	P&ID-Sheet No.	Coord.	Description	Group	Measured Parameters & Frequency Po (psig)	ΔP (psi)	Q (gpm)	V (in/sec)	N (rpm)	RR/Remarks
1-1204-P6-003	2/212	1X4DB121	E-2	SI Pump	B	NA	NA	QTR	NA	NA	None
1-1204-P6-004	2/212	1X4DB121	D-2	SI Pump	B	NA	NA	QTR	NA	NA	None

Test Frequency: QTR = Quarterly Pump Test

VEGP-1 PUMP TEST TABLE
Quarterly Group A and Group B Pump Tests

Residual Heat Removal - System 1205

I.D. Number	CC/PC	P&ID-Sheet No.	Coord.	Description	Group	Measured Parameters & Frequency					RR/Remarks
						Po (psig)	ΔP (psi)	Q (gpm)	V (in/sec)	N (rpm)	
1-1205-P6-001	2/212	1X4DB122	G-4	RHR Pump	A	NA	QTR	QTR	QTR	NA	None
1-1205-P6-002	2/212	1X4DB122	D-4	RHR Pump	A	NA	QTR	QTR	QTR	NA	None

Test Frequency: QTR = Quarterly Pump Test

VEGP-1 PUMP TEST TABLE
Quarterly Group A and Group B Pump Tests

Containment Spray - System 1206

I.D. Number	CC/PC	P&ID-Sheet No.	Coord.	Description	Group	Measured Parameters & Frequency Po (psig)	ΔP (psi)	Q (gpm)	V (in/sec)	N (rpm)	RR/Remarks
1-1206-P6-001	2/212	1X4DB131	G-4	CS Pump	B	NA	NA	QTR	NA	NA	None
1-1206-P6-002	2/212	1X4DB131	C-4	CS Pump	B	NA	NA	QTR	NA	NA	None

Test Frequency: QTR = Quarterly Pump Test

VEGP-1 PUMP TEST TABLE
Quarterly Group A and Group B Pump Tests

Chemical & Volume Control - System 1208

I.D. Number	CC/PC	P&ID-Sheet No.	Coord.	Description	Group	Measured Parameters & Frequency Po (psig)	ΔP (psi)	Q (gpm)	V (in/sec)	N (rpm)	RR/Remarks
1-1208-P6-002	2/212	1X4DB116-2	G-4	CVCS - Centrifugal Charging Pump	A	NA	QTR	QTR	QTR	NA	None
1-1208-P6-003	2/212	1X4DB116-2	C-4	CVCS – Centrifugal Charging Pump	A	NA	QTR	QTR	QTR	NA	None
1-1208-P6-006	3/313	1X4DB118	D-4	CVCS - Boric Acid Transfer Pump	A	NA	QTR	QTR	QTR	NA	None
1-1208-P6-007	3/313	1X4DB118	B-4	CVCS - Boric Acid Transfer Pump	A	NA	QTR	QTR	QTR	NA	None

Test Frequency: QTR = Quarterly Pump Test

VEGP-1 PUMP TEST TABLE
Quarterly Group A and Group B Pump Tests

Auxiliary Feedwater - System 1302

I.D. Number	CC/PC	P&ID-Sheet No.	Coord.	Description	Group	Measured Parameters & Frequency					RR/Remarks
						P_D (psig)	ΔP (psi)	Q (gpm)	V (in/sec)	N (rpm)	
1-1302-P4-001	3/313	1X4DB161-2	G-6	AFW Pump Turbine Driven	B	NA	QTR	QTR	NA	QTR	None
1-1302-P4-002	3/313	1X4DB161-2	D-6	AFW Pump Motor Driven	A	NA	QTR	QTR	QTR	NA	None
1-1302-P4-003	3/313	1X4DB161-2	B-6	AFW Pump Motor Driven	A	NA	QTR	QTR	QTR	NA	None

Test Frequency: QTR = Quarterly Pump Test

VEGP-1 PUMP TEST TABLE
Quarterly Group A and Group B Pump Tests

Safety Related (ESF) Chillers - System 1592

I.D. Number	CC/PC	P&ID-Sheet No.	Coord.	Description	Group	Measured Parameters & Frequency Po (psig)	ΔP (psi)	Q (gpm)	V (in/sec)	N (rpm)	RR/Remarks
1-1592-P7-001	3/313	1X4DB221	F-5	ESF Chilled Water Pump	B	NA	NA	QTR	NA	NA	None
1-1592-P7-002	3/313	1X4DB221	C-5	ESF Chilled Water Pump	B	NA	NA	QTR	NA	NA	None

Test Frequency: QTR = Quarterly Pump Test

VEGP-1 PUMP TEST TABLE
Biennial Comprehensive Pump Tests

Nuclear Service Cooling Water - System 1202

I.D. Number	CC/PC	P&ID-Sheet No.	Coord.	Description	Group	Measured Parameters & Frequency Po (psig)	ΔP (psi)	Q (gpm)	V (in/sec)	N (rpm)	RR/Remarks
1-1202-P4-001	3/313	1X4DB133-1	C-7	NSCW Pump	A	NA	2YR	2YR	2YR	NA	None
1-1202-P4-002	3/313	1X4DB133-2	C-8	NSCW Pump	A	NA	2YR	2YR	2YR	NA	None
1-1202-P4-003	3/313	1X4DB133-1	C-5	NSCW Pump	A	NA	2YR	2YR	2YR	NA	None
1-1202-P4-004	3/313	1X4DB133-2	C-5	NSCW Pump	A	NA	2YR	2YR	2YR	NA	None
1-1202-P4-005	3/313	1X4DB133-1	C-6	NSCW Pump	A	NA	2YR	2YR	2YR	NA	None
1-1202-P4-006	3/313	1X4DB133-2	C-7	NSCW Pump	A	NA	2YR	2YR	2YR	NA	None
1-1202-P4-007	3/313	1X4DB133-1	C-6	NSCW Transfer Pump	A	NA	2YR	2YR	2YR	NA	None
1-1202-P4-008	3/313	1X4DB133-2	C-6	NSCW Transfer Pump	A	NA	2YR	2YR	2YR	NA	None

Test Frequency: 2YR = Biennial Pump Test (once every 2 years)

VEGP-1 PUMP TEST TABLE
Biennial Comprehensive Pump Tests

Component Cooling Water - System 1203

I.D. Number	CC/PC	P&ID-Sheet No.	Coord.	Description	Group	Measured Parameters & Frequency					RR/Remarks
						Po (psig)	ΔP (psi)	Q (gpm)	V (in/sec)	N (rpm)	
1-1203-P4-001	3/313	1X4DB136	G-4	CCW Pump	A	NA	2YR	2YR	2YR	NA	None
1-1203-P4-002	3/313	1X4DB136	D-4	CCW Pump	A	NA	2YR	2YR	2YR	NA	None
1-1203-P4-003	3/313	1X4DB136	G-4	CCW Pump	A	NA	2YR	2YR	2YR	NA	None
1-1203-P4-004	3/313	1X4DB136	C-4	CCW Pump	A	NA	2YR	2YR	2YR	NA	None
1-1203-P4-005	3/313	1X4DB136	F-4	CCW Pump	A	NA	2YR	2YR	2YR	NA	None
1-1203-P4-006	3/313	1X4DB136	B-4	CCW Pump	A	NA	2YR	2YR	2YR	NA	None

Test Frequency: 2YR = Biennial Pump Test (once every 2 years)

VEGP-1 PUMP TEST TABLE
Biennial Comprehensive Pump Tests

Safety Injection - System 1204

I.D. Number	CC/PC	P&ID-Sheet No.	Coord.	Description	Group	Measured Parameters & Frequency Po (psig)	ΔP (psi)	Q (gpm)	V (in/sec)	N (rpm)	RR/Remarks
1-1204-P6-003	2/212	1X4DB121	E-2	SI Pump	B	NA	2YR	2YR	2YR	NA	None
1-1204-P6-004	2/212	1X4DB121	D-2	SI Pump	B	NA	2YR	2YR	2YR	NA	None

Test Frequency: 2YR = Biennial Pump Test (once every 2 years)

VEGP-1 PUMP TEST TABLE
Biennial Comprehensive Pump Tests

Residual Heat Removal - System 1205

I.D. Number	CC/PC	P&ID-Sheet No.	Coord.	Description	Group	Measured Parameters & Frequency Po (psig)	ΔP (psi)	Q (gpm)	V (in/sec)	N (rpm)	RR/Remarks
1-1205-P6-001	2/212	1X4DB122	G-4	RHR Pump	A	NA	2YR	2YR	2YR	NA	None
1-1205-P6-002	2/212	1X4DB122	D-4	RHR Pump	A	NA	2YR	2YR	2YR	NA	None

Test Frequency: 2YR = Biennial Pump Test (once every 2 years)

VEGP-1 PUMP TEST TABLE
Biennial Comprehensive Pump Tests

Containment Spray - System 1206

I.D. Number	CC/PC	P&ID-Sheet No.	Coord.	Description	Group	Measured Parameters & Frequency Po (psig)	ΔP (psi)	Q (gpm)	V (in/sec)	N (rpm)	RR/Remarks
1-1206-P6-001	2/212	1X4DB131	G-4	CS Pump	B	NA	2YR	2YR	2YR	NA	None
1-1206-P6-002	2/212	1X4DB131	C-4	CS Pump	B	NA	2YR	2YR	2YR	NA	None

2YR = Biennial Pump Test (once every 2 years)

VEGP-1 PUMP TEST TABLE
Biennial Comprehensive Pump Tests

Chemical & Volume Control - System 1208

I.D. Number	CC/PC	P&ID-Sheet No.	Coord.	Description	Group	Measured Parameters & Frequency Po (psig)	ΔP (psi)	Q (gpm)	V (in/sec)	N (rpm)	RR/Remarks
1-1208-P6-002	2/212	1X4DB116-2	G-4	CVCS - Centrifugal Charging Pump	A	NA	2YR	2YR	2YR	NA	None
1-1208-P6-003	2/212	1X4DB116-2	C-4	CVCS — Centrifugal Charging Pump	A	NA	2YR	2YR	2YR	NA	None
1-1208-P6-006	3/313	1X4DB118	D-4	CVCS - Boric Acid Transfer Pump	A	NA	2YR	2YR	2YR	NA	None
1-1208-P6-007	3/313	1X4DB118	B-4	CVCS - Boric Acid Transfer Pump	A	NA	2YR	2YR	2YR	NA	None

Test Frequency: 2YR = Biennial Pump Test (once every 2 years)

VEGP-1 PUMP TEST TABLE
Biennial Comprehensive Pump Tests

Auxiliary Feedwater - System 1302

I.D. Number	CC/PC	P&ID-Sheet No.	Coord.	Description	Group	Measured Parameters & Frequency P_D (psig)	ΔP (psi)	Q (gpm)	V (in/sec)	N (rpm)	RR/Remarks
1-1302-P4-001	3/313	1X4DB161-2	G-6	AFW Pump Turbine Driven	B	NA	2YR	2YR	2YR	2YR	None
1-1302-P4-002	3/313	1X4DB161-2	D-6	AFW Pump Motor Driven	A	NA	2YR	2YR	2YR	NA	None
1-1302-P4-003	3/313	1X4DB161-2	B-6	AFW Pump Motor Driven	A	NA	2YR	2YR	2YR	NA	None

Test Frequency: 2YR = Biennial Pump Test (once every 2 years)

VEGP-1 PUMP TEST TABLE
Biennial Comprehensive Pump Tests

Safety Related (ESF) Chillers - System 1592

I.D. Number	CC/PC	P&ID-Sheet No.	Coord.	Description	Group	Measured Parameters & Frequency Po (psig)	ΔP (psi)	Q (gpm)	V (in/sec)	N (rpm)	RR/Remarks
1-1592-P7-001	3/313	1X4DB221	F-5	ESF Chilled Water Pump	B	NA	2YR	2YR	2YR	NA	None
1-1592-P7-002	3/313	1X4DB221	C-5	ESF Chilled Water Pump	B	NA	2YR	2YR	2YR	NA	None

Test Frequency: 2YR = Biennial Pump Test (once every 2 years)

VEGP-2 PUMP TEST TABLE
Quarterly Group A and Group B Pump Tests

Nuclear Service Cooling Water - System 1202

I.D. Number	CC/PC	P&ID-Sheet No.	Coord.	Description	Group	Measured Parameters & Frequency Po (psig)	ΔP (psi)	Q (gpm)	V (in/sec)	N (rpm)	RR/Remarks
2-1202-P4-001	3/313	2X4DB133-1	C-7	NSCW Pump	A	NA	QTR	QTR	QTR	NA	None
2-1202-P4-002	3/313	2X4DB133-2	C-8	NSCW Pump	A	NA	QTR	QTR	QTR	NA	None
2-1202-P4-003	3/313	2X4DB133-1	C-5	NSCW Pump	A	NA	QTR	QTR	QTR	NA	None
2-1202-P4-004	3/313	2X4DB133-2	C-5	NSCW Pump	A	NA	QTR	QTR	QTR	NA	None
2-1202-P4-005	3/313	2X4DB133-1	C-6	NSCW Pump	A	NA	QTR	QTR	QTR	NA	None
2-1202-P4-006	3/313	2X4DB133-2	C-7	NSCW Pump	A	NA	QTR	QTR	QTR	NA	None
2-1202-P4-007	3/313	2X4DB133-1	C-6	NSCW Transfer Pump	A	NA	QTR	QTR	QTR	NA	None
2-1202-P4-008	3/313	2X4DB133-2	C-6	NSCW Transfer Pump	A	NA	QTR	QTR	QTR	NA	None

Test Frequency: QTR = Quarterly Pump Test

VEGP-2 PUMP TEST TABLE
Quarterly Group A and Group B Pump Tests

Component Cooling Water - System 1203

I.D. Number	CC/PC	P&ID-Sheet No.	Coord.	Description	Group	Measured Parameters & Frequency Po (psig)	ΔP (psi)	Q (gpm)	V (in/sec)	N (rpm)	RR/Remarks
2-1203-P4-001	3/313	2X4DB136	G-4	CCW Pump	A	NA	QTR	QTR	QTR	NA	None
2-1203-P4-002	3/313	2X4DB136	D-4	CCW Pump	A	NA	QTR	QTR	QTR	NA	None
2-1203-P4-003	3/313	2X4DB136	G-4	CCW Pump	A	NA	QTR	QTR	QTR	NA	None
2-1203-P4-004	3/313	2X4DB136	C-4	CCW Pump	A	NA	QTR	QTR	QTR	NA	None
2-1203-P4-005	3/313	2X4DB136	F-4	CCW Pump	A	NA	QTR	QTR	QTR	NA	None
2-1203-P4-006	3/313	2X4DB136	B-4	CCW Pump	A	NA	QTR	QTR	QTR	NA	None

Test Frequency: QTR = Quarterly Pump Test

VEGP-2 PUMP TEST TABLE
Quarterly Group A and Group B Pump Tests

Safety Injection - System 1204

I.D. Number	CC/PC	P&ID-Sheet No.	Coord.	Description	Group	Measured Parameters & Frequency Po (psig)	ΔP (psi)	Q (gpm)	V (in/sec)	N (rpm)	RR/Remarks
2-1204-P6-003	2/212	2X4DB121	E-3	SI Pump	B	NA	QTR	QTR	NA	NA	None
2-1204-P6-004	2/212	2X4DB121	D-3	SI Pump	B	NA	QTR	QTR	NA	NA	None

Test Frequency: QTR = Quarterly Pump Test

VEGP-2 PUMP TEST TABLE
Quarterly Group A and Group B Pump Tests

Residual Heat Removal - System 1205

I.D. Number	CC/PC	P&ID-Sheet No.	Coord.	Description	Group	Measured Parameters & Frequency Po (psig)	ΔP (psi)	Q (gpm)	V (in/sec)	N (rpm)	RR/Remarks
2-1205-P6-001	2/212	2X4DB122	G-4	RHR Pump	A	NA	QTR	QTR	QTR	NA	None
2-1205-P6-002	2/212	2X4DB122	D-4	RHR Pump	A	NA	QTR	QTR	QTR	NA	None

Test Frequency: QTR = Quarterly Pump Test

VEGP-2 PUMP TEST TABLE
Quarterly Group A and Group B Pump Tests

Containment Spray - System 1206

I.D. Number	CC/PC	P&ID-Sheet No.	Coord.	Description	Group	Measured Parameters & Frequency Po (psig)	ΔP (psi)	Q (gpm)	V (in/sec)	N (rpm)	RR/Remarks
2-1206-P6-001	2/212	2X4DB131	G-4	CS Pump	B	NA	QTR	QTR	NA	NA	None
2-1206-P6-002	2/212	2X4DB131	C-4	CS Pump	B	NA	QTR	QTR	NA	NA	None

Test Frequency: QTR = Quarterly Pump Test

VEGP-2 PUMP TEST TABLE
Quarterly Group A and Group B Pump Tests

Chemical & Volume Control - System 1208

I.D. Number	CC/PC	P&ID-Sheet No.	Coord.	Description	Group	Measured Parameters & Frequency Po (psig)	ΔP (psi)	Q (gpm)	V (in/sec)	N (rpm)	RR/Remarks
2-1208-P6-002	2/212	2X4DB116-2	G-4	CVCS Centrifugal Charging Pump	A	NA	QTR	QTR	QTR	NA	None
2-1208-P6-003	2/212	2X4DB116-2	C-4	CVCS Centrifugal Charging Pump	A	NA	QTR	QTR	QTR	NA	None
2-1208-P6-006	3/313	2X4DB118	D-4	CVCS Boric Acid Transfer Pump	A	NA	QTR	QTR	QTR	NA	None
2-1208-P6-007	3/313	2X4DB118	B-4	CVCS Boric Acid Transfer Pump	A	NA	QTR	QTR	QTR	NA	None

Test Frequency: QTR = Quarterly Pump Test

VEGP-2 PUMP TEST TABLE
Quarterly Group A and Group B Pump Tests

Auxiliary Feedwater - System 1302

I.D. Number	CC/PC	P&ID-Sheet No.	Coord.	Description	Group	Measured Parameters & Frequency P_D (psig)	ΔP (psi)	Q (gpm)	V (in/sec)	N (rpm)	RR/Remarks
2-1302-P4-001	3/313	2X4DB161-2	G-6	AFW Pump Turbine Driven	B	NA	QTR	QTR	NA	QTR	None
2-1302-P4-002	3/313	2X4DB161-2	D-6	AFW Pump Motor Driven	A	NA	QTR	QTR	QTR	NA	None
2-1302-P4-003	3/313	2X4DB161-2	B-6	AFW Pump Motor Driven	A	NA	QTR	QTR	QTR	NA	None

Test Frequency: QTR = Quarterly Pump Test

VEGP-2 PUMP TEST TABLE
Quarterly Group A and Group B Pump Tests

Safety Related (ESF) Chillers - System 1592

I.D. Number	CC/PC	P&ID-Sheet No.	Coord.	Description	Group	Measured Parameters & Frequency Po (psig)	ΔP (psi)	Q (gpm)	V (in/sec)	N (rpm)	RR/Remarks
2-1592-P7-001	3/313	2X4DB221	F-5	ESF Chilled Water Pump	B	NA	QTR	QTR	NA	NA	None
2-1592-P7-002	3/313	2X4DB221	C-5	ESF Chilled Water Pump	B	NA	QTR	QTR	NA	NA	None

Test Frequency: QTR = Quarterly Pump Test

VEGP-2 PUMP TEST TABLE
Biennial Comprehensive Pump Tests

Nuclear Service Cooling Water - System 1202

I.D. Number	CC/PC	P&ID-Sheet No.	Coord.	Description	Group	Measured Parameters & Frequency Po (psig)	ΔP (psi)	Q (gpm)	V (in/sec)	N (rpm)	RR/Remarks
2-1202-P4-001	3/313	2X4DB133-1	C-7	NSCW Pump	A	NA	2YR	2YR	2YR	NA	None
2-1202-P4-002	3/313	2X4DB133-2	C-8	NSCW Pump	A	NA	2YR	2YR	2YR	NA	None
2-1202-P4-003	3/313	2X4DB133-1	C-5	NSCW Pump	A	NA	2YR	2YR	2YR	NA	None
2-1202-P4-004	3/313	2X4DB133-2	C-5	NSCW Pump	A	NA	2YR	2YR	2YR	NA	None
2-1202-P4-005	3/313	2X4DB133-1	C-6	NSCW Pump	A	NA	2YR	2YR	2YR	NA	None
2-1202-P4-006	3/313	2X4DB133-2	C-7	NSCW Pump	A	NA	2YR	2YR	2YR	NA	None
2-1202-P4-007	3/313	2X4DB133-1	C-6	NSCW Transfer Pump	A	NA	2YR	2YR	2YR	NA	None
2-1202-P4-008	3/313	2X4DB133-2	C-6	NSCW Transfer Pump	A	NA	2YR	2YR	2YR	NA	None

Test Frequency: 2YR = Biennial Pump Test (once every 2 years)

VEGP-2 PUMP TEST TABLE
Biennial Comprehensive Pump Tests

Component Cooling Water - System 1203

I.D. Number	CC/PC	P&ID-Sheet No.	Coord.	Description	Group	Measured Parameters & Frequency Po (psig)	ΔP (psi)	Q (gpm)	V (in/sec)	N (rpm)	RR/Remarks
2-1203-P4-001	3/313	2X4DB136	G-4	CCW Pump	A	NA	2YR	2YR	2YR	NA	None
2-1203-P4-002	3/313	2X4DB136	D-4	CCW Pump	A	NA	2YR	2YR	2YR	NA	None
2-1203-P4-003	3/313	2X4DB136	G-4	CCW Pump	A	NA	2YR	2YR	2YR	NA	None
2-1203-P4-004	3/313	2X4DB136	C-4	CCW Pump	A	NA	2YR	2YR	2YR	NA	None
2-1203-P4-005	3/313	2X4DB136	F-4	CCW Pump	A	NA	2YR	2YR	2YR	NA	None
2-1203-P4-006	3/313	2X4DB136	B-4	CCW Pump	A	NA	2YR	2YR	2YR	NA	None

Test Frequency: 2YR = Biennial Pump Test (once every 2 years)

VEGP-2 PUMP TEST TABLE
Biennial Comprehensive Pump Tests

Safety Injection - System 1204

I.D. Number	CC/PC	P&ID-Sheet No.	Coord.	Description	Group	Measured Parameters & Frequency Po (psig)	ΔP (psi)	Q (gpm)	V (in/sec)	N (rpm)	RR/Remarks
2-1204-P6-003	2/212	2X4DB121	E-3	SI Pump	B	NA	2YR	2YR	2YR	NA	None
2-1204-P6-004	2/212	2X4DB121	D-3	SI Pump	B	NA	2YR	2YR	2YR	NA	None

Test Frequency: 2YR = Biennial Pump Test (once every 2 years)

VEGP-2 PUMP TEST TABLE
Biennial Comprehensive Pump Tests

Residual Heat Removal - System 1205

I.D. Number	CC/PC	P&ID-Sheet No.	Coord.	Description	Group	Measured Parameters & Frequency Po (psig)	ΔP (psi)	Q (gpm)	V (in/sec)	N (rpm)	RR/Remarks
2-1205-P6-001	2/212	2X4DB122	G-4	RHR Pump	A	NA	2YR	2YR	2YR	NA	None
2-1205-P6-002	2/212	2X4DB122	D-4	RHR Pump	A	NA	2YR	2YR	2YR	NA	None

Test Frequency: 2YR = Biennial Pump Test (once every 2 years)

VEGP-2 PUMP TEST TABLE
Biennial Comprehensive Pump Tests

Containment Spray - System 1206

I.D. Number	CC/PC	P&ID-Sheet No.	Coord.	Description	Group	Measured Parameters & Frequency Po (psig)	ΔP (psi)	Q (gpm)	V (in/sec)	N (rpm)	RR/Remarks
2-1206-P6-001	2/212	2X4DB131	G-4	CS Pump	B	NA	2YR	2YR	2YR	NA	None
2-1206-P6-002	2/212	2X4DB131	C-4	CS Pump	B	NA	2YR	2YR	2YR	NA	None

Test Frequency: 2YR = Biennial Pump Test (once every 2 years)

VEGP-2 PUMP TEST TABLE
Biennial Comprehensive Pump Tests

Chemical & Volume Control - System 1208

I.D. Number	CC/PC	P&ID-Sheet No.	Coord.	Description	Group	Measured Parameters & Frequency Po (psig)	ΔP (psi)	Q (gpm)	V (in/sec)	N (rpm)	RR/Remarks
2-1208-P6-002	2/212	2X4DB116-2	G-4	CVCS Centrifugal Charging Pump	A	NA	2YR	2YR	2YR	NA	None
2-1208-P6-003	2/212	2X4DB116-2	C-4	CVCS Centrifugal Charging Pump	A	NA	2YR	2YR	2YR	NA	None
2-1208-P6-006	3/313	2X4DB118	D-4	CVCS Boric Acid Transfer Pump	A	NA	2YR	2YR	2YR	NA	None
2-1208-P6-007	3/313	2X4DB118	B-4	CVCS Boric Acid Transfer Pump	A	NA	2YR	2YR	2YR	NA	None

Test Frequency: 2YR = Biennial Pump Test (once every 2 years)

VEGP-2 PUMP TEST TABLE
Biennial Comprehensive Pump Tests

Auxiliary Feedwater - System 1302

I.D. Number	CC/PC	P&ID-Sheet No.	Coord.	Description	Group	Measured Parameters & Frequency P_D (psig)	ΔP (psi)	Q (gpm)	V (in/sec)	N (rpm)	RR/Remarks
2-1302-P4-001	3/313	2X4DB161-2	G-6	AFW Pump Turbine Driven	B	NA	2YR	2YR	2YR	2YR	None
2-1302-P4-002	3/313	2X4DB161-2	D-6	AFW Pump Motor Driven	A	NA	2YR	2YR	2YR	NA	None
2-1302-P4-003	3/313	2X4DB161-2	B-6	AFW Pump Motor Driven	A	NA	2YR	2YR	2YR	NA	None

Test Frequency: 2YR = Biennial Pump Test (once every 2 years)

VEGP-2 PUMP TEST TABLE
Biennial Comprehensive Pump Tests

Safety Related (ESF) Chillers - System 1592

I.D. Number	CC/PC	P&ID-Sheet No.	Coord.	Description	Group	Measured Parameters & Frequency Po (psig)	ΔP (psi)	Q (gpm)	V (in/sec)	N (rpm)	RR/Remarks
2-1592-P7-001	3/313	2X4DB221	F-5	ESF Chilled Water Pump	B	NA	2YR	2YR	2YR	NA	None
2-1592-P7-002	3/313	2X4DB221	C-5	ESF Chilled Water Pump	B	NA	2YR	2YR	2YR	NA	None

Test Frequency: 2YR = Biennial Pump Test (once every 2 years)

7.0 PUMP RELIEF REQUEST LOG

NONE

8.0 INSERVICE TESTING OF VALVES

8.1. GENERAL

This section of the IST Program was developed to comply with the testing provisions of 10 CFR 50.55a(f) which delineate the testing requirements for ASME Class 1, 2, and 3 valves. The Code of record required by 10 CFR 50.55a (b)(3) for the 3rd Interval valve IST is the ASME OM Code-2001 Edition with Addenda through OMb-2003 (hereafter referred to as the OM Code). The supplemental guidance of NRC NUREG-1482, Rev.1, have been applied to the extent practicable.

Valves in the program are listed by MPL Number in tables for Units 1 and 2, respectively, and will be tested in accordance with the Code unless otherwise specified in this program.

8.2. SCOPE

ASME Class 1, 2, and 3 valves covered by the Regulatory Position of Regulatory Guide 1.26 (September 1974) are included within the scope of this program and are tested using the provisions of the OM Code. Containment isolation valves located in non-safety related systems are considered safety-related for containment purposes, and are therefore, tested under the provisions of the OM Code and 10 CFR 50, Appendix J, as applicable. In cases where specific Code requirements cannot be met or an alternative testing method is considered an improvement over OM Code requirements, relief has been requested from these requirements. Valve relief requests are located under a separate tab.

It is recognized that 10 CFR 50 Appendix A, General Design Criteria 1 (GDC-1), and Appendix B, Criterion XI intend that all valves necessary for safe operation of the plant be tested to demonstrate that they will perform satisfactorily in service. This testing is required to be performed at a level commensurate with the safety function of the valve, and is generally performed per the requirements of the plant Technical Specifications or other regulatory requirements.

Diesel Fuel Oil Transfer and Air Start Systems

The Diesel Fuel Oil and Air Start System valves are considered essential valves requiring testing. However, these valves are not ASME Class components, as defined in Regulatory Guide 1.26 (September 1974), and are therefore, not included in this Program. The active valves contained in these systems are considered to be adequately tested by demonstrating their ability to perform their intended safety function when tested pursuant to the surveillance requirements specified in plant Technical Specifications (TS) 3.8.1 and 3.8.3.

The Spent Fuel Cooling System valves have not been included in this Program because they are not considered to perform a safety function. Three sources of makeup water are available to replace pool inventory lost by evaporation or boil-off. The reactor makeup water storage tank serves as the Seismic Category 1 makeup source for the spent fuel pool. Makeup water can also be pumped or gravity feed into the discharge line from spent fuel pump A. Demineralized water can be pump directly into the Safety Class 3 return lines of each spent fuel cooling loop. The cooling water return lines of the cooling loops transport the reactor makeup water, refueling water, or demineralized water into the spent fuel pool.

8.3. LEAKAGE RATE TESTING

8.3.1 PRESSURE ISOLATION VALVES (PIV)

Pressure isolation valves (PIVs) are defined as two normally closed valves in series that isolate the Reactor Coolant System (RCS) from the attached low pressure system. Event V pressure isolation valves (WASH 1400) are defined as "two check valves in series at a low pressure/RCS interface whose failure may result in a LOCA that bypasses containment." At VEGP, all PIVs including Event V series pairs of check valves that provide the high-pressure to low-pressure isolation barrier between the RCS and ECCS piping outside the reactor containment are individually leak tested periodically, as required by VEGP Techanical Specifications, to provide assurance that certain postulated failure modes will not result in a loss of coolant from the low-pressure system outside containment with a simultaneous loss of ECCS pumping capacity. Testing is in accordance with the guidelines provided in NUREG-1482, Rev.1 Section 4.4.4 "Pressure Isolation Valves".

Pressure isolation valves are listed VEGP FSAR Table 16.3-7 and TS 3.4.14.1 and B 3.4.14. Some valves function as both pressure and Containment Isolation Valves (CIV), and are designated as PIV/CIV.

Instrumentation to monitor the leakage upstream of each pressure isolation valve during power operation was not a design requirement at Plant Vogtle. Also, while it is practical to test several of the valves individually, the ability to isolate and test each valve separately was not a design consideration. Subsequently, all valves can not be practically tested on an individual basis. A leakage test will be performed at least every 18 months or per the surveillance requirements specified in plant Technical Specifications Surveillance Requirement (SR) 3.4.14.1 as follows:

a. A valve that serves as a pressure isolation valve is tested at operating differential pressure or at a reduced pressure as allowed by ISTC-3630(b)(4), using water as a test medium. The leakage observed during a reduced pressure test is then adjusted to a "function maximum pressure differential value" as required by ISTC-3630(b)(4). The allowable leakage at operating differential pressure for RCS/low pressure piping interface valves is 0.5 gpm (1892 cc/min) per inch of valve size up to a maximum of 5 gpm.

b. An RCS/low pressure piping interface valve that also functions as a containment isolation valve (CIV) is Appendix J, type C tested using CIV acceptance criteria since this criteria is more stringent. Acceptable leakage for these valves is always less than the PIV criterion of 1892 cc/min per inch of valve size, even when the adjustment to the "function maximum pressure differential value" is performed.

8.3.2 CONTAINMENT ISOLATION VALVES (CIV)

Containment isolation valves are listed VEGP FSAR Table 6.2.4-1.

All containment isolation valves that receive a Type C, Appendix J test are included in this Program and are identified as "CIV" in the "Frequency" column in the valve tables. Any changes in the Appendix J, Type C testing scope will be reflected in this document with appropriate changes to the test tables.

SNC conforms to the requirements of ISTC-3630(e) to the extent practical by assigning a specific leakage limit to each valve or penetration assembly. Limits are based on the type and size of each valve, the number of valves in the test boundary, and historical leakage data.

As a rule, test configurations have the least number of boundary valves practical to perform the Type C test; however, the piping configuration at Plant Vogtle generally requires the pressurization of a combination of CIVs and block valves simultaneously. In these cases, the leakage limit is applied to each penetration test configuration. During the testing of the penetration, if the measured leakage exceeds the limit for the penetration, causes are investigated and repairs made to specific valves as necessary. The intent of the OM Code to detect degradation (and repair if necessary) of each valve due to service related conditions is therefore met.

8.3.3 LEAK TEST TYPE AND FREQUENCY DESIGNATION

- All valves that require any type of Leakage Test are designated by "LT" in the "Test" column of the Valve Test Tables.
- "CIV" in the "Frequency" column indicates a leakage test frequency in accordance with 10 CFR 50 Appendix J, Option B.
- "PIV" indicates a leakage test is required at least every 18 months or per TS 3.4.14.1.
- "PIV/CIV" indicates a leakage test is required at least every 18 months or per TS 3.4.14.1.

8.3.4 CHECK VALVES

It is SNC's position to extend the test frequency of any non safety position tests to refueling outage without a Refueling Outage Justification (ROJ) or without a Cold Shutdown Justification (CSJ).

8.4 FAIL-SAFE VALVES

Unless otherwise specified in the program tables, additional fail-safe testing will not be performed. Stroking the valve full cycle during normal testing causes loss of power to the actuator as required by ISTC-3560. Therefore, additional testing to demonstrate the fail-safe capability is not required.

8.5 PASSIVE POWER OPERATED VALVES

A passive power operated valve does not perform a mechanical motion during the course of accomplishing a system safety function. These valves are identified as such in the "AP" column of the Valve Test Tables. Per Table ISTC-3500-1, passive Category B valves do not require any exercising testing and verification of the actual valve position is indicated by remote position indication lights every two years is the only testing required. Passive Category B power operated valves that are de-energized in their safety position during power operation will not have remote position indication verification.

9.0 VALVE NOTES

1. Valve is exercised to the open position required to perform its safety function in conjunction with quarterly testing of the associated pump.

2. Valve is exercised closed in conjunction with quarterly testing of either one of the other pumps in the train by ensuring flow is not diverted through the associated idle pump.

3. Frequency of 2-year in accordance with 10CFR50.55a(b)(3)(vi).

4. PIV leakage test is required each refueling outage or at least once every 9 months if the unit has been in Mode 5 for greater than 7 days in accordance with T.S. SR 3.4.14.1.

5. Actual valve position is confirmed to agree with remote position indicating lights in conjunction with quarterly pump IST.

6. Relief valve testing is performed in accordance with ASME OM Code, Appendix I, 2001 edition through 2003 addenda.

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
1-1201-U4-251	2	AC	3/4"	CH	SA	A	1X4DB122	C	O	NA	BDTC	RO		NA
RHR Pmp Sup Inbrd Iso Viv Bypass Viv							(F-2)				CKO	RO	ROJ-V-1	
1-1201-U4-252	2	AC	3/4"	CH	SA	A	1X4DB122	C	O	NA	BDTC	RO		NA
RHR Pmp Sup Inbrd Iso Viv Bypass Viv							(C-2)				CKO	RO	ROJ-V-1	
1-1201-U6-112	2	AC	3"	CH	SA	A	1X4DB112	C	C	NA	BDTO	Normal Ops		NA
Primary Grade Water Sup to Ctmt CH							(F-2)				CKC	RO	ROJ-V-2	
											LT	CIV		
1-HV-0442A	2	B	1"	GL	SO	A	1X4DB112	C	O/C	C	FST	CS	CSJ-V-1	NA
RPV Head Vent to PRT Iso Viv							(H-4)				PI	RO		
											STC	CS	CSJ-V-1	
											STO	CS	CSJ-V-1	
1-HV-0442B	2	B	1"	GL	SO	A	1X4DB112	C	O/C	C	FST	CS	CSJ-V-1	NA
RPV Head Vent to PRT Iso Viv							(G-4)				PI	RO		
											STC	CS	CSJ-V-1	
											STO	CS	CSJ-V-1	
1-HV-8000A	1	B	3"	GA	MO	A	1X4DB112	O	O/C	AI	PI	RO		NA
PORV Block Viv							(E-7)				STC	Q		
											STO	Q		
1-HV-8000B	1	B	3"	GA	MO	A	1X4DB112	O	O/C	AI	PI	RO		NA
PORV Block Viv							(F-7)				STC	Q		
											STO	Q		
1-HV-8028	2	A	3"	DI	AO	A	1X4DB112	O	C	C	FST	Q		NA
Primary Grade Water Sup to Ctmt Iso Viv							(F-2)				LT	CIV		
											PI	RO		
											STC	Q		
1-HV-8033	2	A	1"	DI	AO	A	1X4DB112	C	C	C	FST	Q		NA
PRT Vent Viv							(G-2)				LT	CIV		
											PI	RO		
											STC	Q		
1-HV-8047	2	A	1"	DI	AO	A	1X4DB112	C	C	C	FST	Q		NA
PRT Vent Viv							(G-3)				LT	CIV		
											PI	RO		
											STC	Q		

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
1-HV-8095A	1	B	1"	GL	SO	A	1X4DB114	C	O/C	C	FST	CS	CSJ-V-1	NA
RPV Head Vent Vlv							(E-5)				PI	RO		
											STC	CS	CSJ-V-1	
											STO	CS	CSJ-V-1	
1-HV-8095B	1	B	1"	GL	SO	A	1X4DB114	C	O/C	C	FST	CS	CSJ-V-1	NA
RPV Head Vent Vlv							(E-5)				PI	RO		
											STC	CS	CSJ-V-1	
											STO	CS	CSJ-V-1	
1-HV-8096A	1	B	1"	GL	SO	A	1X4DB114	C	O/C	C	FST	CS	CSJ-V-1	NA
RPV Head Vent Vlv							(E-5)				PI	RO		
											STC	CS	CSJ-V-1	
											STO	CS	CSJ-V-1	
1-HV-8096B	1	B	1"	GL	SO	A	1X4DB114	C	O/C	C	FST	CS	CSJ-V-1	NA
RPV Head Vent Vlv							(E-5)				PI	RO		
											STC	CS	CSJ-V-1	
											STO	CS	CSJ-V-1	
1-HV-8701A	1	A	12"	GA	MO	A	1X4DB122	C	O/C	AI	LT	RO		NA
RHR Pmp Sup Iso From RCS Loops							(G-2)				PI	RO		
											STC	CS	CSJ-V-2	
											STO	CS	CSJ-V-2	
1-HV-8701B	1	A	12"	GA	MO	A	1X4DB122	C	O/C	AI	LT	RO		NA
RHR Pmp Sup Iso From RCS Loops							(G-1)				PI	RO		
											STC	CS	CSJ-V-2	
											STO	CS	CSJ-V-2	
1-HV-8702A	1	A	12"	GA	MO	A	1X4DB122	C	O/C	AI	LT	RO		NA
RHR Pmp Sup Iso From RCS Loops							(D-2)				PI	RO		
											STC	CS	CSJ-V-2	
											STO	CS	CSJ-V-2	
1-HV-8702B	1	A	12"	GA	MO	A	1X4DB122	C	O/C	AI	LT	RO		NA
RHR Pmp Sup Iso From RCS Loops							(D-2)				PI	RO		
											STC	CS	CSJ-V-2	
											STO	CS	CSJ-V-2	
1-PSV-8010A	1	C	6"	RV	SA	A	1X4DB112	C	O/C	NA	RVT	Note 6		NA
PRZR Safety Vlv							(G-7)							

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ Remarks
1-PSV-8010B PRZR Safety Vlv	1	C	6"	RV	SA	A	1X4DB112 (G-6)	C	O/C	NA	RVT	Note 6	NA
1-PSV-8010C PRZR Safety Vlv	1	C	6"	RV	SA	A	1X4DB112 (G-6)	C	O/C	NA	RVT	Note 6	NA
1-PV-0455A PORV	1	B	3"	GL	SO	A	1X4DB112 (E-8)	C	O/C	C	FST PI STC STO	RO RO RO RO	NA
1-PV-0456A PORV	1	B	3"	GL	SO	A	1X4DB112 (F-8)	C	O/C	C	FST PI STC STO	RO RO RO RO	NA

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
1-1202-U4-025	3	C	18"	CH	SA	A	1X4DB133-1	O/C	O/C	NA	CKC	Q		Notes 1, 2
NSCW Pmp Disch CH							(C-8)				CKO	Q		
1-1202-U4-027	3	C	18"	CH	SA	A	1X4DB133-2	O/C	O/C	NA	CKC	Q		Notes 1, 2
NSCW Pmp Disch CH							(C-8)				CKO	Q		
1-1202-U4-031	3	C	18"	CH	SA	A	1X4DB133-1	O/C	O/C	NA	CKC	Q		Notes 1, 2
NSCW Pmp Disch CH							(E-6)				CKO	Q		
1-1202-U4-033	3	C	18"	CH	SA	A	1X4DB133-2	O/C	O/C	NA	CKC	Q		Notes 1, 2
NSCW Pmp Disch CH							(E-6)				CKO	Q		
1-1202-U4-035	3	C	18"	CH	SA	A	1X4DB133-1	O/C	O/C	NA	CKC	Q		Notes 1, 2
NSCW Pmp Disch CH							(C-4)				CKO	Q		
1-1202-U4-037	3	C	18"	CH	SA	A	1X4DB133-2	O/C	O/C	NA	CKC	Q		Notes 1, 2
NSCW Pmp Disch CH							(C-5)				CKO	Q		
1-1202-U4-463	3	C	8"	CH	SA	A	1X4DB134	O	O	NA	BDTC	RO		NA
NSCW Sup to CB Ess Chiller CH							(E-2)				CKO	Q		
1-1202-U4-464	3	C	4"	CH	SA	A	1X4DB133-2	O	O	NA	BDTC	RO		NA
NSCW Sup to Piping Pen Area CH							(D-3)				CKO	Q		
1-1202-U4-465	3	C	16"	CH	SA	A	1X4DB133-2	O	O	NA	BDTC	RO		NA
NSCW Sup to CCW Hx							(D-1)				CKO	Q		
1-1202-U4-466	2	C	8"	CH	SA	A	1X4DB135-1	O	O/C	NA	CKC	RO	ROJ-V-33	NA
NSCW to Ctmt Cooler CH							(H-4)				CKO	Q		
1-1202-U4-467	2	C	8"	CH	SA	A	1X4DB135-1	O	O/C	NA	CKC	RO	ROJ-V-33	NA
NSCW to Ctmt Cooler CH							(F-5)				CKO	Q		
1-1202-U4-468	2	C	8"	CH	SA	A	1X4DB135-1	O	C	NA	BDTO	Normal Ops		NA
NSCW to CTB Aux and Rx Cav Cooling Iso Vlv							(C-5)				CKC	RO	ROJ-V-33	
1-1202-U4-469	3	C	16"	CH	SA	A	1X4DB135-1	O	O	NA	BDTC	RO		NA
NSCW Sup to CCW Hx							(D-7)				CKO	Q		
1-1202-U4-470	3	C	4"	CH	SA	A	1X4DB135-1	O	O	NA	BDTC	RO		NA
NSCW Sup to Piping Pen Area CH							(B-7)				CKO	Q		

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
1-1202-U4-471 NSCW to Ctmt Cooler CH	2	C	8"	CH	SA	A	1X4DB135-2 (H-6)	O	O/C	NA	CKC CKO	RO Q	ROJ-V-33	NA
1-1202-U4-472 NSCW to Ctmt Cooler CH	2	C	8"	CH	SA	A	1X4DB135-2 (H-6)	O	O/C	NA	CKC CKO	RO Q	ROJ-V-33	NA
1-1202-U4-473 NSCW to CTB Aux and Rx Cav Cooling Iso Vlv	2	C	8"	CH	SA	A	1X4DB135-2 (G-6)	O	C	NA	BDTO CKC	Normal Ops RO	ROJ-V-33	NA
1-1202-U4-474 NSCW Sup to CB Ess Chiller CH	3	C	8"	CH	SA	A	1X4DB135-2 (C-8)	O	O	NA	BDTC CKO	RO Q		NA
1-1202-U4-492 NSCW Hdr/Train Inter-Tie Man. Iso. Vlv.	3	B	2"	GA	MA	A	1X4DB133-1 (G-1)	O	C	NA	ETC	2YR	CSJ-V-38	Note 3
1-1202-U4-497 NSCW Hdr/Train Inter-Tie Man. Iso. Vlv.	3	B	2"	GA	MA	A	1X4DB134 (E-5)	O	C	NA	ETC	2YR	CSJ-V-38	Note 3
1-1202-U4-A07 NSCW Slow-Fill Line CH	3	C	4"	CH	SA	A	1X4DB133-1 (B-8)	O/C	O	NA	BDTC CKO	RO RO	ROJ-V-32	NA
1-1202-U4-A08 NSCW Slow-Fill Line CH	3	C	4"	CH	SA	A	1X4DB133-1 (A-8)	O/C	O	NA	BDTC CKO	RO RO	ROJ-V-32	NA
1-1202-U4-A09 NSCW Slow-Fill Line CH	3	C	4"	CH	SA	A	1X4DB133-1 (B-7)	O/C	O	NA	BDTC CKO	RO RO	ROJ-V-32	NA
1-1202-U4-A13 NSCW Slow-Fill Line CH	3	C	4"	CH	SA	A	1X4DB133-2 (B-8)	O/C	O	NA	BDTC CKO	RO RO	ROJ-V-32	NA
1-1202-U4-A14 NSCW Slow-Fill Line CH	3	C	4"	CH	SA	A	1X4DB133-2 (A-8)	O/C	O	NA	BDTC CKO	RO RO	ROJ-V-32	NA
1-1202-U4-A15 NSCW Slow-Fill Line CH	3	C	4"	CH	SA	A	1X4DB133-2 (B-7)	O/C	O	NA	BDTC CKO	RO RO	ROJ-V-32	NA
1-CV-9446 NSCW Blowdown Ctrl Vlv	3	B	2"	GL	AO	A	1X4DB133-1 (B-5)	O	C	C	FST PI STC	Q RO Q		NA
1-CV-9447 NSCW Blowdown Ctrl Vlv	3	B	2"	GL	AO	A	1X4DB133-2 (B-5)	O	C	C	FST PI STC	Q RO Q		NA

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
1-HV-11600 NSCW Pmp Disch Vlv	3	B	18"	BU	MO	A	1X4DB133-1 (D-8)	O/C	O	AI	PI STO	RO Q		Note 5
1-HV-11605 NSCW Pmp Disch Vlv	3	B	18"	BU	MO	A	1X4DB133-1 (E-6)	O/C	O	AI	PI STO	RO Q		Note 5
1-HV-11606 NSCW Pmp Disch Vlv	3	B	18"	BU	MO	A	1X4DB133-1 (C-4)	O/C	O	AI	PI STO	RO Q		Note 5
1-HV-11607 NSCW Pmp Disch Vlv	3	B	18"	BU	MO	A	1X4DB133-2 (C-8)	O/C	O	AI	PI STO	RO Q		Note 5
1-HV-11612 NSCW Pmp Disch Vlv	3	B	18"	BU	MO	A	1X4DB133-2 (E-6)	O/C	O	AI	PI STO	RO Q		Note 5
1-HV-11613 NSCW Pmp Disch Vlv	3	B	18"	BU	MO	A	1X4DB133-2 (C-5)	O/C	O	AI	PI STO	RO Q		Note 5
1-HV-1668A NSCW Tower Ret Hdr Stop Vlv	3	B	24"	BU	MO	A	1X4DB133-1 (G-5)	O/C	O	AI	PI STO	RO Q		NA
1-HV-1668B NSCW Tower Bypass to Basin Vlv	3	B	18"	BU	MO	A	1X4DB133-1 (F-5)	O/C	C	AI	PI STC	RO Q		NA
1-HV-1669A NSCW Tower Ret Hdr Stop Vlv	3	B	24"	BU	MO	A	1X4DB133-2 (G-5)	O/C	O	AI	PI STO	RO Q		NA
1-HV-1669B NSCW Tower Bypass to Basin Vlv	3	B	18"	BU	MO	A	1X4DB133-2 (F-5)	O/C	C	AI	PI STC	RO Q		NA
1-HV-1806 NSCW to Ctmt Cooler Iso Vlv	2	B	8"	BU	MO	P	1X4DB135-1 (E-5)	O	O	AI	PI	RO		NA
1-HV-1807 NSCW to Ctmt Cooler Iso Vlv	2	B	8"	BU	MO	P	1X4DB135-2 (E-7)	O	O	AI	PI	RO		NA
1-HV-1808 NSCW to Ctmt Cooler Iso Vlv	2	B	8"	BU	MO	P	1X4DB135-1 (H-5)	O	O	AI	PI	RO		NA
1-HV-1809 NSCW to Ctmt Cooler Iso Vlv	2	B	8"	BU	MO	P	1X4DB135-2 (G-7)	O	O	AI	PI	RO		NA

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
1-HV-1822 NSCW Ret From Ctmt Cooler Iso Vlv	2	B	8"	BU	MO	P	1X4DB135-1 (E-2)	O	O	AI	PI	RO		NA
1-HV-1823 NSCW Ret From Ctmt Cooler Iso Vlv	2	B	8"	BU	MO	P	1X4DB135-2 (D-3)	O	O	AI	PI	RO		NA
1-HV-1830 NSCW Ret From Ctmt Cooler Iso Vlv	2	B	8"	BU	MO	P	1X4DB135-1 (G-2)	O	O	AI	PI	RO		NA
1-HV-1831 NSCW Ret From Ctmt Cooler Iso Vlv	2	B	8"	BU	MO	P	1X4DB135-2 (D-1)	O	O	AI	PI	RO		NA
1-HV-2134 NSCW to CTB Aux and Rx Cav Cooling Iso Vlv	2	B	8"	BU	MO	A	1X4DB135-1 (C-5)	O	C	AI	PI STC	RO Q		NA
1-HV-2135 NSCW to CTB Aux and Rx Cav Cooling Iso Vlv	2	B	8"	BU	MO	A	1X4DB135-2 (D-7)	O	C	AI	PI STC	RO Q		NA
1-HV-2138 NSCW Ret From CTB Aux and Rx Cav Cooling Iso Vlv	2	B	8"	BU	MO	A	1X4DB135-1 (B-2)	O	C	AI	PI STC	RO Q		NA
1-HV-2139 NSCW Ret From CTB Aux and Rx Cav Cooling Iso Vlv	2	B	8"	BU	MO	A	1X4DB135-2 (D-5)	O	C	AI	PI STC	RO Q		NA
1-PSV-11671 Ctmt Cooler RV	2	C	3/4"	RV	SA	A	1X4DB135-1 (G-4)	C	O/C	NA	RVT	Note 6		NA
1-PSV-11672 Ctmt Cooler RV	2	C	3/4"	RV	SA	A	1X4DB135-1 (E-4)	C	O/C	NA	RVT	Note 6		NA
1-PSV-11673 Rx Cav Cooler RV	2	C	3/4"	RV	SA	A	1X4DB135-1 (C-4)	C	O/C	NA	RVT	Note 6		NA
1-PSV-11684 Piping Pen Area Cooler RV	3	C	3/4"	RV	SA	A	1X4DB133-2 (F-3)	C	O/C	NA	RVT	Note 6		NA
1-PSV-11743 Char Pmp Lub Oil Cooler RV	3	C	1"	RV	SA	A	1X4DB134 (F-8)	C	O/C	NA	RVT	Note 6		NA
1-PSV-11744 Char Pmp Mot Cooler RV	3	C	1 1/2"	RV	SA	A	1X4DB134 (F-7)	C	O/C	NA	RVT	Note 6		NA

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
1-PSV-11745 SI Pmp Lub Oil Cooler RV	3	C	1"	RV	SA	A	1X4DB134 (F-6)	C	O/C	NA	RVT	Note 6	NA	
1-PSV-11746 SI Pmp Mot Oil Cooler RV	3	C	1 1/2"	RV	SA	A	1X4DB134 (F-5)	C	O/C	NA	RVT	Note 6	NA	
1-PSV-11747 Ctmt Spray Pmp Mot Cooler RV	3	C	1"	RV	SA	A	1X4DB134 (F-4)	C	O/C	NA	RVT	Note 6	NA	
1-PSV-11748 RHR Pmp Mot Cooler RV	3	C	1"	RV	SA	A	1X4DB134 (F-4)	C	O/C	NA	RVT	Note 6	NA	
1-PSV-11749 Char Pmp Lub Oil Cooler RV	3	C	1"	RV	SA	A	1X4DB134 (C-6)	C	O/C	NA	RVT	Note 6	NA	
1-PSV-11750 Char Pmp Mot Cooler RV	3	C	1 1/2"	RV	SA	A	1X4DB134 (C-5)	C	O/C	NA	RVT	Note 6	NA	
1-PSV-11751 SI PmpLub Oil Cooler RV	3	C	1"	RV	SA	A	1X4DB134 (C-5)	C	O/C	NA	RVT	Note 6	NA	
1-PSV-11752 SI Pmp Mot Oil Cooler RV	3	C	1 1/2"	RV	SA	A	1X4DB134 (C-3)	C	O/C	NA	RVT	Note 6	NA	
1-PSV-11753 Ctmt Spray Pmp Mot Cooler RV	3	C	1"	RV	SA	A	1X4DB134 (C-2)	C	O/C	NA	RVT	Note 6	NA	
1-PSV-11754 RHR Pmp Mot Cooler RV	3	C	1"	RV	SA	A	1X4DB134 (C-1)	C	O/C	NA	RVT	Note 6	NA	
1-PSV-11759 NSCW Ret Hdr RV	3	C	8"	RV	SA	A	1X4DB133-1 (G-5)	C	O/C	NA	RVT	Note 6	NA	
1-PSV-11766 NSCW Ret Hdr RV	3	C	8"	RV	SA	A	1X4DB133-2 (G-5)	C	O/C	NA	RVT	Note 6	NA	
1-PSV-11772 CTB Aux Air Cooler RV	2	C	3/4"	RV	SA	A	1X4DB135-2 (E-6)	C	O/C	NA	RVT	Note 6	NA	
1-PSV-11773 Ctmt Cooler RV	2	C	3/4"	RV	SA	A	1X4DB135-2 (E-4)	C	O/C	NA	RVT	Note 6	NA	

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
1-PSV-11774 Ctmt Cooler RV	2	C	3/4"	RV	SA	A	1X4DB135-2 (G-2)	C	O/C	NA	RVT	Note 6	NA	
1-PSV-11780 Piping Pen Area Cooler RV	3	C	3/4"	RV	SA	A	1X4DB135-1 (C-7)	C	O/C	NA	RVT	Note 6	NA	
1-PSV-1648 Diesel Gen Jac Water Hx RV	3	C	3/4"	RV	SA	A	1X4DB135-1 (H-7)	C	O/C	NA	RVT	Note 6	NA	
1-PSV-1649 Diesel Gen Jac Water Hx RV	3	C	3/4"	RV	SA	A	1X4DB133-2 (H-1)	C	O/C	NA	RVT	Note 6	NA	
1-PSV-1660 CCW Pmp Mot Cooler RV	3	C	3/4"	RV	SA	A	1X4DB133-1 (F-3)	C	O/C	NA	RVT	Note 6	NA	
1-PSV-1661 CCW Pmp Mot Cooler RV	3	C	3/4"	RV	SA	A	1X4DB133-2 (G-4)	C	O/C	NA	RVT	Note 6	NA	
1-PSV-1680 CCW Pmp Mot Cooler RV	3	C	3/4"	RV	SA	A	1X4DB133-1 (F-2)	C	O/C	NA	RVT	Note 6	NA	
1-PSV-1681 CCW Pmp Mot Cooler RV	3	C	3/4"	RV	SA	A	1X4DB133-2 (G-4)	C	O/C	NA	RVT	Note 6	NA	
1-PSV-1689 CCW Hx RV	3	C	3/4"	RV	SA	A	1X4DB133-2 (F-1)	C	O/C	NA	RVT	Note 6	NA	
1-PSV-1698 CCW Pmp Mot Cooler RV	3	C	3/4"	RV	SA	A	1X4DB133-1 (F-1)	C	O/C	NA	RVT	Note 6	NA	
1-PSV-1699 CCW Pmp Mot Cooler RV	3	C	3/4"	RV	SA	A	1X4DB134 (C-7)	C	O/C	NA	RVT	Note 6	NA	
1-PSV-1702 CCW Hx RV	3	C	3/4"	RV	SA	A	1X4DB135-1 (F-7)	C	O/C	NA	RVT	Note 6	NA	
1-PSV-1714 CCW Hx RV	3	C	3/4"	RV	SA	A	1X4DB135-1 (F-8)	C	O/C	NA	RVT	Note 6	NA	
1-PSV-1715 CCW Hx RV	3	C	3/4"	RV	SA	A	1X4DB133-2 (F-2)	C	O/C	NA	RVT	Note 6	NA	

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
1-PSV-1718 Aux CCW Hx RV	3	C	3/4"	RV	SA	A	1X4DB135-1 (D-7)	C	O/C	NA	RVT	Note 6	NA	
1-PSV-1719 Aux CCW Hx RV	3	C	3/4"	RV	SA	A	1X4DB133-2 (D-2)	C	O/C	NA	RVT	Note 6	NA	
1-PSV-1800 Ctrl Bldg Ess Chiller RV	3	C	3/4"	RV	SA	A	1X4DB134 (G-3)	C	O/C	NA	RVT	Note 6	NA	
1-PSV-1801 Ctrl Bldg Ess Chiller RV	3	C	3/4"	RV	SA	A	1X4DB135-2 (B-4)	C	O/C	NA	RVT	Note 6	NA	
1-PSV-1814 Ctmt Cooler RV	2	C	3/4"	RV	SA	A	1X4DB135-1 (F-4)	C	O/C	NA	RVT	Note 6	NA	
1-PSV-1815 Ctmt Cooler RV	2	C	3/4"	RV	SA	A	1X4DB135-2 (G-3)	C	O/C	NA	RVT	Note 6	NA	
1-PSV-1816 Ctmt Cooler RV	2	C	3/4"	RV	SA	A	1X4DB135-1 (H-4)	C	O/C	NA	RVT	Note 6	NA	
1-PSV-1817 Ctmt Cooler RV	2	C	3/4"	RV	SA	A	1X4DB135-2 (H-1)	C	O/C	NA	RVT	Note 6	NA	
1-PSV-2136 CTB Aux Air Cooler RV	2	C	3/4"	RV	SA	A	1X4DB135-1 (D-3)	C	O/C	NA	RVT	Note 6	NA	
1-PSV-2137 Rx Cav Cooler RV	2	C	3/4"	RV	SA	A	1X4DB135-2 (G-5)	C	O/C	NA	RVT	Note 6	NA	

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
1-1203-U4-030 CCW Pmp Disch CH	3	C	14"	CH	SA	A	1X4DB136 (H-4)	O/C	O/C	NA	CKC CKO	Q Q		NA
1-1203-U4-032 CCW Pmp Disch CH	3	C	14"	CH	SA	A	1X4DB136 (G-4)	O/C	O/C	NA	CKC CKO	Q Q		NA
1-1203-U4-034 CCW Pmp Disch CH	3	C	14"	CH	SA	A	1X4DB136 (F-4)	O/C	O/C	NA	CKC CKO	Q Q		NA
1-1203-U4-055 CCW Pmp Disch CH	3	C	14"	CH	SA	A	1X4DB136 (D-4)	O/C	O/C	NA	CKC CKO	Q Q		NA
1-1203-U4-057 CCW Pmp Disch CH	3	C	14"	CH	SA	A	1X4DB136 (C-4)	O/C	O/C	NA	CKC CKO	Q Q		NA
1-1203-U4-059 CCW Pmp Disch CH	3	C	14"	CH	SA	A	1X4DB136 (B-4)	O/C	O/C	NA	CKC CKO	Q Q		NA
1-PSV-11824 RHR Pmp Seal Cooler RV	3	C	1"	RV	SA	A	1X4DB137 (G-3)	C	O/C	NA	RVT	Note 6		NA
1-PSV-11825 RHR Pmp Seal Cooler RV	3	C	1"	RV	SA	A	1X4DB137 (B-3)	C	O/C	NA	RVT	Note 6		NA
1-PSV-1872 CCW Hx Shell-Side RV	3	C	3/4"	RV	SA	A	1X4DB136 (H-2)	C	O/C	NA	RVT	Note 6		NA
1-PSV-1873 CCW Hx Shell-Side RV	3	C	3/4"	RV	SA	A	1X4DB136 (E-2)	C	O/C	NA	RVT	Note 6		NA
1-PSV-1926 RHR Hx Shell-Side RV	3	C	3/4"	RV	SA	A	1X4DB137 (G-4)	C	O/C	NA	RVT	Note 6		NA
1-PSV-1927 RHR Hx Shell-Side RV	3	C	3/4"	RV	SA	A	1X4DB137 (C-4)	C	O/C	NA	RVT	Note 6		NA

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
1-1204-U4-026	1	C	1.50"	CH	SA	A	1X4DB111	C	O	NA	BDTC	RO		NA
RCS Cold Leg SI Admis CH							(D-5)				CKO	RO	ROJ-V-3	
1-1204-U4-027	1	C	1.50"	CH	SA	A	1X4DB111	C	O	NA	BDTC	RO		NA
RCS Cold Leg SI Admis CH							(G-5)				CKO	RO	ROJ-V-3	
1-1204-U4-028	1	C	1.50"	CH	SA	A	1X4DB111	C	O	NA	BDTC	RO		NA
RCS Cold Leg SI Admis CH							(G-4)				CKO	RO	ROJ-V-3	
1-1204-U4-029	1	C	1.50"	CH	SA	A	1X4DB111	C	O	NA	BDTC	RO		NA
RCS Cold Leg SI Admis CH							(D-4)				CKO	RO	ROJ-V-3	
1-1204-U4-093	2	C	1.50"	CH	SA	A	1X4DB121	C	O/C	NA	CKC	Q		NA
SI Pmp Min Flow Disch CH							(E-3)				CKO	Q		
1-1204-U4-094	2	C	1.50"	CH	SA	A	1X4DB121	C	O/C	NA	CKC	Q		NA
SI Pmp Min Flow Disch CH							(D-3)				CKO	Q		
1-1204-U4-120	1	AC	2"	CH	SA	A	1X4DB121	C	O/C	NA	CKC	RO	ROJ-V-4	Note 4
SI to RCS Hot Leg Iso CH							(F-6)				CKO	RO	ROJ-V-4	
											LT	RO	ROJ-V-4	
1-1204-U4-121	1	AC	2"	CH	SA	A	1X4DB121	C	O/C	NA	CKC	RO	ROJ-V-4	Note 4
SI to RCS Hot Leg Iso CH							(F-6)				CKO	RO	ROJ-V-4	
											LT	RO	ROJ-V-4	
1-1204-U4-122	1	AC	2"	CH	SA	A	1X4DB121	C	O/C	NA	CKC	RO	ROJ-V-4	Note 4
SI to RCS Hot Leg Iso CH							(F-7)				CKO	RO	ROJ-V-4	
											LT	RO	ROJ-V-4	
1-1204-U4-123	1	AC	2"	CH	SA	A	1X4DB121	C	O/C	NA	CKC	RO	ROJ-V-4	Note 4
SI to RCS Hot Leg Iso CH							(F-7)				CKO	RO	ROJ-V-4	
											LT	RO	ROJ-V-4	
1-1204-U4-143	1	AC	2"	CH	SA	A	1X4DB121	C	O/C	NA	CKC	RO	ROJ-V-4	Note 4
SI To RCS Cold Leg Iso CH							(B-6)				CKO	RO	ROJ-V-4	
											LT	RO	ROJ-V-4	
1-1204-U4-144	1	AC	2"	CH	SA	A	1X4DB121	C	O/C	NA	CKC	RO	ROJ-V-4	Note 4
SI To RCS Cold Leg Iso CH							(B-7)				CKO	RO	ROJ-V-4	
											LT	RO	ROJ-V-4	

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
1-1204-U4-145	1	AC	2"	CH	SA	A	1X4DB121	C	O/C	NA	CKC	RO	ROJ-V-4	Note 4
SI To RCS Cold Leg Iso CH							(B-7)				CKO	RO	ROJ-V-4	
											LT	RO	ROJ-V-4	
1-1204-U4-146	1	AC	2"	CH	SA	A	1X4DB121	C	O/C	NA	CKC	RO	ROJ-V-4	Note 4
SI To RCS Cold Leg Iso CH							(B-8)				CKO	RO	ROJ-V-4	
											LT	RO	ROJ-V-4	
1-1204-U4-159	2	A	3/4"	GL	MA	P	1X4DB120	C	C	NA	LT	CIV		NA
SI Accum Sam Man Iso Vlv							(G-2)							
1-1204-U4-160	2	A	3/4"	GL	MA	P	1X4DB120	C	C	NA	LT	CIV		NA
SI Accum Sam Man Iso Vlv							(E-2)							
1-1204-U4-161	2	A	3/4"	GL	MA	P	1X4DB120	C	C	NA	LT	CIV		NA
SI Accum Sam Man Iso Vlv							(C-2)							
1-1204-U4-162	2	A	3/4"	GL	MA	P	1X4DB120	C	C	NA	LT	CIV		NA
SI Accum Sam Man Iso Vlv							(A-2)							
1-1204-U4-262	2	C	3"	CH	SA	A	1X4DB121	O/C	C	NA	BDTO	Normal Ops		NA
RWST Sludge Mixing Pmp Disch CH							(G-3)				CKC	RO	ROJ-V-5	
1-1204-U4-263	2	C	3"	CH	SA	A	1X4DB121	O/C	C	NA	BDTO	Normal Ops		NA
RWST Sludge Mixing Pmp Disch CH							(G-3)				CKC	RO	ROJ-V-5	
1-1204-U6-013	1	C	3"	CH	SA	A	1X4DB119	C	O/C	NA	CKC	RO	ROJ-V-6	NA
SI From BIT To RCS Cold Legs CH							(E-6)				CKO	RO	ROJ-V-6	
1-1204-U6-079	1	AC	10"	CH	SA	A	1X4DB120	C	O/C	NA	CKC	RO	ROJ-V-7	Notes 4
SI Accum Disch CH							(G-8)				CKO	RO	ROJ-V-7	
											LT	RO	ROJ-V-7	
1-1204-U6-080	1	AC	10"	CH	SA	A	1X4DB120	C	O/C	NA	CKC	RO	ROJ-V-7	Notes 4
SI Accum Disch CH							(E-8)				CKO	RO	ROJ-V-7	
											LT	RO	ROJ-V-7	
1-1204-U6-081	1	AC	10"	CH	SA	A	1X4DB120	C	O/C	NA	CKC	RO	ROJ-V-7	Notes 4
SI Accum Disch CH							(C-8)				CKO	RO	ROJ-V-7	
											LT	RO	ROJ-V-7	

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
1-1204-U6-082	1	AC	10"	CH	SA	A	1X4DB120	C	O/C	NA	CKC	RO	ROJ-V-7	Notes 4
SI Accum Disch CH							(A-8)				CKO	RO	ROJ-V-7	
											LT	RO	ROJ-V-7	
1-1204-U6-083	1	AC	10"	CH	SA	A	1X4DB111	C	O/C	NA	CKC	RO	ROJ-V-8	Notes 4
SI/RHR Cold Leg Admis CH							(B-5)				CKO	RO	ROJ-V-8	
											LT	RO	ROJ-V-8	
1-1204-U6-084	1	AC	10"	CH	SA	A	1X4DB111	C	O/C	NA	CKC	RO	ROJ-V-8	Notes 4
SI/RHR Cold Leg Admis CH							(H-5)				CKO	RO	ROJ-V-8	
											LT	RO	ROJ-V-8	
1-1204-U6-085	1	AC	10"	CH	SA	A	1X4DB111	C	O/C	NA	CKC	RO	ROJ-V-8	Notes 4
SI/RHR Cold Leg Admis CH							(H-4)				CKO	RO	ROJ-V-8	
											LT	RO	ROJ-V-8	
1-1204-U6-086	1	AC	10"	CH	SA	A	1X4DB111	C	O/C	NA	CKC	RO	ROJ-V-8	Notes 4
SI/RHR Cold Leg Admis CH							(B-4)				CKO	RO	ROJ-V-8	
											LT	RO	ROJ-V-8	
1-1204-U6-090	2	C	8"	CH	SA	A	1X4DB121	C	O	NA	BDTC	RO		NA
SI Suc Line CH							(E-1)				CKO	RO	ROJ-V-9	
1-1204-U6-098	2	C	4"	CH	SA	A	1X4DB121	C	O/C	NA	CKC	RO	ROJ-V-10	NA
SI Pmp Disch CH							(E-4)				CKO	RO	ROJ-V-10	
1-1204-U6-099	2	C	4"	CH	SA	A	1X4DB121	C	O/C	NA	CKC	RO	ROJ-V-10	NA
SI Pmp Disch CH							(D-3)				CKO	RO	ROJ-V-10	
1-1204-U6-124	1	AC	6"	CH	SA	A	1X4DB111	C	O/C	NA	CKC	RO	ROJ-V-4	Note 4
RCS Hot Leg SI Admis CH							(F-5)				CKO	RO	ROJ-V-4	
											LT	RO	ROJ-V-4	
1-1204-U6-125	1	AC	6"	CH	SA	A	1X4DB111	C	O/C	NA	CKC	RO	ROJ-V-11	Notes 4
RCS Hot Leg SI Admis CH							(D-3)				CKO	CS	CSJ-V-3	
											CKO	RO	ROJ-V-11	
											LT	RO	ROJ-V-11	
1-1204-U6-126	1	AC	6"	CH	SA	A	1X4DB111	C	O/C	NA	CKC	RO	ROJ-V-11	Notes 4
RCS Hot Leg SI Admis CH							(D-6)				CKO	CS	CSJ-V-3	
											CKO	RO	ROJ-V-11	
											LT	RO	ROJ-V-11	

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
1-1204-U6-127	1	AC	6"	CH	SA	A	1X4DB111	C	O/C	NA	CKC	RO	ROJ-V-4	Note 4
RCS Hot Leg SI Admis CH							(F-4)				CKO	RO	ROJ-V-4	
											LT	RO	ROJ-V-4	
1-1204-U6-128	1	AC	8"	CH	SA	A	1X4DB121	C	O/C	NA	CKC	RO	ROJ-V-11	Notes 4
RHR To RCS Hot Leg Iso CH							(F-6)				CKO	CS	CSJ-V-3	
											CKO	RO	ROJ-V-11	
											LT	RO	ROJ-V-11	
1-1204-U6-129	1	AC	8"	CH	SA	A	1X4DB121	C	O/C	NA	CKC	CS	CSJ-V-3	Notes 4
RHR To RCS Hot Leg Iso CH							(F-6)				CKC	RO	ROJ-V-11	
											CKO	CS	CSJ-V-3	
											CKO	RO	ROJ-V-11	
											LT	RO	ROJ-V-11	
1-1204-U6-147	1	AC	6"	CH	SA	A	1X4DB121	C	O/C	NA	CKC	RO	ROJ-V-12	Notes 4
RHR To RCS Cold Leg Iso CH							(B-6)				CKO	CS	CSJ-V-4	
											CKO	RO	ROJ-V-12	
											LT	RO	ROJ-V-12	
1-1204-U6-148	1	AC	6"	CH	SA	A	1X4DB121	C	O/C	NA	CKC	RO	ROJ-V-12	Notes 4
RHR To RCS Cold Leg Iso CH							(A-6)				CKO	CS	CSJ-V-4	
											CKO	RO	ROJ-V-12	
											LT	RO	ROJ-V-12	
1-1204-U6-149	1	AC	6"	CH	SA	A	1X4DB121	C	O/C	NA	CKC	RO	ROJ-V-12	Notes 4
RHR To RCS Cold Leg Iso CH							(A-7)				CKO	CS	CSJ-V-4	
											CKO	RO	ROJ-V-12	
											LT	RO	ROJ-V-12	
1-1204-U6-150	1	AC	6"	CH	SA	A	1X4DB121	C	O/C	NA	CKC	RO	ROJ-V-12	Notes 4
RHR To RCS Cold Leg Iso CH							(A-7)				CKO	CS	CSJ-V-4	
											CKO	RO	ROJ-V-12	
											LT	RO	ROJ-V-12	
1-1204-U6-163	2	C	8"	CH	SA	A	1X4DB122	C	O	NA	BDTC	RO		NA
RHR Pmp to SI Pmps Suc Iso							(B-8)				CKO	RO	ROJ-V-13	
1-HV-0943A	3	B	1"	GL	SO	A	1X4DB120	C	O/C	C	FST	Q		NA
SI Accum Nitrogen Vent Vlv							(E-1)				PI	RO		
											STO	Q		

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
1-HV-0943B SI Accum Nitrogen Vent Vlv	3	B	1"	GL	SO	A	1X4DB120 (D-1)	C	O/C	C	FST PI STO	Q RO Q		NA
1-HV-10950 SI Accum Sam Iso Vlv	2	A	3/4"	GL	SO	A	1X4DB120 (G-3)	O/C	C	C	FST LT PI STC	Q CIV RO Q		NA
1-HV-10951 SI Accum Sam Iso Vlv	2	A	3/4"	GL	SO	A	1X4DB120 (E-3)	O/C	C	C	FST LT PI STC	Q CIV RO Q		NA
1-HV-10952 SI Accum Sam Iso Vlv	2	A	3/4"	GL	SO	A	1X4DB120 (C-3)	O/C	C	C	FST LT PI STC	Q CIV RO Q		NA
1-HV-10953 SI Accum Sam Iso Vlv	2	A	3/4"	GL	SO	A	1X4DB120 (A-3)	O/C	C	C	FST LT PI STC	Q CIV RO Q		NA
1-HV-10957 RWST Sludge Mixing Pmp Suc Vlv	2	B	3"	GA	AO	A	1X4DB121 (G-3)	O/C	C	C	FST PI STC	Q RO Q		NA
1-HV-10958 RWST Sludge Mixing Pmp Suc Vlv	2	B	3"	GA	AO	A	1X4DB121 (G-3)	O/C	C	C	FST PI STC	Q RO Q		NA
1-HV-8801A BIT Outlet to RCS Cold Legs, Obrd Ctmt Iso Vlv	2	B	4"	GA	MO	A	1X4DB119 (F-5)	C	O	AI	PI STO	RO Q		NA
1-HV-8801B BIT Outlet to RCS Cold Legs, Obrd Ctmt Iso Vlv	2	B	4"	GA	MO	A	1X4DB119 (E-5)	C	O	AI	PI STO	RO Q		NA
1-HV-8802A SI to RCS Hot Legs, Obrd Ctmt Iso Vlv	2	B	4"	GA	MO	A	1X4DB121 (E-5)	C	O/C	AI	PI STC STO	RO CS CS	 CSJ-V-5 CSJ-V-5	NA

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
1-HV-8802B	2	B	4"	GA	MO	A	1X4DB121	C	O/C	AI	PI	RO		NA
SI to RCS Hot Legs, Obrd Ctmt Iso Vlv							(D-5)				STC	CS	CSJ-V-5	
											STO	CS	CSJ-V-5	
1-HV-8806	2	B	6"	GA	MO	A	1X4DB121	O	O/C	AI	PI	RO		NA
SI Pmp Suc From RWST							(E-1)				STC	CS	CSJ-V-6	
											STO	CS	CSJ-V-6	
1-HV-8807A	2	B	6"	GA	MO	A	1X4DB121	C	O	AI	PI	RO		NA
SI Pmp Suc from Char Pmp Suc Hdr							(D-2)				STO	Q		
1-HV-8807B	2	B	6"	GA	MO	A	1X4DB121	C	O	AI	PI	RO		NA
SI Pmp Suc from Char Pmp Suc Hdr							(D-2)				STO	Q		
1-HV-8809A	2	B	8"	GA	MO	A	1X4DB121	O	O/C	AI	PI	RO		NA
RHR Disch To Cold Legs From RHR Hx							(B-5)				STC	CS	CSJ-V-7	
											STO	CS	CSJ-V-7	
1-HV-8809B	2	B	8"	GA	MO	A	1X4DB121	O	O/C	AI	PI	RO		NA
RHR Disch To Cold Legs From RHR Hx							(A-5)				STC	CS	CSJ-V-7	
											STO	CS	CSJ-V-7	
1-HV-8813	2	B	2"	GL	MO	A	1X4DB121	O	O/C	AI	PI	RO		NA
SI Min Flow Hdr Iso Vlv							(F-5)				STC	CS	CSJ-V-8	
											STO	CS	CSJ-V-8	
1-HV-8814	2	B	1.50"	GL	MO	A	1X4DB121	O	O/C	AI	PI	RO		NA
SI Pmp Min Flow Line Iso Vlv							(E-3)				STC	Q		
											STO	Q		
1-HV-8821A	2	B	4"	GA	MO	A	1X4DB121	O	O/C	AI	PI	RO		NA
SI Pmp Cold Leg Disch Stop Vlv							(E-4)				STC	Q		
											STO	Q		
1-HV-8821B	2	B	4"	GA	MO	A	1X4DB121	O	O/C	AI	PI	RO		NA
SI Pmp Cold Leg Disch Stop Vlv							(D-4)				STC	Q		
											STO	Q		
1-HV-8823	2	B	3/4"	GL	AO	A	1X4DB121	O/C	C	C	FST	Q		NA
SI Cold Leg Inj Test Line Vlv							(C-8)				PI	RO		
											STC	Q		

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
1-HV-8824 SI CH Hot Leg 2 and 3 Test Vlv	2	B	3/4"	GL	AO	A	1X4DB121 (E-8)	O/C	C	C	FST PI STC	Q RO Q		NA
1-HV-8825 RHR To Hot Leg Test Line Vlv	2	B	3/4"	GL	AO	A	1X4DB121 (D-8)	O/C	C	C	FST PI STC	Q RO Q		NA
1-HV-8835 SI Hdr Cold Leg Disch Stop Vlv	2	B	4"	GA	MO	A	1X4DB121 (C-5)	O	O/C	AI	PI STC STO	RO CS CS	 CSJ-V-9 CSJ-V-9	NA
1-HV-8840 Hot Leg Crossover Iso Vlv	2	B	12"	GA	MO	A	1X4DB121 (B-4)	C	O/C	AI	PI STC STO	RO CS CS	 CSJ-V-10 CSJ-V-10	NA
1-HV-8843 BIT Test/Recir Vlv	2	B	3/4"	GL	AO	A	1X4DB119 (D-6)	O/C	C	C	FST PI STC	Q RO Q		NA
1-HV-8871 Accum Test Line Inbrd Ctmt Iso Vlv	2	A	3/4"	GL	AO	A	1X4DB121 (H-6)	O/C	C	C	FST LT PI STC	Q CIV RO Q		NA
1-HV-8875A SI Accum Nitrogen Sup/Vent Vlv	2	B	1"	GL	SO	A	1X4DB120 (H-3)	C	O/C	C	FST PI STC STO	Q RO Q Q		NA
1-HV-8875B SI Accum Nitrogen Sup/Vent Vlv	2	B	1"	GL	SO	A	1X4DB120 (F-3)	C	O/C	C	FST PI STC STO	Q RO Q Q		NA
1-HV-8875C SI Accum Nitrogen Sup/Vent Vlv	2	B	1"	GL	SO	A	1X4DB120 (D-3)	C	O/C	C	FST PI STC STO	Q RO Q Q		NA

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
1-HV-8875D SI Accum Nitrogen Sup/Vent Vlv	2	B	1"	GL	SO	A	1X4DB120 (B-3)	C	O/C	C	FST PI STC STO	Q RO Q Q		NA
1-HV-8875E SI Accum Nitrogen Sup/Vent Vlv	2	B	1"	GL	SO	A	1X4DB120 (G-3)	C	O/C	C	FST PI STC STO	Q RO Q Q		NA
1-HV-8875F SI Accum Nitrogen Sup/Vent Vlv	2	B	1"	GL	SO	A	1X4DB120 (E-3)	C	O/C	C	FST PI STC STO	Q RO Q Q		NA
1-HV-8875G SI Accum Nitrogen Sup/Vent Vlv	2	B	1"	GL	SO	A	1X4DB120 (D-3)	C	O/C	C	FST PI STC STO	Q RO Q Q		NA
1-HV-8875H SI Accum Nitrogen Sup/Vent Vlv	2	B	1"	GL	SO	A	1X4DB120 (B-3)	C	O/C	C	FST PI STC STO	Q RO Q Q		NA
1-HV-8877A Accum Test Header Iso Vlv	2	B	3/4"	GL	AO	P	1X4DB120 (G-6)	C	C	C	PI	RO		NA
1-HV-8877B Accum Test Header Iso Vlv	2	B	3/4"	GL	AO	P	1X4DB120 (E-6)	C	C	C	PI	RO		NA
1-HV-8877C Accum Test Header Iso Vlv	2	B	3/4"	GL	AO	P	1X4DB120 (D-6)	C	C	C	PI	RO		NA
1-HV-8877D Accum Test Header Iso Vlv	2	B	3/4"	GL	AO	P	1X4DB120 (B-6)	C	C	C	PI	RO		NA
1-HV-8878A Accum Water Fill Vlv	2	B	1"	GL	AO	P	1X4DB120 (G-2)	C	C	C	PI	RO		NA
1-HV-8878B Accum Water Fill Vlv	2	B	1"	GL	AO	P	1X4DB120 (E-2)	C	C	C	PI	RO		NA

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
1-HV-8878C Accum Water Fill Vlv	2	B	1"	GL	AO	P	1X4DB120 (C-2)	C	C	C	PI	RO		NA
1-HV-8878D Accum Water Fill Vlv	2	B	1"	GL	AO	P	1X4DB120 (B-2)	C	C	C	PI	RO		NA
1-HV-8879A Accum CH Test Line Iso Vlv	2	B	3/4"	GL	AO	P	1X4DB120 (G-7)	C	C	C	PI	RO		NA
1-HV-8879B Accum CH Test Line Iso Vlv	2	B	3/4"	GL	AO	P	1X4DB120 (E-7)	C	C	C	PI	RO		NA
1-HV-8879C Accum CH Test Line Iso Vlv	2	B	3/4"	GL	AO	P	1X4DB120 (C-7)	C	C	C	PI	RO		NA
1-HV-8879D Accum CH Test Line Iso Vlv	2	B	3/4"	GL	AO	P	1X4DB120 (B-7)	C	C	C	PI	RO		NA
1-HV-8881 SI CH Hot Leg 1 and 4 Test Vlv	2	B	3/4"	GL	AO	A	1X4DB121 (G-6)	O/C	C	C	FST PI STC	Q RO Q		NA
1-HV-8882 BIT Test/Recir Vlv	2	B	3/4"	GL	AO	P	1X4DB119 (B-6)	C	C	C	PI	RO		NA
1-HV-8888 Accum Fill Iso Vlv	2	A	3/4"	GL	AO	A	1X4DB121 (F-5)	O/C	C	C	FST LT PI STC	Q CIV RO Q		NA
1-HV-8889A SI CH Hot Leg Test Vlv	2	B	3/4"	GL	AO	P	1X4DB121 (G-8)	C	C	C	PI	RO		NA
1-HV-8889B SI CH Hot Leg Test Vlv	2	B	3/4"	GL	AO	P	1X4DB121 (F-8)	C	C	C	PI	RO		NA
1-HV-8889C SI CH Hot Leg Test Vlv	2	B	3/4"	GL	AO	P	1X4DB121 (F-8)	C	C	C	PI	RO		NA
1-HV-8889D SI CH Hot Leg Test Vlv	2	B	3/4"	GL	AO	P	1X4DB121 (D-8)	C	C	C	PI	RO		NA

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
1-HV-8890A SI RHR Pmp CH Test Vlv	2	B	3/4"	GL	AO	A	1X4DB121 (G-8)	O/C	C	C	FST PI STC	Q RO Q		NA
1-HV-8890B SI RHR Pmp CH Test Vlv	2	B	3/4"	GL	AO	A	1X4DB121 (E-8)	O/C	C	C	FST PI STC	Q RO Q		NA
1-HV-8920 SI Pmp Min Flow Line Iso Vlv	2	B	1.50"	GL	MO	A	1X4DB121 (D-3)	O	O/C	AI	PI STC STO	RO Q Q		NA
1-HV-8923A SI Pmp Suc Iso Vlv	2	B	8"	GA	MO	P	1X4DB121 (E-2)	O	O	AI	PI	RO		NA
1-HV-8923B SI Pmp Suc Iso Vlv	2	B	8"	GA	MO	P	1X4DB121 (D-2)	O	O	AI	PI	RO		NA
1-HV-8924 CVCS/SI Suc Hdr Intertie Iso Vlv	2	B	6"	GA	MO	A	1X4DB116-2 (A-7)	O	C	AI	PI STC	RO Q		NA
1-HV-8964 Accum Test Line Obrd Ctmt Iso Vlv	2	A	3/4"	GL	AO	A	1X4DB121 (H-5)	O/C	C	C	FST LT PI STC	Q CIV RO Q		NA
1-HV-9017A RWST to Ctmt Spray Pmp Iso Vlv	2	B	10"	GA	MO	A	1X4DB131 (F-3)	O	O/C	AI	PI STC STO	RO Q Q		NA
1-HV-9017B RWST to Ctmt Spray Pmp Iso Vlv	2	B	10"	GA	MO	A	1X4DB131 (E-3)	O	O/C	AI	PI STC STO	RO Q Q		NA
1-PSV-8851 SI Cold Leg Inj Hdr RV	2	C	3/4"	RV	SA	A	1X4DB121 (C-5)	C	O/C	NA	RVT	Note 8		NA
1-PSV-8853A SI Pmp Disch RV	2	C	3/4"	RV	SA	A	1X4DB121 (E-4)	C	O/C	NA	RVT	Note 8		NA
1-PSV-8853B SI Pmp Disch RV	2	C	3/4"	RV	SA	A	1X4DB121 (D-4)	C	O/C	NA	RVT	Note 8		NA

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
1-PSV-8858 SI Pmp Suc Hdr RV	2	C	3/4"	RV	SA	A	1X4DB121 (E-1)	C	O/C	NA	RVT	Note 6		NA
1-PSV-8871 Pen 41 Thermal RV	2	C	3/4"	RV	SA	A	1X4DB121 (H-5)	C	O/C	NA	RVT	Note 6		NA
1-PSV-8916A SI Pmp Suc RV	2	C	3/4"	RV	SA	A	1X4DB121 (E-3)	C	O/C	NA	RVT	Note 6		NA
1-PSV-8916B SI Pmp Suc RV	2	C	3/4"	RV	SA	A	1X4DB121 (D-2)	C	O/C	NA	RVT	Note 6		NA

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
1-1205-U4-122 RHR Pmp Suc CH from Ctmt Sump	2	C	14"	CH	SA	A	1X4DB122 (C-3)	C	O/C	NA	CKC CKO	RO RO	ROJ-V-14 ROJ-V-14	NA
1-1205-U4-123 RHR Pmp Suc CH from Ctmt Sump	2	C	14"	CH	SA	A	1X4DB122 (B-3)	C	O/C	NA	CKC CKO	RO RO	ROJ-V-14 ROJ-V-14	NA
1-1205-U6-001 RHR Pmp Sup Iso From RWST CH	2	C	12"	CH	SA	A	1X4DB122 (F-4)	C	O/C	NA	CKC CKO CKO	Q CS CS	CSJ-V-11	NA
1-1205-U6-002 RHR Pmp Sup Iso From RWST CH	2	C	12"	CH	SA	A	1X4DB122 (C-4)	C	O/C	NA	CKC CKO CKO	Q CS CS	CSJ-V-11	NA
1-1205-U6-009 RHR Pmp Disch CH	2	C	8"	CH	SA	A	1X4DB122 (G-5)	C	O	NA	BDTC CKO	RO RO	CSJ-V-12	NA
1-1205-U6-010 RHR Pmp Disch CH	2	C	8"	CH	SA	A	1X4DB122 (D-5)	C	O	NA	BDTC CKO CKO	CS CS CS	CSJ-V-12	NA
1-FV-0610 RHR Pmp Min Flow Ctrl Vlv	2	B	3"	GA	MO	A	1X4DB122 (H-5)	O	O/C	AI	PI STC STO	RO Q Q		NA
1-FV-0611 RHR Pmp Min Flow Ctrl Vlv	2	B	3"	GA	MO	A	1X4DB122 (E-5)	O	O/C	AI	PI STC STO	RO Q Q		NA
1-FV-0618 RHR Hx Bypass Flow Ctrl Vlv	2	B	8"	BU	AO	P	1X4DB122 (F-7)	C	C	C	PI	RO		NA
1-FV-0619 RHR Hx Bypass Flow Ctrl Vlv	2	B	8"	BU	AO	P	1X4DB122 (C-7)	C	C	C	PI	RO		NA
1-HV-0606 RHR Hx Disch Flow Ctrl Vlv	2	B	8"	BU	AO	P	1X4DB122 (G-7)	O	O	O	PI	RO		NA
1-HV-0607 RHR Hx Disch Flow Ctrl Vlv	2	B	8"	BU	AO	P	1X4DB122 (D-7)	O	O	O	PI	RO		NA

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
1-HV-8716A RHR Train A to Hot Leg Cross-over Iso Vlv	2	B	8"	GA	MO	A	1X4DB122 (F-7)	O	O/C	AI	PI STC STO	RO Q Q		NA
1-HV-8716B RHR Train B to Hot Leg Cross-over Iso Vlv	2	B	8"	GA	MO	A	1X4DB122 (D-7)	O	O/C	AI	PI STC STO	RO Q Q		NA
1-HV-8804A RHR Pmp "A" Disch to Char Pmp Suc Hdrs	2	B	8"	GA	MO	A	1X4DB122 (F-8)	C	O/C	AI	PI STC STO	RO CS CS	 CSJ-V-13 CSJ-V-13	NA
1-HV-8804B RHR Pmp "B" To SI Pmp "B" Iso Vlv	2	B	8"	GA	MO	A	1X4DB122 (B-8)	C	O/C	AI	PI STC STO	RO CS CS	 CSJ-V-14 CSJ-V-14	NA
1-HV-8811A RHR Pmp Suc Iso From Ctmt Sump	2	B	14"	GA	MO	A	1X4DB122 (B-3)	C	O/C	AI	PI STC STO	RO Q Q		NA
1-HV-8811B RHR Pmp Suc Iso From Ctmt Sump	2	B	14"	GA	MO	A	1X4DB122 (B-3)	C	O/C	AI	PI STC STO	RO Q Q		NA
1-HV-8812A RHR Pmp Sup Iso From RWST	2	B	12"	GA	MO	A	1X4DB122 (F-4)	O	O/C	AI	PI STC STO	RO Q Q		NA
1-HV-8812B RHR Pmp Sup Iso From RWST	2	B	12"	GA	MO	A	1X4DB122 (C-4)	O	O/C	AI	PI STC STO	RO Q Q		NA
1-PSV-8708A RHR Pmp Suc RV	2	C	3"	RV	SA	A	1X4DB122 (H-3)	C	O/C	NA	RVT	Note 8		NA
1-PSV-8708B RHR Pmp Suc RV	2	C	3"	RV	SA	A	1X4DB122 (E-3)	C	O/C	NA	RVT	Note 8		NA
1-PSV-8842 RHR Hot Leg Cross-over Line RV	2	C	3/4"	RV	SA	A	1X4DB121 (C-3)	C	O/C	NA	RVT	Note 8		NA
1-PSV-8856A RHR Hx Disch Hdr to Cold Leg RV	2	C	3/4"	RV	SA	A	1X4DB121 (B-4)	C	O/C	NA	RVT	Note 8		NA

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
1-PSV-8856B RHR Hx Disch Hdr to Cold Leg RV	2	C	3/4"	RV	SA	A	1X4DB121 (A-4)	C	O/C	NA	RVT	Note 6	NA	

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
1-1206-U6-001	2	C	10"	CH	SA	A	1X4DB131	C	O/C	NA	CKC	RO	ROJ-V-15	NA
Ctmt Spray Pmp Suc From RWST CH							(G-3)				CKO	RO	ROJ-V-15	
											CKOP	RO		
1-1206-U6-008	2	C	10"	CH	SA	A	1X4DB131	C	O/C	NA	CKC	RO	ROJ-V-15	NA
Ctmt Spray Pmp Suc From RWST CH							(D-3)				CKO	RO	ROJ-V-15	
											CKOP	RO		
1-1206-U6-015	2	AC	8"	CH	SA	A	1X4DB131	C	O/C	NA	CKC	RO	ROJ-V-16	NA
Ctmt Spray Inbrd Ctmt Iso CH							(H-7)				CKO	RO	ROJ-V-16	
											LT	CIV		
1-1206-U6-016	2	AC	8"	CH	SA	A	1X4DB131	C	O/C	NA	CKC	RO	ROJ-V-16	NA
Ctmt Spray Inbrd Ctmt Iso CH							(C-7)				CKO	RO	ROJ-V-16	
											LT	CIV		
1-HV-9001A	2	A	8"	GA	MO	A	1X4DB131	C	O/C	AI	LT	CIV		NA
Ctmt Spray Pmp Suc From Ctmt Sump Inbrd Iso Vlv							(G-6)				PI	RO		
											STC	Q		
											STO	Q		
1-HV-9001B	2	A	8"	GA	MO	A	1X4DB131	C	O/C	AI	LT	CIV		NA
Ctmt Spray Pmp Suc From Ctmt Sump Inbrd Iso Vlv							(C-6)				PI	RO		
											STC	Q		
											STO	Q		
1-HV-9002A	2	B	10"	GA	MO	A	1X4DB131	C	O/C	AI	PI	RO		NA
Ctmt Spray Pmp Suc From Ctmt Sump Inbrd Iso Vlv							(B-6)				STC	Q		
											STO	Q		
1-HV-9002B	2	B	10"	GA	MO	A	1X4DB131	C	O/C	AI	PI	RO		NA
Ctmt Spray Pmp Suc From Ctmt Sump Inbrd Iso Vlv							(C-6)				STC	Q		
											STO	Q		
1-HV-9003A	2	B	10"	GA	MO	A	1X4DB131	C	O	AI	PI	RO		NA
Ctmt Spray Pmp Suc From Ctmt Sump Obrd Iso Vlv							(B-5)				STO	Q		
1-HV-9003B	2	B	10"	GA	MO	A	1X4DB131	C	O	AI	PI	RO		NA
Ctmt Spray Pmp Suc From Ctmt Sump Obrd Iso Vlv							(C-5)				STO	Q		
1-PSV-9007A	2	C	3/4"	RV	SA	A	1X4DB131	C	O/C	NA	RVT	Note 6		NA
Ctmt Spray Suc Hdr SRV							(G-3)							

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
1-PSV-9007B Ctmt Spray Suc Hdr SRV	2	C	3/4"	RV	SA	A	1X4DB131 (D-3)	C	O/C	NA	RVT	Note 6	NA	

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
1-1208-U4-004 RCP Seal Inj Inbrd CH	2	C	1.5"	CH	SA	A	1X4DB114 (B-7)	O	C	NA	BDTO CKC	Normal Ops RO	 ROJ-V-17	NA
1-1208-U4-021 RCS Seal Water Ret Line Pressure Equalizing CH	2	AC	3/4"	CH	SA	A	1X4DB114 (D-4)	C	O/C	NA	CKC CKO LT	RO RO CIV	ROJ-V-18 ROJ-V-18	NA
1-1208-U4-140 Cent Char Pmp Disch Recir Line CH	2	C	2"	CH	SA	A	1X4DB116-2 (G-6)	C	O	NA	BDTC CKO	Q Q		NA
1-1208-U4-147 Cent Char Pmp Disch Recir Line CH	2	C	2"	CH	SA	A	1X4DB116-2 (C-6)	C	O/C	NA	CKC CKO	Q Q		NA
1-1208-U4-185 Emergency Boration to Char Pmp Suc CH	2	C	2"	CH	SA	A	1X4DB116-1 (D-1)	C	O	NA	BDTC CKO	CS CS	 CSJ-V-15	NA
1-1208-U4-284 Boric Acid Tran Pmp Disch CH	3	C	2"	CH	SA	A	1X4DB118 (D-5)	C	O/C	NA	CKC CKO	Q Q		NA
1-1208-U4-299 Boric Acid Tran Pmp Disch CH	3	C	2"	CH	SA	A	1X4DB118 (B-5)	C	O/C	NA	CKC CKO	Q Q		NA
1-1208-U4-353 RCP Seal Inj Inbrd CH	2	C	1.5"	CH	SA	A	1X4DB114 (B-7)	O	C	NA	BDTO CKC	Normal Ops RO	 ROJ-V-17	NA
1-1208-U4-354 RCP Seal Inj Inbrd CH	2	C	1.5"	CH	SA	A	1X4DB114 (B-7)	O	C	NA	BDTO CKC	Normal Ops RO	 ROJ-V-17	NA
1-1208-U4-355 RCP Seal Inj Inbrd CH	2	C	1.5"	CH	SA	A	1X4DB114 (B-7)	O	C	NA	BDTO CKC	Normal Ops RO	 ROJ-V-17	NA
1-1208-U6-032 Main Char Hdr CH	2	AC	3"	CH	SA	A	1X4DB114 (F-3)	O	O/C	NA	CKC CKO LT	RO Q CIV	ROJ-V-19	NA
1-1208-U6-124 Char Pmp Sup From VCT CH	2	C	4"	CH	SA	A	1X4DB116-1 (E-4)	O	C	NA	BDTO CKC	Normal Ops RO	 ROJ-V-20	NA
1-1208-U6-129 Normal Char Pmp Disch Line CH	2	C	3"	CH	SA	A	1X4DB116-1 (C-5)	O	C	NA	BDTO CKC	Normal Ops Q		NA
1-1208-U6-142 Cent Char Pmp Disch CH	2	C	4"	CH	SA	A	1X4DB116-2 (G-6)	O/C	O/C	NA	CKC CKO	RO RO	ROJ-V-21 ROJ-V-21	NA

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
1-1208-U6-149	2	C	4"	CH	SA	A	1X4DB116-2	O/C	O/C	NA	CKC	RO	ROJ-V-21	NA
Cent Char Pmp Disch CH							(C-6)				CKO	RO	ROJ-V-21	
1-1208-U6-189	2	C	8"	CH	SA	A	1X4DB116-2	C	O/C	NA	CKC	RO	ROJ-V-22	NA
Cent Char Pmp Suc From RWST CH							(E-2)				CKO	RO	ROJ-V-22	
1-1208-U6-436	2	C	8"	CH	SA	A	1X4DB122	C	O	NA	BDTC	RO		NA
RHR Pmp "A" Disch to Char Pmp Suc Hdrs CH							(F-8)				CKO	RO	ROJ-V-23	
1-HV-0190A	2	B	1"	GL	SO	A	1X4DB116-2	C	O	C	PI	RO		NA
Char Throttle Vlv							(G-7)				STO	Q		
1-HV-0190B	2	B	1"	GL	SO	A	1X4DB116-2	C	O	C	PI	RO		NA
Char Throttle Vlv							(B-7)				STO	Q		
1-HV-8100	2	A	2"	GL	MO	A	1X4DB114	O	C	AI	LT	CIV		NA
RCP Seal Water Leakoff Ctmt Iso Vlv							(D-3)				PI	RO		
											STC	CS	CSJ-V-16	
1-HV-8103A	2	B	1.5"	GL	MO	A	1X4DB114	O	C	AI	PI	RO	ROJ-V-24	NA
RCP Seal Inj Iso Vlv							(B-6)				STC	RO	ROJ-V-24	
1-HV-8103B	2	B	1.5"	GL	MO	A	1X4DB114	O	C	AI	PI	RO	ROJ-V-24	NA
RCP Seal Inj Iso Vlv							(B-6)				STC	RO	ROJ-V-24	
1-HV-8103C	2	B	1.5"	GL	MO	A	1X4DB114	O	C	AI	PI	RO	ROJ-V-24	NA
RCP Seal Inj Iso Vlv							(B-6)				STC	RO	ROJ-V-24	
1-HV-8103D	2	B	1.5"	GL	MO	A	1X4DB114	O	C	AI	PI	RO	ROJ-V-24	NA
RCP Seal Inj Iso Vlv							(B-6)				STC	RO	ROJ-V-24	
1-HV-8104	2	B	2"	GL	MO	A	1X4DB116-1	C	O/C	AI	PI	RO		NA
Emergency Borate Iso Vlv							(D-1)				STC	Q		
											STO	Q		
1-HV-8105	2	A	3"	GA	MO	A	1X4DB116-1	O	O/C	AI	LT	CIV		NA
Char Pmp to RCS Ctmt Iso Vlv							(C-8)				PI	RO		
											STC	CS	CSJ-V-17	
											STO	CS	CSJ-V-17	
1-HV-8106	2	B	3"	GA	MO	A	1X4DB116-1	O	C	AI	PI	RO		NA
Char Pmp to RCS Iso Vlv							(C-7)				STC	CS	CSJ-V-18	

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
1-HV-8110	2	B	2"	GL	MO	A	1X4DB116-2	O	C	AI	PI	RO		NA
Cent Char Pmp Common Recir to RCS Seal Water Iso Vlv							(E-7)				STC	Q		
1-HV-8111A	2	B	2"	GL	MO	A	1X4DB116-2	O	C	AI	PI	RO		NA
Cent Char Pmp Recir to RCS Seal Water Iso Vlv							(F-6)				STC	Q		
1-HV-8111B	2	B	2"	GL	MO	A	1X4DB116-2	O	C	AI	PI	RO		NA
Cent Char Pmp Recir to RCS Seal Water Iso Vlv							(D-6)				STC	Q		
1-HV-8112	2	A	2"	GL	MO	A	1X4DB114	O	C	AI	LT	CIV		NA
RCPS Seal Water Leakoff Ctmt Iso Vlv							(D-3)				PI	RO		
											STC	CS	CSJ-V-16	
1-HV-8116	2	B	1"	GL	MO	A	1X4DB116-2	C	O	AI	PI	RO		NA
Char Iso Vlv							(G-8)				STC	Q		
											STO	Q		
1-HV-8152	2	A	3"	GL	AO	A	1X4DB114	O	C	C	FST	CS	CSJ-V-19	NA
RCS Ltdwn Line Iso Vlv							(G-3)				LT	CIV		
											PI	RO		
											STC	CS	CSJ-V-19	
1-HV-8160	2	A	3"	GL	AO	A	1X4DB114	O	C	C	FST	CS	CSJ-V-19	NA
RCS Ltdwn Line Iso Vlv							(G-3)				LT	CIV		
											PI	RO		
											STC	CS	CSJ-V-19	
1-HV-8438	2	B	3"	GA	MO	P	1X4DB116-2	O	O	AI	PI	RO		NA
Cent Char Pmp Disch Hdr Cross-Connect Vlv							(D-7)							
1-HV-8471A	2	B	6"	GA	MO	A	1X4DB116-2	O	O/C	AI	PI	RO		NA
Cent Char Pmp Suc Iso Vlv							(G-3)				STC	Q		
											STO	Q		
1-HV-8471B	2	B	6"	GA	MO	A	1X4DB116-2	O	O/C	AI	PI	RO		NA
Cent Char Pmp Suc Iso Vlv							(C-3)				STC	Q		
											STO	Q		
1-HV-8485A	2	B	4"	GA	MO	P	1X4DB116-2	O	O	AI	PI	RO		NA
Cent Char Pmp Disch Iso Vlv							(G-7)							
1-HV-8485B	2	B	4"	GA	MO	P	1X4DB116-2	O	O	AI	PI	RO		NA
Cent Char Pmp Disch Iso Vlv							(C-7)							

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
1-HV-8508A	2	B	2"	GL	MO	A	1X4DB116-2	C	O/C	AI	PI	RO		NA
Cent Char Pmp Alt Mini-Flow to RWST Iso Vlv							(G-5)				STC	CS	CSJ-V-20	
											STO	CS	CSJ-V-20	
1-HV-8508B	2	B	2"	GL	MO	A	1X4DB116-2	C	O/C	AI	PI	RO		NA
Cent Char Pmp Alt Mini-Flow to RWST Iso Vlv							(D-5)				STC	CS	CSJ-V-20	
											STO	CS	CSJ-V-20	
1-HV-8509A	2	B	2"	GL	MO	A	1X4DB116-2	O	O/C	AI	PI	RO		NA
Cent Char Pmp Alt Mini-Flow to RWST Iso Vlv							(D-5)				STC	Q		
1-HV-8509B	2	B	2"	GL	MO	A	1X4DB116-2	O	O/C	AI	PI	RO		NA
Cent Char Pmp Alt Mini-Flow to RWST Iso Vlv							(G-5)				STC	Q		
1-LV-0112B	2	B	4"	GA	MO	A	1X4DB116-1	O	C	AI	PI	RO		NA
VCT Outlet Iso Vlv							(F-4)				STC	CS	CSJ-V-21	
1-LV-0112C	2	B	4"	GA	MO	A	1X4DB116-1	O	C	AI	PI	RO		NA
VCT Outlet Iso Vlv							(E-4)				STC	CS	CSJ-V-21	
1-LV-0112D	2	B	8"	GA	MO	A	1X4DB116-2	C	O/C	AI	PI	RO		NA
RWST To Char Pmp Suc Iso Vlv							(E-2)				STC	CS	CSJ-V-22	
											STO	CS	CSJ-V-22	
1-LV-0112E	2	B	8"	GA	MO	A	1X4DB116-2	C	O/C	AI	PI	RO		NA
RWST To Char Pmp Suc Iso Vlv							(D-2)				STC	CS	CSJ-V-22	
											STO	CS	CSJ-V-22	
1-PSV-8121	2	C	2"	RV	SA	A	1X4DB114	C	O/C	NA	RVT	Note 6		NA
RCP Seal Water Ret Hdr RV							(D-4)							
1-PSV-8124	2	C	3/4"	RV	SA	A	1X4DB116-1	C	O/C	C	RVT	Note 6		NA
Char Pmp Suc Hdr RV							(C-3)							
1-PSV-8468B	2	C	3/4"	RV	SA	A	1X4DB116-2	C	O/C	NA	RVT	Note 6		NA
Cent Char Pmp Suc RV							(G-3)							
1-PSV-8468C	2	C	3/4"	RV	SA	A	1X4DB116-2	C	O/C	NA	RVT	Note 6		NA
Cent Char Pmp Suc RV							(C-3)							

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
1-HV-3502 RC Hot Legs Sam Hdr Ctmt Iso Vlv	2	A	1/2"	GL	AO	A	1X4DB140-1 (E-7)	O	C	C	FST LT PI STC	Q CIV RO Q		NA
1-HV-3507 PRZR Liquid Space Sam Line Ctmt Iso Vlv	2	A	1/2"	GL	AO	A	1X4DB140-1 (G-7)	C	C	C	FST LT PI STC	Q CIV RO Q		NA
1-HV-3508 PRZR Liquid Space Sam Line Ctmt Iso Vlv	2	A	1/2"	GL	AO	A	1X4DB140-1 (G-7)	C	C	C	FST LT PI STC	Q CIV RO Q		NA
1-HV-3513 PRZR Steam Space Sam Line Ctmt Iso Vlv	2	A	1/2"	GL	AO	A	1X4DB140-1 (F-8)	C	C	C	FST LT PI STC	Q CIV RO Q		NA
1-HV-3514 PRZR Steam Space Sam Line Ctmt Iso Vlv	2	A	1/2"	GL	AO	A	1X4DB140-1 (F-7)	C	C	C	FST LT PI STC	Q CIV RO Q		NA
1-HV-3548 RC Hot Legs Sam Hdr Ctmt Iso Vlv	2	A	1/2"	GL	MO	A	1X4DB140-1 (D-8)	O	C	AI	LT PI STC	CIV RO Q		NA

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
1-1213-U6-050	2	A	3"	DI	MA	P	1X4DB130 (G-8)	C	C	NA	LT	CIV	NA	
RF Pur from SFP Pmp to Rx Cav CIV														
1-1213-U6-051	2	A	3"	DI	MA	P	1X4DB130 (G-8)	C	C	NA	LT	CIV	NA	
RF Pur from SFP Pmp to Rx Cav CIV														

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
1-HV-0780 Ctmt/Rx Cav Sump Pmp Disch Ctmt Iso Vlv	2	A	3"	GA	AO	A	1X4DB143 (G-6)	O	C	C	FST LT PI STC	Q CIV RO Q		NA
1-HV-0781 Ctmt/Rx Cav Sump Pmp Disch Ctmt Iso Vlv	2	A	3"	GA	AO	A	1X4DB143 (G-6)	O	C	C	FST LT PI STC	Q CIV RO Q		NA
1-PSV-0780 Pen 78 Thermal RV	2	C	3/4"	RV	SA	A	1X4DB143 (H-6)	C	O/C	NA	RVT	Note 6		NA

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
1-1217-U4-084 ACCW To RCP Thermal Barrier Iso CH	3	C	2.50"	CH	SA	A	1X4DB138-2 (E-6)	O	C	NA	BDTO CKC	Normal Ops RO	ROJ-V-25	NA
1-1217-U4-085 ACCW To RCP Thermal Barrier Iso CH	3	C	2.50"	CH	SA	A	1X4DB138-2 (C-6)	O	C	NA	BDTO CKC	Normal Ops RO	ROJ-V-25	NA
1-1217-U4-086 ACCW To RCP Thermal Barrier Iso CH	3	C	2.50"	CH	SA	A	1X4DB138-2 (B-3)	O	C	NA	BDTO CKC	Normal Ops RO	ROJ-V-25	NA
1-1217-U4-087 ACCW To RCP Thermal Barrier Iso CH	3	C	2.50"	CH	SA	A	1X4DB138-2 (F-3)	O	C	NA	BDTO CKC	Normal Ops RO	ROJ-V-25	NA
1-1217-U4-113 ACCW Sup to Ctmt Iso Vlv Bypass Vlv	2	AC	3/4"	CH	SA	A	1X4DB138-2 (G-7)	C	O/C	NA	CKC CKO LT	RO RO CIV	ROJ-V-26 ROJ-V-26	NA
1-HV-19051 Individual RCP Thermal Barrier ACCW Ret Trip Vlv	3	B	2.50"	GA	MO	A	1X4DB138-2 (E-7)	O	C	AI	PI STC	RO CS	CSJ-V-23	NA
1-HV-19053 Individual RCP Thermal Barrier ACCW Ret Trip Vlv	3	B	2.50"	GA	MO	A	1X4DB138-2 (C-7)	O	C	AI	PI STC	RO CS	CSJ-V-23	NA
1-HV-19055 Individual RCP Thermal Barrier ACCW Ret Trip Vlv	3	B	2.50"	GA	MO	A	1X4DB138-2 (B-2)	O	C	AI	PI STC	RO CS	CSJ-V-23	NA
1-HV-19057 Individual RCP Thermal Barrier ACCW Ret Trip Vlv	3	B	2.50"	GA	MO	A	1X4DB138-2 (F-1)	O	C	AI	PI STC	RO CS	CSJ-V-23	NA
1-HV-1974 ACCW Ret From Ctmt Iso Vlv	2	A	10"	BU	MO	A	1X4DB138-2 (G-7)	O	C	AI	LT PI STC	CIV RO CS	CSJ-V-24	NA
1-HV-1975 ACCW Ret From Ctmt Iso Vlv	2	A	10"	BU	MO	A	1X4DB138-1 (B-2)	O	C	AI	LT PI STC	CIV RO CS	CSJ-V-24	NA
1-HV-1978 ACCW Sup to Ctmt Iso Vlv	2	A	10"	BU	MO	A	1X4DB138-2 (H-7)	O	C	AI	LT PI STC	CIV RO CS	CSJ-V-24	NA
1-HV-1979 ACCW Sup to Ctmt Iso Vlv	2	A	10"	BU	MO	A	1X4DB138-1 (D-3)	O	C	AI	LT PI STC	CIV RO CS	CSJ-V-24	NA

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
1-HV-2041 Common RCP Thermal Barrier ACCW Ret Trip Vlv	3	B	3"	GA	MO	A	1X4DB138-2 (F-7)	O	C	AI	PI STC	RO CS	CSJ-V-23	NA
1-PSV-1978 Pen 28 Thermal RV	2	C	3/4"	RV	SA	A	1X4DB138-2 (H-8)	C	O/C	NA	RVT	Note 6		NA

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
1-1301-U4-008 MS Hdr Sup CH to AFW Pmp	3	C	4"	CH	SA	A	1X4DB159-2 (E-4)	O	O/C	NA	CKC CKO CKOP	RO CS RO	ROJ-V-27 CSJ-V-25	NA
1-1301-U4-136 ARV Manual Isolation Vlv	2	B	8"	GA	MA	A	1X4DB159-2 (H-2)	O	O/C	NA	ETC FST PI	CS CS RO	CSJ-V-38	Note 3
1-1301-U4-137 ARV Manual Isolation Vlv	2	B	8"	GA	MA	A	1X4DB159-2 (F-2)	O	O/C	NA	ETC FST PI	CS CS RO	CSJ-V-38	Note 3
1-1301-U4-138 ARV Manual Isolation Vlv	2	B	8"	GA	MA	A	1X4DB159-2 (D-2)	O	O/C	NA	ETC FST PI	CS CS RO	CSJ-V-38	Note 3
1-1301-U4-139 ARV Manual Isolation Vlv	2	B	8"	GA	MA	A	1X4DB159-2 (B-2)	O	O/C	NA	ETC FST PI	CS CS RO	CSJ-V-38	Note 3
1-1301-U4-404 MS Hdr Sup CH to AFW Pmp	3	C	4"	CH	SA	A	1X4DB159-2 (E-4)	O	O/C	NA	CKC CKO CKOP	RO CS RO	ROJ-V-27 CSJ-V-25	NA
1-HV-13005A MSIV Bypass/Steam Drain Iso Vlv	2	B	4"	GL	AO	A	1X4DB159-2 (G-6)	O	C	C	FST PI STC	Q RO Q		NA
1-HV-13005B MSIV Bypass/Steam Drain Iso Vlv	2	B	4"	GL	AO	A	1X4DB159-2 (G-6)	O	C	C	FST PI STC	Q RO Q		NA
1-HV-13006A MSIV Bypass/Steam Drain Iso Vlv	2	B	4"	GL	AO	A	1X4DB159-2 (A-6)	O	C	C	FST PI STC	Q RO Q		NA
1-HV-13006B MSIV Bypass/Steam Drain Iso Vlv	2	B	4"	GL	AO	A	1X4DB159-2 (A-6)	O	C	C	FST PI STC	Q RO Q		NA
1-HV-13007A MSIV Bypass/Steam Drain Iso Vlv	2	B	4"	GL	AO	A	1X4DB159-2 (E-6)	O	C	C	FST PI STC	Q RO Q		NA

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
1-HV-13007B MSIV Bypass/Steam Drain Iso Vlv	2	B	4"	GL	AO	A	1X4DB159-2 (E-6)	O	C	C	FST PI STC	Q RO Q		NA
1-HV-13008A MSIV Bypass/Steam Drain Iso Vlv	2	B	4"	GL	AO	A	1X4DB159-2 (C-6)	O	C	C	FST PI STC	Q RO Q		NA
1-HV-13008B MSIV Bypass/Steam Drain Iso Vlv	2	B	4"	GL	AO	A	1X4DB159-2 (C-6)	O	C	C	FST PI STC	Q RO Q		NA
1-HV-15212A SG Blowdown Inbrd Iso Vlv	2	B	3"	GL	AO	A	1X4DB159-3 (F-4)	O	C	C	FST PI STC	Q RO Q		NA
1-HV-15212B SG Blowdown Inbrd Iso Vlv	2	B	3"	GL	AO	A	1X4DB159-3 (B-4)	O	C	C	FST PI STC	Q RO Q		NA
1-HV-15212C SG Blowdown Inbrd Iso Vlv	2	B	3"	GL	AO	A	1X4DB159-1 (F-3)	O	C	C	FST PI STC	Q RO Q		NA
1-HV-15212D SG Blowdown Inbrd Iso Vlv	2	B	3"	GL	AO	A	1X4DB159-1 (B-3)	O	C	C	FST PI STC	Q RO Q		NA
1-HV-15216A SG Blowdown Inbrd Iso Vlv	2	B	3"	GL	AO	A	1X4DB159-3 (F-3)	O	C	C	FST PI STC	Q RO Q		NA
1-HV-15216B SG Blowdown Inbrd Iso Vlv	2	B	3"	GL	AO	A	1X4DB159-3 (B-3)	O	C	C	FST PI STC	Q RO Q		NA
1-HV-15216C SG Blowdown Inbrd Iso Vlv	2	B	3"	GL	AO	A	1X4DB159-1 (F-3)	O	C	C	FST PI STC	Q RO Q		NA
1-HV-15216D SG Blowdown Inbrd Iso Vlv	2	B	3"	GL	AO	A	1X4DB159-1 (B-3)	O	C	C	FST PI STC	Q RO Q		NA

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
1-HV-3006A MSIV	2	B	29.50"	GA	EH	A	1X4DB159-2 (H-6)	O	C	C	FST	CS	CSJ-V-26	NA
											PI	RO		
											STC	CS		
											STC_NPS	CS	CSJ-V-26	
											STC_PS	CS	CSJ-V-26	
1-HV-3006B MSIV	2	B	28"	GA	EH	A	1X4DB159-2 (H-7)	O	C	C	FST	CS	CSJ-V-26	NA
											PI	RO		
											STC	CS		
											STC_NPS	CS	CSJ-V-26	
											STC_PS	CS	CSJ-V-26	
1-HV-3009 MS Line to AFW Pmp Iso Vlv	2	B	4"	GA	MO	A	1X4DB159-2 (G-3)	O	O/C	AI	PI	RO		NA
											STC	Q		
											STO	Q		
1-HV-3016A MSIV	2	B	29.50"	GA	EH	A	1X4DB159-2 (F-6)	O	C	C	FST	CS	CSJ-V-26	NA
											PI	RO		
											STC	CS		
											STC_NPS	CS	CSJ-V-26	
											STC_PS	CS	CSJ-V-26	
1-HV-3016B MSIV	2	B	28"	GA	EH	A	1X4DB159-2 (F-7)	O	C	C	FST	CS	CSJ-V-26	NA
											PI	RO		
											STC	CS		
											STC_NPS	CS	CSJ-V-26	
											STC_PS	CS	CSJ-V-26	
1-HV-3019 MS Line to AFW Pmp Iso Vlv	2	B	4"	GA	MO	A	1X4DB159-2 (E-2)	O	O/C	AI	PI	RO		NA
											STC	Q		
											STO	Q		
1-HV-3026A MSIV	2	B	29.50"	GA	EH	A	1X4DB159-2 (D-6)	O	C	C	FST	CS	CSJ-V-26	NA
											PI	RO		
											STC	CS		
											STC_NPS	CS	CSJ-V-26	
											STC_PS	CS	CSJ-V-26	

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
1-HV-3026B MSIV	2	B	28"	GA	EH	A	1X4DB159-2 (D-7)	O	C	C	FST	CS	CSJ-V-26	NA
											PI	RO		
											STC	CS		
											STC_NPS	CS	CSJ-V-26	
											STC_PS	CS	CSJ-V-26	
1-HV-3036A MSIV	2	B	29.50"	GA	EH	A	1X4DB159-2 (B-6)	O	C	C	FST	CS	CSJ-V-26	NA
											PI	RO		
											STC	CS		
											STC_NPS	CS	CSJ-V-26	
											STC_PS	CS	CSJ-V-26	
1-HV-3036B MSIV	2	B	28"	GA	EH	A	1X4DB159-2 (B-7)	O	C	C	FST	CS	CSJ-V-26	NA
											PI	RO		
											STC	CS		
											STC_NPS	CS	CSJ-V-26	
											STC_PS	CS	CSJ-V-26	
1-HV-7603A SG Blowdown Iso Viv	2	B	3"	GL	AO	A	1X4DB159-3 (F-2)	O	C	C	FST	Q		NA
											PI	RO		
											STC	Q		
1-HV-7603B SG Blowdown Iso Viv	2	B	3"	GL	AO	A	1X4DB159-3 (B-2)	O	C	C	FST	Q		NA
											PI	RO		
											STC	Q		
1-HV-7603C SG Blowdown Iso Viv	2	B	3"	GL	AO	A	1X4DB159-1 (F-2)	O	C	C	FST	Q		NA
											PI	RO		
											STC	Q		
1-HV-7603D SG Blowdown Iso Viv	2	B	3"	GL	AO	A	1X4DB159-1 (B-2)	O	C	C	FST	Q		NA
											PI	RO		
											STC	Q		
1-HV-9451 SG Sam Iso Viv	2	B	1/2"	GL	SO	A	1X4DB159-3 (E-3)	O	C	C	FST	Q		NA
											PI	RO		
											STC	Q		
1-HV-9452 SG Sam Iso Viv	2	B	1/2"	GL	SO	A	1X4DB159-3 (B-3)	O	C	C	FST	Q		NA
											PI	RO		
											STC	Q		

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
1-HV-9453 SG Sam Iso Vlv	2	B	1/2"	GL	SO	A	1X4DB159-1 (E-2)	O	C	C	FST PI STC	Q RO Q		NA
1-HV-9454 SG Sam Iso Vlv	2	B	1/2"	GL	SO	A	1X4DB159-1 (B-3)	O	C	C	FST PI STC	Q RO Q		NA
1-PSV-3001 MS Safety Vlv	2	C	6"	RV	SA	A	1X4DB159-2 (H-3)	C	O/C	NA	RVT	Note 6		NA
1-PSV-3002 MS Safety Vlv	2	C	6"	RV	SA	A	1X4DB159-2 (H-4)	C	O/C	NA	RVT	Note 6		NA
1-PSV-3003 MS Safety Vlv	2	C	6"	RV	SA	A	1X4DB159-2 (H-4)	C	O/C	NA	RVT	Note 6		NA
1-PSV-3004 MS Safety Vlv	2	C	6"	RV	SA	A	1X4DB159-2 (H-5)	C	O/C	NA	RVT	Note 6		NA
1-PSV-3005 MS Safety Vlv	2	C	6"	RV	SA	A	1X4DB159-2 (H-5)	C	O/C	NA	RVT	Note 6		NA
1-PSV-3011 MS Safety Vlv	2	C	6"	RV	SA	A	1X4DB159-2 (F-3)	C	O/C	NA	RVT	Note 6		NA
1-PSV-3012 MS Safety Vlv	2	C	6"	RV	SA	A	1X4DB159-2 (F-4)	C	O/C	NA	RVT	Note 6		NA
1-PSV-3013 MS Safety Vlv	2	C	6"	RV	SA	A	1X4DB159-2 (F-4)	C	O/C	NA	RVT	Note 6		NA
1-PSV-3014 MS Safety Vlv	2	C	6"	RV	SA	A	1X4DB159-2 (F-5)	C	O/C	NA	RVT	Note 6		NA
1-PSV-3015 MS Safety Vlv	2	C	6"	RV	SA	A	1X4DB159-2 (F-5)	C	O/C	NA	RVT	Note 6		NA
1-PSV-3021 MS Safety Vlv	2	C	6"	RV	SA	A	1X4DB159-2 (D-3)	C	O/C	NA	RVT	Note 6		NA
1-PSV-3022 MS Safety Vlv	2	C	6"	RV	SA	A	1X4DB159-2 (D-4)	C	O/C	NA	RVT	Note 6		NA

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
1-PSV-3023 MS Safety Viv	2	C	6"	RV	SA	A	1X4DB159-2 (D-4)	C	O/C	NA	RVT	Note 6		NA
1-PSV-3024 MS Safety Viv	2	C	6"	RV	SA	A	1X4DB159-2 (D-5)	C	O/C	NA	RVT	Note 6		NA
1-PSV-3025 MS Safety Viv	2	C	6"	RV	SA	A	1X4DB159-2 (D-5)	C	O/C	NA	RVT	Note 6		NA
1-PSV-3031 MS Safety Viv	2	C	6"	RV	SA	A	1X4DB159-2 (B-3)	C	O/C	NA	RVT	Note 6		NA
1-PSV-3032 MS Safety Viv	2	C	6"	RV	SA	A	1X4DB159-2 (B-4)	C	O/C	NA	RVT	Note 6		NA
1-PSV-3033 MS Safety Viv	2	C	6"	RV	SA	A	1X4DB159-2 (B-4)	C	O/C	NA	RVT	Note 6		NA
1-PSV-3034 MS Safety Viv	2	C	6"	RV	SA	A	1X4DB159-2 (B-5)	C	O/C	NA	RVT	Note 6		NA
1-PSV-3035 MS Safety Viv	2	C	6"	RV	SA	A	1X4DB159-2 (B-5)	C	O/C	NA	RVT	Note 6		NA
1-PV-3000 ARV	2	B	10"	GL	EH	A	1X4DB159-2 (H-2)	C	O/C	C	FST PI STC STO	RO RO RO RO	CSJ-V-38 CSJ-V-38 CSJ-V-38	NA
1-PV-3010 ARV	2	B	10"	GL	EH	A	1X4DB159-2 (F-2)	C	O/C	C	FST PI STC STO	RO RO RO RO	CSJ-V-38 CSJ-V-38 CSJ-V-38	NA
1-PV-3020 ARV	2	B	10"	GL	EH	A	1X4DB159-2 (D-2)	C	O/C	C	FST PI STC STO	RO RO RO RO	CSJ-V-38 CSJ-V-38 CSJ-V-38	NA

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
1-PV-3030	2	B	10"	GL	EH	A	1X4DB159-2	C	O/C	C	FST	RO	CSJ-V-38	NA
ARV							(C-2)				PI	RO		
											STC	RO	CSJ-V-38	
											STO	Q		

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
1-1302-U4-001 AFW Pmp Disch CH	3	C	4"	CH	SA	A	1X4DB161-2 (B-5)	C	O	NA	BDTC CKO	CS CS	CSJ-V-27	NA
1-1302-U4-002 AFW Pmp Disch CH	3	C	4"	CH	SA	A	1X4DB161-2 (D-5)	C	O	NA	BDTC CKO	CS CS	CSJ-V-27	NA
1-1302-U4-013 AFW Pmp Suc CH	3	C	10"	CH	SA	A	1X4DB161-2 (F-7)	C	O	NA	BDTC CKO	CS CS	CSJ-V-28	NA
1-1302-U4-014 AFW Pmp Disch CH	3	C	6"	CH	SA	A	1X4DB161-2 (F-5)	C	O	NA	BDTC CKO	CS CS	CSJ-V-27	NA
1-1302-U4-017 AFW Hdr Stop/CH	2	C	4"	CH	SA	A	1X4DB161-2 (H-3)	C	O	NA	BDTC CKO	CS CS	CSJ-V-27	NA
1-1302-U4-020 AFW Hdr Stop/CH	2	C	4"	CH	SA	A	1X4DB161-2 (G-3)	C	O	NA	BDTC CKO	CS CS	CSJ-V-27	NA
1-1302-U4-023 AFW Hdr Stop/CH	2	C	4"	CH	SA	A	1X4DB161-2 (F-3)	C	O	NA	BDTC CKO	CS CS	CSJ-V-27	NA
1-1302-U4-026 AFW Hdr Stop/CH	2	C	4"	CH	SA	A	1X4DB161-2 (E-3)	C	O	NA	BDTC CKO	CS CS	CSJ-V-27	NA
1-1302-U4-033 AFW Pmp Suc CH	3	C	8"	CH	SA	A	1X4DB161-2 (B-7)	C	O	NA	BDTC CKO	CS CS	CSJ-V-28	NA
1-1302-U4-037 AFW Hdr Stop/CH	2	C	4"	CH	SA	A	1X4DB161-2 (D-3)	C	O	NA	BDTC CKO	CS CS	CSJ-V-27	NA
1-1302-U4-040 AFW Hdr Stop/CH	2	C	4"	CH	SA	A	1X4DB161-2 (C-3)	C	O	NA	BDTC CKO	CS CS	CSJ-V-27	NA
1-1302-U4-043 AFW Hdr Stop/CH	2	C	4"	CH	SA	A	1X4DB161-2 (B-3)	C	O	NA	BDTC CKO	CS CS	CSJ-V-27	NA
1-1302-U4-046 AFW Hdr Stop/CH	2	C	4"	CH	SA	A	1X4DB161-2 (A-3)	C	O	NA	BDTC CKO	CS CS	CSJ-V-27	NA
1-1302-U4-051 AFW Pmp Suc CH	3	C	10"	CH	SA	A	1X4DB161-2 (E-7)	C	O	NA	BDTC CKO	CS CS	CSJ-V-28	NA

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
1-1302-U4-052 AFW Pmp Suc CH	3	C	8"	CH	SA	A	1X4DB161-2 (A-7)	C	O	NA	BDTC CKO	CS CS	 CSJ-V-28	NA
1-1302-U4-058 AFW Pmp Suc CH	3	C	8"	CH	SA	A	1X4DB161-2 (D-7)	C	O	NA	BDTC CKO	CS CS	 CSJ-V-28	NA
1-1302-U4-061 AFW Pmp Suc CH	3	C	8"	CH	SA	A	1X4DB161-2 (C-7)	C	O	NA	BDTC CKO	CS CS	 CSJ-V-28	NA
1-1302-U4-085 AFW Pmp Recir Line CH	3	C	2.50"	CH	SA	A	1X4DB161-1 (G-6)	C	O	NA	BDTC CKO	CS Q		NA
1-1302-U4-086 AFW Pmp Recir Line CH	3	C	2.50"	CH	SA	A	1X4DB161-1 (B-6)	C	O	NA	BDTC CKO	CS Q		NA
1-1302-U4-087 AFW Pmp Recir Line CH	3	C	2.50"	CH	SA	A	1X4DB161-1 (B-6)	C	O	NA	BDTC CKO	CS Q		NA
1-1302-U4-113 AFW Hdr CH at FW Bypass Hdrs	2	C	4"	CH	SA	A	1X4DB168-3 (F-2)	C	O/C	NA	CKC CKO	Q CS	 CSJ-V-29	NA
1-1302-U4-114 AFW Hdr CH at FW Bypass Hdrs	2	C	4"	CH	SA	A	1X4DB168-3 (F-4)	C	O/C	NA	CKC CKO	Q CS	 CSJ-V-29	NA
1-1302-U4-115 AFW Hdr CH at FW Bypass Hdrs	2	C	4"	CH	SA	A	1X4DB168-3 (F-8)	C	O/C	NA	CKC CKO	Q CS	 CSJ-V-29	NA
1-1302-U4-116 AFW Hdr CH at FW Bypass Hdrs	2	C	4"	CH	SA	A	1X4DB168-3 (F-6)	C	O/C	NA	CKC CKO	Q CS	 CSJ-V-29	NA
1-1302-U4-117 Main FW Bypass Hdr CH (Obrd Ctmt)	2	C	6"	CH	SA	A	1X4DB168-3 (F-2)	O	C	NA	BDTO CKC	Normal Ops RO	 ROJ-V-28	NA
1-1302-U4-118 Main FW Bypass Hdr CH (Obrd Ctmt)	2	C	6"	CH	SA	A	1X4DB168-3 (F-4)	O	C	NA	BDTO CKC	Normal Ops RO	 ROJ-V-28	NA
1-1302-U4-119 Main FW Bypass Hdr CH (Obrd Ctmt)	2	C	6"	CH	SA	A	1X4DB168-3 (F-6)	O	C	NA	BDTO CKC	Normal Ops RO	 ROJ-V-28	NA
1-1302-U4-120 Main FW Bypass Hdr CH (Obrd Ctmt)	2	C	6"	CH	SA	A	1X4DB168-3 (F-8)	O	C	NA	BDTO CKC	Normal Ops RO	 ROJ-V-28	NA

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
1-1302-U4-125 Main FW Bypass Hdr Ctmt Iso CH	2	C	6"	CH	SA	A	1X4DB168-3 (G-2)	O	O	NA	BDTC CKO	RO CS	 CSJ-V-30	NA
1-1302-U4-126 Main FW Bypass Hdr Ctmt Iso CH	2	C	6"	CH	SA	A	1X4DB168-3 (G-4)	O	O	NA	BDTC CKO	RO CS	 CSJ-V-30	NA
1-1302-U4-127 Main FW Bypass Hdr Ctmt Iso CH	2	C	6"	CH	SA	A	1X4DB168-3 (G-6)	O	O	NA	BDTC CKO	RO CS	 CSJ-V-30	NA
1-1302-U4-128 Main FW Bypass Hdr Ctmt Iso CH	2	C	6"	CH	SA	A	1X4DB168-3 (G-8)	O	O	NA	BDTC CKO	RO CS	 CSJ-V-30	NA
1-FV-5154 Mot-Driven AFW Pmp Recir Line Stop Vlv	3	B	2"	GL	MO	A	1X4DB161-2 (C-6)	O	O/C	AI	PI STC STO	RO Q Q		NA
1-FV-5155 Mot-Driven AFW Pmp Recir Line Stop Vlv	3	B	2"	GL	MO	A	1X4DB161-2 (B-5)	O	O/C	AI	PI STC STO	RO Q Q		NA
1-HV-15196 Main FW Bypass Iso Vlv	2	B	6"	GA	AO	A	1X4DB168-3 (E-2)	O	C	C	FST PI STC_A STC_B	CS RO CS CS	CSJ-V-31 CSJ-V-31 CSJ-V-31	NA
1-HV-15197 Main FW Bypass Iso Vlv	2	B	6"	GA	AO	A	1X4DB168-3 (E-4)	O	C	C	FST PI STC_A STC_B	CS RO CS CS	CSJ-V-31 CSJ-V-31 CSJ-V-31	NA
1-HV-15198 Main FW Bypass Iso Vlv	2	B	6"	GA	AO	A	1X4DB168-3 (E-8)	O	C	C	FST PI STC_A STC_B	CS RO CS CS	CSJ-V-31 CSJ-V-31 CSJ-V-31	NA
1-HV-15199 Main FW Bypass Iso Vlv	2	B	6"	GA	AO	A	1X4DB168-3 (E-6)	O	C	C	FST PI STC_A STC_B	CS RO CS CS	CSJ-V-31 CSJ-V-31 CSJ-V-31	NA
1-HV-5106 AFW Steam Sup Stop Vlv	3	B	4"	GL	MO	A	1X4DB161-3 (G-5)	C	O	AI	PI STO	RO Q		NA

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
1-HV-5113 AFW Pmp Suc From CST Iso Vlv	3	B	10"	BU	MO	A	1X4DB161-2 (E-8)	C	O	AI	PI STO	RO Q		NA
1-HV-5118 AFW Pmp Suc From CST Iso Vlv	3	B	8"	BU	MO	A	1X4DB161-2 (C-8)	C	O	AI	PI STO	RO Q		NA
1-HV-5119 AFW Pmp Suc From CST Iso Vlv	3	B	8"	BU	MO	A	1X4DB161-2 (A-8)	C	O	AI	PI STO	RO Q		NA
1-HV-5120 AFW Pmp Disch Hdr Iso Vlv	2	B	4"	GL	MO	A	1X4DB161-2 (H-3)	O	O/C	AI	PI STC STO	RO Q Q		NA
1-HV-5122 AFW Pmp Disch Hdr Iso Vlv	2	B	4"	GL	MO	A	1X4DB161-2 (G-3)	O	O/C	AI	PI STC STO	RO Q Q		NA
1-HV-5125 AFW Pmp Disch Hdr Iso Vlv	2	B	4"	GL	MO	A	1X4DB161-2 (F-3)	O	O/C	AI	PI STC STO	RO Q Q		NA
1-HV-5127 AFW Pmp Disch Hdr Iso Vlv	2	B	4"	GL	MO	A	1X4DB161-2 (E-3)	O	O/C	AI	PI STC STO	RO Q Q		NA
1-HV-5132 AFW Pmp Disch Hdr Iso Vlv	2	B	4"	GL	MO	A	1X4DB161-2 (D-3)	O	O/C	AI	PI STC STO	RO Q Q		NA
1-HV-5134 AFW Pmp Disch Hdr Iso Vlv	2	B	4"	GL	MO	A	1X4DB161-2 (C-3)	O	O/C	AI	PI STC STO	RO Q Q		NA
1-HV-5137 AFW Pmp Disch Hdr Iso Vlv	2	B	4"	GL	MO	A	1X4DB161-2 (B-3)	O	O/C	AI	PI STC STO	RO Q Q		NA
1-HV-5139 AFW Pmp Disch Hdr Iso Vlv	2	B	4"	GL	MO	A	1X4DB161-2 (A-3)	O	O/C	AI	PI STC STO	RO Q Q		NA
1-PSV-5110 AFW Pmp Suc RV	3	C	3/4"	RV	SA	A	1X4DB161-2 (G-7)	C	O/C	NA	RVT	Note 6		NA

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
1-PSV-5128 AFW Pmp Suc RV	3	C	3/4"	RV	SA	A	1X4DB161-2 (D-7)	C	O/C	NA	RVT	Note 6	NA	
1-PSV-5129 AFW Pmp Suc RV	3	C	3/4"	RV	SA	A	1X4DB161-2 (B-7)	C	O/C	NA	RVT	Note 6	NA	

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
1-1305-U4-071 Main FW Iso CH	2	C	16"	CH	SA	A	1X4DB168-3 (G-5)	O	C	NA	BDTO CVC	Normal Ops RO	 ROJ-V-34	Notes 1, 2
1-1305-U4-073 Main FW Iso CH	2	C	16"	CH	SA	A	1X4DB168-3 (G-1)	O	C	NA	BDTO CVC	Normal Ops RO	 ROJ-V-34	Notes 1, 2
1-1305-U4-075 Main FW Iso CH	2	C	16"	CH	SA	A	1X4DB168-3 (G-7)	O	C	NA	BDTO CVC	Normal Ops RO	 ROJ-V-34	Notes 1, 2
1-1305-U4-077 Main FW Iso CH	2	C	16"	CH	SA	A	1X4DB168-3 (G-3)	O	C	NA	BDTO CVC	Normal Ops RO	 ROJ-V-34	Notes 1, 2
1-FV-0510 Main FW Reg Vlv	3	B	16"	AN	AO	A	1X4DB168-3 (D-2)	O	C	C	FST PI STC_A STC_B	CS RO CS CS	CSJ-V-32 CSJ-V-32 CSJ-V-32	NA
1-FV-0520 Main FW Reg Vlv	3	B	16"	AN	AO	A	1X4DB168-3 (D-3)	O	C	C	FST PI STC_A STC_B	CS RO CS CS	CSJ-V-32 CSJ-V-32 CSJ-V-32	NA
1-FV-0530 Main FW Reg Vlv	3	B	16"	AN	AO	A	1X4DB168-3 (D-7)	O	C	C	FST PI STC_A STC_B	CS RO CS CS	CSJ-V-32 CSJ-V-32 CSJ-V-32	NA
1-FV-0540 Main FW Reg Vlv	3	B	16"	AN	AO	A	1X4DB168-3 (D-5)	O	C	C	FST PI STC_A STC_B	CS RO CS CS	CSJ-V-32 CSJ-V-32 CSJ-V-32	NA
1-HV-5227 Main FW Iso Vlv	2	B	16"	GA	EH	A	1X4DB168-3 (F-1)	O	C	C	FST PI STC_A STC_B	CS RO CS CS	CSJ-V-33 CSJ-V-33 CSJ-V-33	NA
1-HV-5228 Main FW Iso Vlv	2	B	16"	GA	EH	A	1X4DB168-3 (F-3)	O	C	C	FST PI STC_A STC_B	CS RO CS CS	CSJ-V-33 CSJ-V-33 CSJ-V-33	NA

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
1-HV-5229 Main FW Iso Vlv	2	B	16"	GA	EH	A	1X4DB168-3 (F-7)	O	C	C	FST	CS	CSJ-V-33	NA
											PI	RO		
											STC_A	CS	CSJ-V-33	
											STC_B	CS	CSJ-V-33	
1-HV-5230 Main FW Iso Vlv	2	B	16"	GA	EH	A	1X4DB168-3 (F-5)	O	C	C	FST	CS	CSJ-V-33	NA
											PI	RO		
											STC_A	CS	CSJ-V-33	
											STC_B	CS	CSJ-V-33	
1-LV-5242 Main FW Bypass Reg Vlv	3	B	4"	GL	AO	A	1X4DB168-3 (D-5)	O/C	C	C	FST	Q		NA
											PI	RO		
											STC_A	Q		
											STC_B	Q		
1-LV-5243 Main FW Bypass Reg Vlv	3	B	4"	GL	AO	A	1X4DB168-3 (D-2)	O/C	C	C	FST	Q		NA
											PI	RO		
											STC_A	Q		
											STC_B	Q		
1-LV-5244 Main FW Bypass Reg Vlv	3	B	4"	GL	AO	A	1X4DB168-3 (D-3)	O/C	C	C	FST	Q		NA
											PI	RO		
											STC_A	Q		
											STC_B	Q		
1-LV-5245 Main FW Bypass Reg Vlv	3	B	4"	GL	AO	A	1X4DB168-3 (D-7)	O/C	C	C	FST	Q		NA
											PI	RO		
											STC_A	Q		
											STC_B	Q		

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
1-1411-U4-676 Chem Sup to SG Ctmt Iso Viv	2	A	1/2"	GL	MA	P	1X4DB159-1 (G-2)	C	C	NA	LT	CIV	NA	
1-1411-U4-677 Chem Sup to SG Ctmt Iso Viv	2	A	1/2"	GL	MA	P	1X4DB159-1 (C-2)	C	C	NA	LT	CIV	NA	
1-1411-U4-678 Chem Sup to SG Ctmt Iso Viv	2	A	1/2"	GL	MA	P	1X4DB159-3 (G-2)	C	C	NA	LT	CIV	NA	
1-1411-U4-679 Chem Sup to SG Ctmt Iso Viv	2	A	1/2"	GL	MA	P	1X4DB159-3 (C-3)	C	C	NA	LT	CIV	NA	
1-HV-5278 Chem Sup to SG Ctmt Iso Viv	2	A	1/2"	GL	AO	P	1X4DB159-3 (G-2)	C	C	NA	LT PI	CIV RO	NA	
1-HV-5279 Chem Sup to SG Ctmt Iso Viv	2	A	1/2"	GL	AO	P	1X4DB159-3 (C-2)	C	C	NA	LT PI	CIV RO	NA	
1-HV-5280 Chem Sup to SG Ctmt Iso Viv	2	A	1/2"	GL	AO	P	1X4DB159-1 (G-2)	C	C	NA	LT PI	CIV RO	NA	
1-HV-5281 Chem Sup to SG Ctmt Iso Viv	2	A	1/2"	GL	AO	P	1X4DB159-1 (C-2)	C	C	NA	LT PI	CIV RO	NA	

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
1-1418-U4-005 Demin Water Sup to Ctmt Iso Vlv	2	A	2"	GL	MA	P	AX4DB190-2 (E-4)	C	C	NA	LT	CIV		NA
1-1418-U4-038 Demin Water Sup to Ctmt Iso CH	2	AC	2"	CH	SA	P	AX4DB190-2 (E-3)	C	C	NA	LT	CIV		NA
1-PSV-17589 Demin Water Sup to Ctmt RV	2	AC	1.5"	RV	SA	A	AX4DB190-2 (E-3)	C	C	NA	LT	CIV		NA

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
1-HV-2626A Ctmt Purge Sup Ctmt Iso Vlv	2	A	24"	BU	MO	A	1X4DB213-1 (E-7)	O/C	C	AI	LT PI STC	CIV RO CS	 CSJ-V-34	NA
1-HV-2626B Ctmt Mini-Purge Sup Ctmt Iso Vlv	2	A	14"	BU	AO	A	1X4DB213-1 (D-7)	O/C	C	C	FST LT PI STC	Q CIV RO Q		NA
1-HV-2627A Ctmt Purge Sup Ctmt Iso Vlv	2	A	24"	BU	MO	A	1X4DB213-1 (E-6)	O/C	C	AI	LT PI STC	CIV RO CS	 CSJ-V-34	NA
1-HV-2627B Ctmt Mini-Purge Sup Ctmt Iso Vlv	2	A	14"	BU	AO	A	1X4DB213-1 (D-6)	O/C	C	C	FST LT PI STC	Q CIV RO Q		NA

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
1-HV-2628A Ctmt Purge Sup Ctmt Iso Vlv	2	A	24"	BU	MO	A	1X4DB213-1 (C-7)	O/C	C	AI	LT PI STC	CIV RO CS	CSJ-V-35	NA
1-HV-2628B Ctmt Mini-Purge Sup Ctmt Iso Vlv	2	A	14"	BU	AO	A	1X4DB213-1 (B-7)	O/C	C	C	FST LT PI STC	Q CIV RO Q		NA
1-HV-2629A Ctmt Purge Sup Ctmt Iso Vlv	2	A	24"	BU	MO	A	1X4DB213-1 (C-6)	O/C	C	AI	LT PI STC	CIV RO CS	CSJ-V-35	NA
1-HV-2629B Ctmt Mini-Purge Sup Ctmt Iso Vlv	2	A	14"	BU	AO	A	1X4DB213-1 (B-6)	O/C	C	C	FST LT PI STC	Q CIV RO Q		NA

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
1-1508-U4-012 Ctmt Post Accident Purge Exh Ctmt Man Iso Vlv	2	A	4"	GA	MA	P	1X4DB213-1 (G-6)	C	C	NA	LT	CIV		NA
1-HV-2624A Ctmt Post Accident Purge Exh Ctmt Iso Vlv	2	A	4"	BU	MO	A	1X4DB213-1 (G-7)	C	C	AI	LT PI STC	CIV RO Q		NA
1-HV-2624B Ctmt Post Accident Purge Exh Ctmt Iso Vlv	2	A	4"	BU	MO	A	1X4DB213-1 (F-7)	C	C	AI	LT PI STC	CIV RO Q		NA

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
1-1513-U4-001 H2 Analyzer Ret to Ctmt Iso CH	2	AC	3/4"	CH	SA	A	1X4DB213-2 (B-7)	C	O/C	NA	CKC CKO LT	RO Q CIV	ROJ-V-29	NA
1-1513-U4-002 H2 Analyzer Ret to Ctmt Iso CH	2	AC	3/4"	CH	SA	A	1X4DB213-2 (B-7)	C	O/C	NA	CKC CKO LT	RO Q CIV	ROJ-V-29	NA
1-HV-2790A H2 Analyzer Sup From Ctmt Iso Vlv	2	A	3/4"	GL	SO	A	1X4DB213-2 (E-7)	C	O/C	C	FST LT PI STC STO	Q CIV RO Q Q		NA
1-HV-2790B H2 Analyzer Sup From Ctmt Iso Vlv	2	A	3/4"	GL	SO	A	1X4DB213-2 (D-7)	C	O/C	C	FST LT PI STC STO	Q CIV RO Q Q		NA
1-HV-2791A H2 Analyzer Sup From Ctmt Iso Vlv	2	A	3/4"	GL	SO	A	1X4DB213-2 (E-6)	C	O/C	C	FST LT PI STC STO	Q CIV RO Q Q		NA
1-HV-2791B H2 Analyzer Sup From Ctmt Iso Vlv	2	A	3/4"	GL	SO	A	1X4DB213-2 (C-6)	C	O/C	C	FST LT PI STC STO	Q CIV RO Q Q		NA
1-HV-2792A H2 Analyzer Sup From Ctmt Iso Vlv	2	A	3/4"	GL	SO	A	1X4DB213-2 (C-7)	C	O/C	C	FST LT PI STC STO	Q CIV RO Q Q		NA

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
1-HV-2792B	2	A	3/4"	GL	SO	A	1X4DB213-2	C	O/C	C	FST	Q		NA
H2 Analyzer Sup From Ctmt Iso Vlv							(C-7)				LT	CIV		
											PI	RO		
											STC	Q		
											STO	Q		
1-HV-2793A	2	A	3/4"	GL	SO	A	1X4DB213-2	C	O/C	C	FST	Q		NA
H2 Analyzer Ret to Ctmt Iso Vlv							(B-6)				LT	CIV		
											PI	RO		
											PI	RO		
											STC	Q		
											STO	Q		
1-HV-2793B	2	A	3/4"	GL	SO	A	1X4DB213-2	C	O/C	C	FST	Q		NA
H2 Analyzer Ret to Ctmt Iso Vlv							(B-6)				LT	CIV		
											PI	RO		
											PI	RO		
											STC	Q		
											STO	Q		

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
1-1592-U4-188	3	C	1"	CH	SA	A	1X4DB221 (F-7)	O/C	C	NA	BDTO CKC	RO Q		NA
Chilled Water Makeup From Demin Water Sys CH														
1-1592-U4-192	3	C	1"	CH	SA	A	1X4DB221 (C-7)	O/C	C	NA	BDTO CKC	RO Q		NA
Chilled Water Makeup From Demin Water Sys CH														
1-PSV-22404	3	C	3/4"	RV	SA	A	1X4DB221 (G-7)	C	O/C	NA	RVT	Note 6		NA
Demin Water to Exp Tank RV														
1-PSV-22405	3	C	3/4"	RV	SA	A	1X4DB221 (D-7)	C	O/C	NA	RVT	Note 6		NA
Demin Water to Exp Tank RV														

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
1-HV-12975 Sam Line To Air Sam Pan Ctmt Iso Vlv	2	A	1"	GA	SO	A	1X4DB213-2 (E-3)	O	C	C	FST LT PI STC	Q CIV RO Q		NA
1-HV-12976 Sam Line To Air Sam Pan Ctmt Iso Vlv	2	A	1"	GA	SO	A	1X4DB213-2 (E-2)	O	C	C	FST LT PI STC	Q CIV RO Q		NA
1-HV-12977 Sam Line Ret From Air Sam Pan Ctmt Iso Vlv	2	A	1"	GL	SO	A	1X4DB213-2 (D-2)	O	C	C	FST LT PI STC	Q CIV RO Q		NA
1-HV-12978 Sam Line Ret From Air Sam Pan Ctmt Iso Vlv	2	A	1"	GL	SO	A	1X4DB213-2 (D-3)	O	C	C	FST LT PI STC	Q CIV RO Q		NA

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
1-HV-7126 RCDT Vent/H2 Sup Ctmt Iso Vlv	2	A	3/4"	DI	AO	A	1X4DB127 (G-5)	O	C	C	FST LT PI STC	Q CIV RO Q		NA
1-HV-7136 RCDT Pmp Disch Ctmt Iso Vlv	2	A	3"	DI	AO	A	1X4DB127 (E-1)	O	C	C	FST LT PI STC	Q CIV RO Q		NA
1-HV-7150 RCDT Vent/H2 Sup Ctmt Iso Vlv	2	A	3/4"	DI	AO	A	1X4DB127 (G-4)	O	C	C	FST LT PI STC	Q CIV RO Q		NA
1-HV-7699 RCDT Pmp Disch Ctmt Iso Vlv	2	A	3"	DI	AO	A	1X4DB127 (D-2)	O	C	C	FST LT PI STC	Q CIV RO Q		NA
1-PSV-7699 Pen 77 Thermal RV	2	C	3/4"	RV	SA	A	1X4DB127 (E-1)	C	O/C	NA	RVT	Note 6		NA

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
1-2301-U4-036	2	AC	6"	CH	SA	P	1X4DB174-4 (B-7)	C	C	NA	LT	CIV		NA
Fire Prot Water Sup to Ctmt Iso CH														
1-HV-27901	2	A	4"	GA	AO	A	1X4DB174-4 (B-7)	C	C	C	FST	CS	CSJ-V-36	NA
Fire Prot Water Sup to Ctmt Iso Viv											LT	CIV		
											PI	RO		
											STC_A	CS	CSJ-V-36	
											STC_B	CS	CSJ-V-36	

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
1-2401-U4-034 Ser Air Sup Inbrd Ctmt Iso CH	2	AC	4"	CH	SA	P	1X4DB186-1 (D-2)	C	C	NA	LT	CIV		NA
1-2401-U4-184 Breathing Air Sup Ctmt Iso CH	2	AC	1.50"	CH	SA	P	1X4DB186-1 (C-3)	C	C	NA	LT	CIV		NA
1-2401-U4-211 Breathing Air Sup Ctmt Iso Vlv	2	A	1.50"	GA	MA	P	1X4DB186-1 (C-3)	C	C	NA	LT	CIV		NA
1-HV-9385 Ser Air Sup Obrd Ctmt Iso Vlv	2	A	4"	GA	AO	A	1X4DB186-1 (D-4)	C	C	C	FST LT PI STC_A STC_B	Q CIV RO Q Q		NA

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
1-2402-U4-017	2	AC	1"	CH	SA	A	1X4DB120 (G-1)	C	C	NA	BDTO CKC LT	Normal Ops RO CIV	ROJ-V-30	NA
Nitrogen Sup to Accums, Inbrd Ctmt Iso CH														
1-HV-8880	2	A	1"	GL	AO	A	1X4DB120 (G-1)	O/C	C	C	FST LT PI STC	Q CIV RO Q		NA
Nitrogen Sup To Accums, Obrd Ctmt Iso Vlv														

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
1-2420-U4-049	2	AC	2"	CH	SA	A	1X4DB186-4	O	C	NA	BDTO	Normal Ops		NA
Inst Air Sup Inbrd Ctmt Iso CH							(A-7)				CKC	RO	ROJ-V-31	
											LT	CIV		
1-HV-9376	2	A	2"	GL	AO	A	1X4DB186-4	O	C	C	FST	CS	CSJ-V-37	NA
Inst Air Sup to Ctmt Obrd Ctmt Iso Vlv							(A-7)				LT	CIV		
											PI	RO		
											STC_A	CS	CSJ-V-37	
											STC_B	CS	CSJ-V-37	

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
1-HV-8211 PASS Gaseous Sam Ret Ctmt Iso Vlv	2	A	1"	GL	SO	A	1X4DB110 (C-8)	C	C	C	FST LT PI STC	Q CIV RO Q		NA
1-HV-8212 PASS Gaseous Sam Ret Ctmt Iso Vlv	2	A	1"	GL	SO	A	1X4DB110 (C-7)	C	C	C	FST LT PI STC	Q CIV RO Q		NA

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
2-1201-U4-252	2	AC	3/4"	CH	SA	A	2X4DB122	C	O	NA	BDTC	RO		NA
RHR Pmp Sup Inbrd Iso Vlv Bypass Vlv							(C-2)				CKO	RO	ROJ-V-1	
2-1201-U6-112	2	AC	3"	CH	SA	A	2X4DB112	C	C	NA	BDTO	Normal Ops		NA
Primary Grade Water Sup to Ctmt CH							(F-2)				CKC	RO	ROJ-V-2	
											LT	CIV		
2-HV-0442A	2	B	1"	GL	SO	A	2X4DB112	C	O/C	C	FST	CS	CSJ-V-1	NA
RPV Head Vent to PRT Iso Vlv							(H-4)				PI	RO		
											STC	CS	CSJ-V-1	
											STO	CS	CSJ-V-1	
2-HV-0442B	2	B	1"	GL	SO	A	2X4DB112	C	O/C	C	FST	CS	CSJ-V-1	NA
RPV Head Vent to PRT Iso Vlv							(G-4)				PI	RO		
											STC	CS	CSJ-V-1	
											STO	CS	CSJ-V-1	
2-HV-8000A	1	B	3"	GA	MO	A	2X4DB112	O	O/C	AI	PI	RO		NA
PORV Block Vlv							(E-7)				STC	Q		
											STO	Q		
2-HV-8000B	1	B	3"	GA	MO	A	2X4DB112	O	O/C	AI	PI	RO		NA
PORV Block Vlv							(F-7)				STC	Q		
											STO	Q		
2-HV-8028	2	A	3"	DI	AO	A	2X4DB112	O	C	C	FST	Q		NA
Primary Grade Water Sup to Ctmt Iso Vlv							(F-2)				LT	CIV		
											PI	RO		
											STC	Q		
2-HV-8033	2	A	1"	DI	AO	A	2X4DB112	C	C	C	FST	Q		NA
PRT Vent Vlv							(G-2)				LT	CIV		
											PI	RO		
											STC	Q		
2-HV-8047	2	A	1"	DI	AO	A	2X4DB112	C	C	C	FST	Q		NA
PRT Vent Vlv							(G-3)				LT	CIV		
											PI	RO		
											STC	Q		

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
2-HV-8095A	1	B	1"	GL	SO	A	2X4DB114	C	O/C	C	FST	CS	CSJ-V-1	NA
RPV Head Vent Vlv							(E-5)				PI	RO		
											STC	CS	CSJ-V-1	
											STO	CS	CSJ-V-1	
2-HV-8095B	1	B	1"	GL	SO	A	2X4DB114	C	O/C	C	FST	CS	CSJ-V-1	NA
RPV Head Vent Vlv							(E-5)				PI	RO		
											STC	CS	CSJ-V-1	
											STO	CS	CSJ-V-1	
2-HV-8096A	1	B	1"	GL	SO	A	2X4DB114	C	O/C	C	FST	CS	CSJ-V-1	NA
RPV Head Vent Vlv							(E-5)				PI	RO		
											STC	CS	CSJ-V-1	
											STO	CS	CSJ-V-1	
2-HV-8096B	1	B	1"	GL	SO	A	2X4DB114	C	O/C	C	FST	CS	CSJ-V-1	NA
RPV Head Vent Vlv							(E-5)				PI	RO		
											STC	CS	CSJ-V-1	
											STO	CS	CSJ-V-1	
2-HV-8701A	1	A	12"	GA	MO	A	2X4DB122	C	O/C	AI	LT	RO		NA
RHR Pmp Sup Iso From RCS Loops							(G-2)				PI	RO		
											STC	CS	CSJ-V-2	
											STO	CS	CSJ-V-2	
2-HV-8701B	1	A	12"	GA	MO	A	2X4DB122	C	O/C	AI	LT	RO		NA
RHR Pmp Sup Iso From RCS Loops							(G-1)				PI	RO		
											STC	CS	CSJ-V-2	
											STO	CS	CSJ-V-2	
2-HV-8702A	1	A	12"	GA	MO	A	2X4DB122	C	O/C	AI	LT	RO		NA
RHR Pmp Sup Iso From RCS Loops							(D-2)				PI	RO		
											STC	CS	CSJ-V-2	
											STO	CS	CSJ-V-2	
2-HV-8702B	1	A	12"	GA	MO	A	2X4DB122	C	O/C	AI	LT	RO		NA
RHR Pmp Sup Iso From RCS Loops							(D-1)				PI	RO		
											STC	CS	CSJ-V-2	
											STO	CS	CSJ-V-2	
2-PSV-8010A	1	C	6"	RV	SA	A	2X4DB112	C	O/C	NA	RVT	Note 6		NA
PRZR Safety Vlv							(G-7)							

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
2-PSV-8010B PRZR Safety Vlv	1	C	6"	RV	SA	A	2X4DB112 (G-6)	C	O/C	NA	RVT	Note 6		NA
2-PSV-8010C PRZR Safety Vlv	1	C	6"	RV	SA	A	2X4DB112 (G-6)	C	O/C	NA	RVT	Note 6		NA
2-PV-0455A PORV	1	B	3"	GL	SO	A	2X4DB112 (E-8)	C	O/C	C	FST PI STC STO	RO RO RO RO		NA
2-PV-0456A PORV	1	B	3"	GL	SO	A	2X4DB112 (F-8)	C	O/C	C	FST PI STC STO	RO RO RO RO		NA

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
2-1202-U4-025 NSCW Pmp Disch CH	3	C	18"	CH	SA	A	2X4DB133-1 (C-8)	O/C	O/C	NA	CKC CKO	Q Q		Notes 1, 2
2-1202-U4-027 NSCW Pmp Disch CH	3	C	18"	CH	SA	A	2X4DB133-2 (C-8)	O/C	O/C	NA	CKC CKO	Q Q		Notes 1, 2
2-1202-U4-031 NSCW Pmp Disch CH	3	C	18"	CH	SA	A	2X4DB133-1 (E-6)	O/C	O/C	NA	CKC CKO	Q Q		Notes 1, 2
2-1202-U4-033 NSCW Pmp Disch CH	3	C	18"	CH	SA	A	2X4DB133-2 (E-6)	O/C	O/C	NA	CKC CKO	Q Q		Notes 1, 2
2-1202-U4-035 NSCW Pmp Disch CH	3	C	18"	CH	SA	A	2X4DB133-1 (C-4)	O/C	O/C	NA	CKC CKO	Q Q		Notes 1, 2
2-1202-U4-037 NSCW Pmp Disch CH	3	C	18"	CH	SA	A	2X4DB133-2 (C-5)	O/C	O/C	NA	CKC CKO	Q Q		Notes 1, 2
2-1202-U4-463 NSCW Sup to CB Ess Chiller CH	3	C	8"	CH	SA	A	2X4DB134 (E-2)	O	O	NA	BDTC CKO	RO Q		NA
2-1202-U4-464 NSCW Sup to Piping Pen Area CH	3	C	4"	CH	SA	A	2X4DB133-2 (D-3)	O	O	NA	BDTC CKO	RO Q		NA
2-1202-U4-465 NSCW Sup to CCW Hx	3	C	16"	CH	SA	A	2X4DB133-2 (D-1)	O	O	NA	BDTC CKO	RO Q		NA
2-1202-U4-466 NSCW to Ctmt Cooler CH	2	C	8"	CH	SA	A	2X4DB135-1 (H-5)	O	O/C	NA	CKC CKO	RO Q	ROJ-V-33	NA
2-1202-U4-467 NSCW to Ctmt Cooler CH	2	C	8"	CH	SA	A	2X4DB135-1 (E-5)	O	O/C	NA	CKC CKO	RO Q	ROJ-V-33	NA
2-1202-U4-468 NSCW to CTB Aux and Rx Cav Cooling Iso Vlv	2	C	8"	CH	SA	A	2X4DB135-1 (C-5)	O	C	NA	BDTO CKC	Normal Ops RO	 ROJ-V-33	NA
2-1202-U4-469 NSCW Sup to CCW Hx	3	C	16"	CH	SA	A	2X4DB135-1 (D-7)	O	O	NA	BDTC CKO	RO Q		NA
2-1202-U4-470 NSCW Sup to Piping Pen Area CH	3	C	4"	CH	SA	A	2X4DB135-1 (B-7)	O	O	NA	BDTC CKO	RO Q		NA

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
2-1202-U4-471 NSCW to Ctmt Cooler CH	2	C	8"	CH	SA	A	2X4DB135-2 (H-6)	O	O/C	NA	CKC CKO	RO Q	ROJ-V-33	NA
2-1202-U4-472 NSCW to Ctmt Cooler CH	2	C	8"	CH	SA	A	2X4DB135-2 (H-6)	O	O/C	NA	CKC CKO	RO Q	ROJ-V-33	NA
2-1202-U4-473 NSCW to CTB Aux and Rx Cav Cooling Iso Vlv	2	C	8"	CH	SA	A	2X4DB135-2 (G-6)	O	C	NA	BDTO CKC	Normal Ops RO	ROJ-V-33	NA
2-1202-U4-474 NSCW Sup to CB Ess Chiller CH	3	C	8"	CH	SA	A	2X4DB135-2 (B-8)	O	O	NA	BDTC CKO	RO Q		NA
2-1202-U4-492 NSCW Hdr/Train Inter-Tie Man. Iso. Vlv.	3	B	2"	GA	MA	A	2X4DB133-1 (G-1)	O	C	NA	ETC	2YR	CSJ-V-38	Note 3
2-1202-U4-497 NSCW Hdr/Train Inter-Tie Man. Iso. Vlv.	3	B	2"	GA	MA	A	2X4DB135-2 (D-7)	O	C	NA	ETC	2YR	CSJ-V-38	Note 3
2-1202-U4-A07 NSCW Slow-Fill Line CH	3	C	4"	CH	SA	A	2X4DB133-1 (B-8)	O/C	O	NA	BDTC CKO	RO RO	ROJ-V-32	NA
2-1202-U4-A08 NSCW Slow-Fill Line CH	3	C	4"	CH	SA	A	2X4DB133-1 (A-8)	O/C	O	NA	BDTC CKO	RO RO	ROJ-V-32	NA
2-1202-U4-A09 NSCW Slow-Fill Line CH	3	C	4"	CH	SA	A	2X4DB133-1 (B-7)	O/C	O	NA	BDTC CKO	RO RO	ROJ-V-32	NA
2-1202-U4-A13 NSCW Slow-Fill Line CH	3	C	4"	CH	SA	A	2X4DB133-2 (B-8)	O/C	O	NA	BDTC CKO	RO RO	ROJ-V-32	NA
2-1202-U4-A14 NSCW Slow-Fill Line CH	3	C	4"	CH	SA	A	2X4DB133-2 (A-8)	O/C	O	NA	BDTC CKO	RO RO	ROJ-V-32	NA
2-1202-U4-A15 NSCW Slow-Fill Line CH	3	C	4"	CH	SA	A	2X4DB133-2 (B-7)	O/C	O	NA	BDTC CKO	RO RO	ROJ-V-32	NA
2-CV-9446 NSCW Blowdown Ctrl Vlv	3	B	2"	GL	AO	A	2X4DB133-1 (B-5)	O	C	C	FST PI STC	Q RO Q		NA
2-CV-9447 NSCW Blowdown Ctrl Vlv	3	B	2"	GL	AO	A	2X4DB133-2 (A-5)	O	C	C	FST PI STC	Q RO Q		NA

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
2-HV-11600 NSCW Pmp Disch Vlv	3	B	18"	BU	MO	A	2X4DB133-1 (D-8)	O/C	O	AI	PI STO	RO Q		Note 5
2-HV-11605 NSCW Pmp Disch Vlv	3	B	18"	BU	MO	A	2X4DB133-1 (E-6)	O/C	O	AI	PI STO	RO Q		Note 5
2-HV-11606 NSCW Pmp Disch Vlv	3	B	18"	BU	MO	A	2X4DB133-1 (C-4)	O/C	O	AI	PI STO	RO Q		Note 5
2-HV-11607 NSCW Pmp Disch Vlv	3	B	18"	BU	MO	A	2X4DB133-2 (C-8)	O/C	O	AI	PI STO	RO Q		Note 5
2-HV-11612 NSCW Pmp Disch Vlv	3	B	18"	BU	MO	A	2X4DB133-2 (E-6)	O/C	O	AI	PI STO	RO Q		Note 5
2-HV-11613 NSCW Pmp Disch Vlv	3	B	18"	BU	MO	A	2X4DB133-2 (C-5)	O/C	O	AI	PI STO	RO Q		Note 5
2-HV-1668A NSCW Tower Ret Hdr Stop Vlv	3	B	24"	BU	MO	A	2X4DB133-1 (G-5)	O/C	O	AI	PI STO	RO Q		NA
2-HV-1668B NSCW Tower Bypass to Basin Vlv	3	B	18"	BU	MO	A	2X4DB133-1 (F-5)	O/C	C	AI	PI STC	RO Q		NA
2-HV-1669A NSCW Tower Ret Hdr Stop Vlv	3	B	24"	BU	MO	A	2X4DB133-2 (G-5)	O/C	O	AI	PI STO	RO Q		NA
2-HV-1669B NSCW Tower Bypass to Basin Vlv	3	B	18"	BU	MO	A	2X4DB133-2 (F-5)	O/C	C	AI	PI STC	RO Q		NA
2-HV-1806 NSCW to Ctmt Cooler Iso Vlv	2	B	8"	BU	MO	P	2X4DB135-1 (E-5)	O	O	AI	RVT	Note 6		NA
2-HV-1807 NSCW to Ctmt Cooler Iso Vlv	2	B	8"	BU	MO	P	2X4DB135-2 (E-7)	O	O	AI	RVT	Note 6		NA
2-HV-1808 NSCW to Ctmt Cooler Iso Vlv	2	B	8"	BU	MO	P	2X4DB135-1 (H-5)	O	O	AI	RVT	Note 6		NA
2-HV-1809 NSCW to Ctmt Cooler Iso Vlv	2	B	8"	BU	MO	P	2X4DB135-2 (G-7)	O	O	AI	RVT	Note 6		NA

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
2-HV-1822 NSCW Ret From Ctmt Cooler Iso Vlv	2	B	8"	BU	MO	P	2X4DB135-1 (E-2)	O	O	AI	RVT	Note 6		NA
2-HV-1823 NSCW Ret From Ctmt Cooler Iso Vlv	2	B	8"	BU	MO	P	2X4DB135-2 (D-3)	O	O	AI	RVT	Note 6		NA
2-HV-1830 NSCW Ret From Ctmt Cooler Iso Vlv	2	B	8"	BU	MO	P	2X4DB135-1 (G-2)	O	O	AI	RVT	Note 6		NA
2-HV-1831 NSCW Ret From Ctmt Cooler Iso Vlv	2	B	8"	BU	MO	P	2X4DB135-2 (D-1)	O	O	AI	RVT	Note 6		NA
2-HV-2134 NSCW to CTB Aux and Rx Cav Cooling Iso Vlv	2	B	8"	BU	MO	A	2X4DB135-1 (C-5)	O	C	AI	PI STC	RO Q		NA
2-HV-2135 NSCW to CTB Aux and Rx Cav Cooling Iso Vlv	2	B	8"	BU	MO	A	2X4DB135-2 (D-7)	O	C	AI	PI STC	RO Q		NA
2-HV-2138 NSCW Ret From CTB Aux and Rx Cav Cooling Iso Vlv	2	B	8"	BU	MO	A	2X4DB135-1 (B-2)	O	C	AI	PI STC	RO Q		NA
2-HV-2139 NSCW Ret From CTB Aux and Rx Cav Cooling Iso Vlv	2	B	8"	BU	MO	A	2X4DB135-2 (D-5)	O	C	AI	PI STC	RO Q		NA
2-PSV-11671 Ctmt Cooler RV	2	NA	3/4"	RV	SA	A	2X4DB135-1 (G-4)	NA	NA	NA	RVT	Note 6		NA
2-PSV-11672 Ctmt Cooler RV	2	NA	3/4"	RV	SA	A	2X4DB135-1 (E-4)	NA	NA	NA	RVT	Note 6		NA
2-PSV-11673 Rx Cav Cooler RV	2	C	3/4"	RV	SA	A	2X4DB135-1 (C-4)	C	O/C	NA	RVT	Note 6		NA
2-PSV-11684 Piping Pen Area Cooler RV	3	NA	3/4"	RV	SA	NA	2X4DB133-2 (F-3)	NA	NA	NA	RVT	Note 6		NA
2-PSV-11743 Char Pmp Lub Oil Cooler RV	3	C	1"	RV	SA	A	2X4DB134 (F-8)	C	O/C	NA	RVT	Note 6		NA
2-PSV-11744 Char Pmp Mot Cooler RV	3	C	1 1/2"	RV	SA	A	2X4DB134 (F-7)	C	O/C	NA	RVT	Note 6		NA

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
2-PSV-11745 SI Pmp Lub Oil Cooler RV	3	C	1"	RV	SA	A	2X4DB134 (F-6)	C	O/C	NA	RVT	Note 6	NA	
2-PSV-11746 SI Pmp Mot Oil Cooler RV	3	C	1 1/2"	RV	SA	A	2X4DB134 (F-5)	C	O/C	NA	RVT	Note 6	NA	
2-PSV-11747 Ctmt Spray Pmp Mot Cooler RV	3	C	1"	RV	SA	A	2X4DB134 (F-4)	C	O/C	NA	RVT	Note 6	NA	
2-PSV-11748 RHR Pmp Mot Cooler RV	3	C	1"	RV	SA	A	2X4DB134 (F-4)	C	O/C	NA	RVT	Note 6	NA	
2-PSV-11749 Char Pmp Lub Oil Cooler RV	3	C	1"	RV	SA	A	2X4DB134 (C-6)	C	O/C	NA	RVT	Note 6	NA	
2-PSV-11750 Char Pmp Mot Cooler RV	3	C	1 1/2"	RV	SA	A	2X4DB134 (C-5)	C	O/C	NA	RVT	Note 6	NA	
2-PSV-11751 SI Pmp Lub Oil Cooler RV	3	C	1"	RV	SA	A	2X4DB134 (C-5)	C	O/C	NA	RVT	Note 6	NA	
2-PSV-11752 SI Pmp Mot Oil Cooler RV	3	C	1 1/2"	RV	SA	A	2X4DB134 (C-3)	C	O/C	NA	RVT	Note 6	NA	
2-PSV-11753 Ctmt Spray Pmp Mot Cooler RV	3	C	1"	RV	SA	A	2X4DB134 (C-2)	C	O/C	NA	RVT	Note 6	NA	
2-PSV-11754 RHR Pmp Mot Cooler RV	3	C	1"	RV	SA	A	2X4DB134 (C-1)	C	O/C	NA	RVT	Note 6	NA	
2-PSV-11759 NSCW Ret Hdr RV	3	C	8"	RV	SA	A	2X4DB133-1 (G-5)	C	O/C	NA	RVT	Note 6	NA	
2-PSV-11766 NSCW Ret Hdr RV	3	C	8"	RV	SA	A	2X4DB133-2 (G-5)	C	O/C	NA	RVT	Note 6	NA	
2-PSV-11772 CTB Aux Air Cooler RV	2	C	3/4"	RV	SA	A	2X4DB135-2 (E-6)	C	O/C	NA	RVT	Note 6	NA	
2-PSV-11773 Ctmt Cooler RV	2	NA	3/4"	RV	SA	A	2X4DB135-2 (E-4)	NA	NA	NA	RVT	Note 6	NA	

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
2-PSV-11774 Ctmt Cooler RV	2	NA	3/4"	RV	SA	A	2X4DB135-2 (G-2)	NA	NA	NA	RVT	Note 6		NA
2-PSV-11780 Piping Pen Area Cooler RV	3	NA	3/4"	RV	SA	NA	2X4DB135-1 (C-7)	NA	NA	NA	RVT	Note 6		NA
2-PSV-1648 Diesel Gen Jac Water Hx RV	3	NA	3/4"	RV	SA	NA	2X4DB135-1 (H-7)	NA	NA	NA	RVT	Note 6		NA
2-PSV-1649 Diesel Gen Jac Water Hx RV	3	NA	3/4"	RV	SA	NA	2X4DB133-2 (H-1)	NA	NA	NA	RVT	Note 6		NA
2-PSV-1660 CCW Pmp Mot Cooler RV	3	NA	3/4"	RV	SA	NA	2X4DB133-1 (F-3)	NA	NA	NA	RVT	Note 6		NA
2-PSV-1661 CCW Pmp Mot Cooler RV	3	NA	3/4"	RV	SA	NA	2X4DB133-2 (G-4)	NA	NA	NA	RVT	Note 6		NA
2-PSV-1680 CCW Pmp Mot Cooler RV	3	NA	3/4"	RV	SA	NA	2X4DB133-1 (F-2)	NA	NA	NA	RVT	Note 6		NA
2-PSV-1681 CCW Pmp Mot Cooler RV	3	NA	3/4"	RV	SA	NA	2X4DB133-2 (G-4)	NA	NA	NA	RVT	Note 6		NA
2-PSV-1689 CCW Hx RV	3	NA	3/4"	RV	SA	NA	2X4DB133-2 (F-1)	NA	NA	NA	RVT	Note 6		NA
2-PSV-1698 CCW Pmp Mot Cooler RV	3	NA	3/4"	RV	SA	NA	2X4DB133-1 (F-1)	NA	NA	NA	RVT	Note 6		NA
2-PSV-1699 CCW Pmp Mot Cooler RV	3	NA	3/4"	RV	SA	NA	2X4DB134 (C-7)	NA	NA	NA	RVT	Note 6		NA
2-PSV-1702 CCW Hx RV	3	NA	3/4"	RV	SA	NA	2X4DB135-1 (F-7)	NA	NA	NA	RVT	Note 6		NA
2-PSV-1714 CCW Hx RV	3	NA	3/4"	RV	SA	NA	2X4DB135-1 (F-8)	NA	NA	NA	RVT	Note 6		NA
2-PSV-1715 CCW Hx RV	3	NA	3/4"	RV	SA	NA	2X4DB133-2 (F-2)	NA	NA	NA	RVT	Note 6		NA

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
2-PSV-1718 Aux CCW Hx RV	3	NA	3/4"	RV	SA	NA	2X4DB135-1 (D-7)	NA	NA	NA	RVT	Note 6		NA
2-PSV-1719 Aux CCW Hx RV	3	NA	3/4"	RV	SA	NA	2X4DB133-2 (D-2)	NA	NA	NA	RVT	Note 6		NA
2-PSV-1800 Ctrl Bldg Ess Chiller RV	3	NA	3/4"	RV	SA	NA	2X4DB134 (G-3)	NA	NA	NA	RVT	Note 6		NA
2-PSV-1801 Ctrl Bldg Ess Chiller RV	3	NA	3/4"	RV	SA	NA	2X4DB135-2 (B-4)	NA	NA	NA	RVT	Note 6		NA
2-PSV-1814 Ctmt Cooler RV	2	NA	3/4"	RV	SA	A	2X4DB135-1 (F-4)	NA	NA	NA	RVT	Note 6		NA
2-PSV-1815 Ctmt Cooler RV	2	NA	3/4"	RV	SA	A	2X4DB135-2 (G-3)	NA	NA	NA	RVT	Note 6		NA
2-PSV-1816 Ctmt Cooler RV	2	NA	3/4"	RV	SA	A	2X4DB135-1 (H-4)	NA	NA	NA	RVT	Note 6		NA
2-PSV-1817 Ctmt Cooler RV	2	NA	3/4"	RV	SA	A	2X4DB135-2 (H-1)	NA	NA	NA	RVT	Note 6		NA
2-PSV-2136 CTB Aux Air Cooler RV	2	C	3/4"	RV	SA	A	2X4DB135-1 (D-3)	C	O/C	NA	RVT	Note 6		NA
2-PSV-2137 Rx Cav Cooler RV	2	C	3/4"	RV	SA	A	2X4DB135-2 (G-5)	C	O/C	NA	RVT	Note 6		NA

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
2-1203-U4-030 CCW Pmp Disch CH	3	C	14"	CH	SA	A	2X4DB136 (G-4)	O/C	O/C	NA	CKC CKO	Q Q		NA
2-1203-U4-032 CCW Pmp Disch CH	3	C	14"	CH	SA	A	2X4DB136 (G-4)	O/C	O/C	NA	CKC CKO	Q Q		NA
2-1203-U4-034 CCW Pmp Disch CH	3	C	14"	CH	SA	A	2X4DB136 (F-4)	O/C	O/C	NA	CKC CKO	Q Q		NA
2-1203-U4-055 CCW Pmp Disch CH	3	C	14"	CH	SA	A	2X4DB136 (D-4)	O/C	O/C	NA	CKC CKO	Q Q		NA
2-1203-U4-057 CCW Pmp Disch CH	3	C	14"	CH	SA	A	2X4DB136 (C-4)	O/C	O/C	NA	CKC CKO	Q Q		NA
2-1203-U4-059 CCW Pmp Disch CH	3	C	14"	CH	SA	A	2X4DB136 (B-4)	O/C	O/C	NA	CKC CKO	Q Q		NA
2-PSV-11824 RHR Pmp Seal Cooler RV	3	NA	1"	RV	SA	NA	2X4DB137 (G-3)	NA	NA	NA	RVT	Note 6		NA
2-PSV-11825 RHR Pmp Seal Cooler RV	3	NA	1"	RV	SA	NA	2X4DB137 (B-3)	NA	NA	NA	RVT	Note 6		NA
2-PSV-1872 CCW Hx Shell-Side RV	3	NA	3/4"	RV	SA	NA	2X4DB136 (H-2)	NA	NA	NA	RVT	Note 6		NA
2-PSV-1873 CCW Hx Shell-Side RV	3	NA	3/4"	RV	SA	NA	2X4DB136 (E-2)	NA	NA	NA	RVT	Note 6		NA
2-PSV-1926 RHR Hx Shell-Side RV	3	NA	3/4"	RV	SA	NA	2X4DB137 (G-4)	NA	NA	NA	RVT	Note 6		NA
2-PSV-1927 RHR Hx Shell-Side RV	3	NA	3/4"	RV	SA	NA	2X4DB137 (C-4)	NA	NA	NA	RVT	Note 6		NA

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
2-1204-U4-026 RCS Cold Leg SI Admis CH	1	C	1.50"	CH	SA	A	2X4DB111 (D-5)	C	O	NA	BDTC CKO	RO RO	 ROJ-V-3	NA
2-1204-U4-027 RCS Cold Leg SI Admis CH	1	C	1.50"	CH	SA	A	2X4DB111 (G-5)	C	O	NA	BDTC CKO	RO RO	 ROJ-V-3	NA
2-1204-U4-028 RCS Cold Leg SI Admis CH	1	C	1.50"	CH	SA	A	2X4DB111 (G-4)	C	O	NA	BDTC CKO	RO RO	 ROJ-V-3	NA
2-1204-U4-029 RCS Cold Leg SI Admis CH	1	C	1.50"	CH	SA	A	2X4DB111 (D-4)	C	O	NA	BDTC CKO	RO RO	 ROJ-V-3	NA
2-1204-U4-093 SI Pmp Min Flow Disch CH	2	C	1.50"	CH	SA	A	2X4DB121 (E-3)	C	O/C	NA	CKC CKO	Q Q		NA
2-1204-U4-094 SI Pmp Min Flow Disch CH	2	C	1.50"	CH	SA	A	2X4DB121 (D-3)	C	O/C	NA	CKC CKO	Q Q		NA
2-1204-U4-120 SI to RCS Hot Leg Iso CH	1	AC	2"	CH	SA	A	2X4DB121 (F-6)	C	O/C	NA	CKC CKO LT	RO RO RO	ROJ-V-4 ROJ-V-4 ROJ-V-4	Note 4
2-1204-U4-121 SI to RCS Hot Leg Iso CH	1	AC	2"	CH	SA	A	2X4DB121 (F-6)	C	O/C	NA	CKC CKO LT	RO RO RO	ROJ-V-4 ROJ-V-4 ROJ-V-4	Note 4
2-1204-U4-122 SI to RCS Hot Leg Iso CH	1	AC	2"	CH	SA	A	2X4DB121 (E-7)	C	O/C	NA	CKC CKO LT	RO RO RO	ROJ-V-4 ROJ-V-4 ROJ-V-4	Note 4
2-1204-U4-123 SI to RCS Hot Leg Iso CH	1	AC	2"	CH	SA	A	2X4DB121 (F-7)	C	O/C	NA	CKC CKO LT	RO RO RO	ROJ-V-4 ROJ-V-4 ROJ-V-4	Note 4
2-1204-U4-143 SI To RCS Cold Leg Iso CH	1	AC	2"	CH	SA	A	2X4DB121 (B-6)	C	O/C	NA	CKC CKO LT	RO RO RO	ROJ-V-4 ROJ-V-4 ROJ-V-4	Note 4
2-1204-U4-144 SI To RCS Cold Leg Iso CH	1	AC	2"	CH	SA	A	2X4DB121 (B-7)	C	O/C	NA	CKC CKO LT	RO RO RO	ROJ-V-4 ROJ-V-4 ROJ-V-4	Note 4

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
2-1204-U4-145 SI To RCS Cold Leg Iso CH	1	AC	2"	CH	SA	A	2X4DB121 (B-7)	C	O/C	NA	CKC CKO LT	RO RO RO	ROJ-V-4 ROJ-V-4 ROJ-V-4	Note 4
2-1204-U4-146 SI To RCS Cold Leg Iso CH	1	AC	2"	CH	SA	A	2X4DB121 (B-8)	C	O/C	NA	CKC CKO LT	RO RO RO	ROJ-V-4 ROJ-V-4 ROJ-V-4	Note 4
2-1204-U4-159 SI Accum Sam Man Iso Vlv	2	A	3/4"	GL	MA	P	2X4DB120 (G-2)	C	C	NA	LT	CIV		NA
2-1204-U4-160 SI Accum Sam Man Iso Vlv	2	A	3/4"	GL	MA	P	2X4DB120 (E-2)	C	C	NA	LT	CIV		NA
2-1204-U4-161 SI Accum Sam Man Iso Vlv	2	A	3/4"	GL	MA	P	2X4DB120 (C-2)	C	C	NA	LT	CIV		NA
2-1204-U4-162 SI Accum Sam Man Iso Vlv	2	A	3/4"	GL	MA	P	2X4DB120 (A-2)	C	C	NA	LT	CIV		NA
2-1204-U4-262 RWST Sludge Mixing Pmp Disch CH	2	C	3"	CH	SA	A	2X4DB121 (G-3)	O/C	C	NA	BDTO CKC	Normal Ops RO	 ROJ-V-5	NA
2-1204-U4-263 RWST Sludge Mixing Pmp Disch CH	2	C	3"	CH	SA	A	2X4DB121 (G-3)	O/C	C	NA	BDTO CKC	Normal Ops RO	 ROJ-V-5	NA
2-1204-U6-013 SI From BIT To RCS Cold Legs CH	1	C	3"	CH	SA	A	2X4DB119 (E-6)	C	O/C	NA	CKC CKO	RO RO	ROJ-V-6 ROJ-V-6	NA
2-1204-U6-079 SI Accum Disch CH	1	AC	10"	CH	SA	A	2X4DB120 (G-8)	C	O/C	NA	CKC CKO LT	RO RO RO	ROJ-V-7 ROJ-V-7 ROJ-V-7	Notes 4
2-1204-U6-080 SI Accum Disch CH	1	AC	10"	CH	SA	A	2X4DB120 (E-8)	C	O/C	NA	CKC CKO LT	RO RO RO	ROJ-V-7 ROJ-V-7 ROJ-V-7	Notes 4
2-1204-U6-081 SI Accum Disch CH	1	AC	10"	CH	SA	A	2X4DB120 (C-8)	C	O/C	NA	CKC CKO LT	RO RO RO	ROJ-V-7 ROJ-V-7 ROJ-V-7	Notes 4

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
2-1204-U6-082	1	AC	10"	CH	SA	A	2X4DB120	C	O/C	NA	CKC	RO	ROJ-V-7	Notes 4
SI Accum Disch CH							(A-8)				CKO	RO	ROJ-V-7	
											LT	RO	ROJ-V-7	
2-1204-U6-083	1	AC	10"	CH	SA	A	2X4DB111	C	O/C	NA	CKC	RO	ROJ-V-8	Notes 4
SI/RHR Cold Leg Admis CH							(B-5)				CKO	RO	ROJ-V-8	
											LT	RO	ROJ-V-8	
2-1204-U6-084	1	AC	10"	CH	SA	A	2X4DB111	C	O/C	NA	CKC	RO	ROJ-V-8	Notes 4
SI/RHR Cold Leg Admis CH							(H-5)				CKO	RO	ROJ-V-8	
											LT	RO	ROJ-V-8	
2-1204-U6-085	1	AC	10"	CH	SA	A	2X4DB111	C	O/C	NA	CKC	RO	ROJ-V-8	Notes 4
SI/RHR Cold Leg Admis CH							(H-4)				CKO	RO	ROJ-V-8	
											LT	RO	ROJ-V-8	
2-1204-U6-086	1	AC	10"	CH	SA	A	2X4DB111	C	O/C	NA	CKC	RO	ROJ-V-8	Notes 4
SI/RHR Cold Leg Admis CH							(B-4)				CKO	RO	ROJ-V-8	
											LT	RO	ROJ-V-8	
2-1204-U6-090	2	C	8"	CH	SA	A	2X4DB121	C	O	NA	BDTC	RO		NA
SI Suc Line CH							(E-1)				CKO	RO	ROJ-V-9	
2-1204-U6-098	2	C	4"	CH	SA	A	2X4DB121	C	O/C	NA	CKC	RO	ROJ-V-10	NA
SI Pmp Disch CH							(E-4)				CKO	RO	ROJ-V-10	
2-1204-U6-099	2	C	4"	CH	SA	A	2X4DB121	C	O/C	NA	CKC	RO	ROJ-V-10	NA
SI Pmp Disch CH							(D-3)				CKO	RO	ROJ-V-10	
2-1204-U6-124	1	AC	6"	CH	SA	A	2X4DB111	C	O/C	NA	CKC	RO	ROJ-V-4	Note 4
RCS Hot Leg SI Admis CH							(F-5)				CKO	RO	ROJ-V-4	
											LT	RO	ROJ-V-4	
2-1204-U6-125	1	AC	6"	CH	SA	A	2X4DB111	C	O/C	NA	CKC	CS	CSJ-V-3	Notes 4
RCS Hot Leg SI Admis CH							(D-3)				CKC	RO	ROJ-V-11	
											CKO	CS	CSJ-V-3	
											CKO	RO	ROJ-V-11	
											LT	RO	ROJ-V-11	

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
2-1204-U6-126	1	AC	6"	CH	SA	A	2X4DB111	C	O/C	NA	CKC	CS	CSJ-V-3	Notes 4
RCS Hot Leg SI Admis CH							(D-6)				CKC	RO	ROJ-V-11	
											CKO	CS	CSJ-V-3	
											CKO	RO	ROJ-V-11	
											LT	RO	ROJ-V-11	
2-1204-U6-127	1	AC	6"	CH	SA	A	2X4DB111	C	O/C	NA	CKC	RO	ROJ-V-4	Note 4
RCS Hot Leg SI Admis CH							(F-4)				CKO	RO	ROJ-V-4	
											LT	RO	ROJ-V-4	
2-1204-U6-128	1	AC	8"	CH	SA	A	2X4DB121	C	O/C	NA	CKC	CS	CSJ-V-3	Notes 4
RHR To RCS Hot Leg Iso CH							(F-6)				CKC	RO	ROJ-V-11	
											CKO	CS	CSJ-V-3	
											CKO	RO	ROJ-V-11	
											LT	RO	ROJ-V-11	
2-1204-U6-129	1	AC	8"	CH	SA	A	2X4DB121	C	O/C	NA	CKC	CS	CSJ-V-3	Notes 4
RHR To RCS Hot Leg Iso CH							(F-6)				CKC	RO	ROJ-V-11	
											CKO	CS	CSJ-V-3	
											CKO	RO	ROJ-V-11	
											LT	RO	ROJ-V-11	
2-1204-U6-147	1	AC	6"	CH	SA	A	2X4DB121	C	O/C	NA	CKC	CS	CSJ-V-4	Notes 4
RHR To RCS Cold Leg Iso CH							(B-6)				CKC	RO	ROJ-V-12	
											CKO	CS	CSJ-V-4	
											CKO	RO	ROJ-V-12	
											LT	RO	ROJ-V-12	
2-1204-U6-148	1	AC	6"	CH	SA	A	2X4DB121	C	O/C	NA	CKC	CS	CSJ-V-4	Notes 4
RHR To RCS Cold Leg Iso CH							(A-6)				CKC	RO	ROJ-V-12	
											CKO	CS	CSJ-V-4	
											CKO	RO	ROJ-V-12	
											LT	RO	ROJ-V-12	
2-1204-U6-149	1	AC	6"	CH	SA	A	2X4DB121	C	O/C	NA	CKC	CS	CSJ-V-4	Notes 4
RHR To RCS Cold Leg Iso CH							(A-7)				CKC	RO	ROJ-V-12	
											CKO	CS	CSJ-V-4	
											CKO	RO	ROJ-V-12	
											LT	RO	ROJ-V-12	

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
2-1204-U6-150 RHR To RCS Cold Leg Iso CH	1	AC	6"	CH	SA	A	2X4DB121 (A-7)	C	O/C	NA	CKC CKC CKO CKO LT	CS RO CS RO RO	CSJ-V-4 ROJ-V-12 CSJ-V-4 ROJ-V-12 ROJ-V-12	Notes 4
2-1204-U6-163 RHR Pmp to SI Pmps Suc Iso	2	C	8"	CH	SA	A	2X4DB122 (B-8)	C	O	NA	BDTC CKO	RO RO	 ROJ-V-13	NA
2-HV-0943A SI Accum Nitrogen Vent Vlv	3	B	1"	GL	SO	A	2X4DB120 (E-1)	C	O/C	C	FST PI STO	Q RO Q		NA
2-HV-0943B SI Accum Nitrogen Vent Vlv	3	B	1"	GL	SO	A	2X4DB120 (D-1)	C	O/C	C	FST PI STO	Q RO Q		NA
2-HV-10950 SI Accum Sam Iso Vlv	2	A	3/4"	GL	SO	A	2X4DB120 (G-3)	O/C	C	C	FST LT PI STC	Q CIV RO Q		NA
2-HV-10951 SI Accum Sam Iso Vlv	2	A	3/4"	GL	SO	A	2X4DB120 (E-3)	O/C	C	C	FST LT PI STC	Q CIV RO Q		NA
2-HV-10952 SI Accum Sam Iso Vlv	2	A	3/4"	GL	SO	A	2X4DB120 (C-3)	O/C	C	C	FST LT PI STC	Q CIV RO Q		NA
2-HV-10953 SI Accum Sam Iso Vlv	2	A	3/4"	GL	SO	A	2X4DB120 (A-3)	O/C	C	C	FST LT PI STC	Q CIV RO Q		NA
2-HV-10957 RWST Sludge Mixing Pmp Suc Vlv	2	B	3"	GA	AO	A	2X4DB121 (G-3)	O/C	C	C	FST PI STC	Q RO Q		NA

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
2-HV-10958	2	B	3"	GA	AO	A	2X4DB121	O/C	C	C	FST	Q		NA
RWST Sludge Mixing Pmp Suc Viv							(G-3)				PI	RO		
											STC	Q		
2-HV-8801A	2	B	4"	GA	MO	A	2X4DB119	C	O	AI	PI	RO		NA
BIT Outlet to RCS Cold Legs, Obrd Ctmt Iso Viv							(F-5)				STO	Q		
2-HV-8801B	2	B	4"	GA	MO	A	2X4DB119	C	O	AI	PI	RO		NA
BIT Outlet to RCS Cold Legs, Obrd Ctmt Iso Viv							(E-5)				STO	Q		
2-HV-8802A	2	B	4"	GA	MO	A	2X4DB121	C	O/C	AI	PI	RO		NA
SI to RCS Hot Legs, Obrd Ctmt Iso Viv							(E-5)				STC	CS	CSJ-V-5	
											STO	CS	CSJ-V-5	
2-HV-8802B	2	B	4"	GA	MO	A	2X4DB121	C	O/C	AI	PI	RO		NA
SI to RCS Hot Legs, Obrd Ctmt Iso Viv							(D-5)				STC	CS	CSJ-V-5	
											STO	CS	CSJ-V-5	
2-HV-8806	2	B	6"	GA	MO	A	2X4DB121	O	O/C	AI	PI	RO		NA
SI Pmp Suc From RWST							(E-1)				STC	CS	CSJ-V-6	
											STO	CS	CSJ-V-6	
2-HV-8807A	2	B	6"	GA	MO	A	2X4DB121	C	O	AI	PI	RO		NA
SI Pmp Suc from Char Pmp Suc Hdr							(D-2)				STO	Q		
2-HV-8807B	2	B	6"	GA	MO	A	2X4DB121	C	O	AI	PI	RO		NA
SI Pmp Suc from Char Pmp Suc Hdr							(D-2)				STO	Q		
2-HV-8809A	2	B	8"	GA	MO	A	2X4DB121	O	O/C	AI	PI	RO		NA
RHR Disch To Cold Legs From RHR Hx							(B-5)				STC	CS	CSJ-V-7	
											STO	CS	CSJ-V-7	
2-HV-8809B	2	B	8"	GA	MO	A	2X4DB121	O	O/C	AI	PI	RO		NA
RHR Disch To Cold Legs From RHR Hx							(A-5)				STC	CS	CSJ-V-7	
											STO	CS	CSJ-V-7	
2-HV-8813	2	B	2"	GL	MO	A	2X4DB121	O	O/C	AI	PI	RO		NA
SI Min Flow Hdr Iso Viv							(F-5)				STC	CS	CSJ-V-8	
											STO	CS	CSJ-V-8	
2-HV-8814	2	B	1.50"	GL	MO	A	2X4DB121	O	O/C	AI	PI	RO		NA
SI Pmp Min Flow Line Iso Viv							(E-3)				STC	Q		
											STO	Q		

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
2-HV-8821A SI Pmp Cold Leg Disch Stop Vlv	2	B	4"	GA	MO	A	2X4DB121 (D-4)	O	O/C	AI	PI STC STO	RO Q Q		NA
2-HV-8821B SI Pmp Cold Leg Disch Stop Vlv	2	B	4"	GA	MO	A	2X4DB121 (D-4)	O	O/C	AI	PI STC STO	RO Q Q		NA
2-HV-8823 SI Cold Leg Inj Test Line Vlv	2	B	3/4"	GL	AO	A	2X4DB121 (C-8)	O/C	C	C	FST PI STC	Q RO Q		NA
2-HV-8824 SI CH Hot Leg 2 and 3 Test Vlv	2	B	3/4"	GL	AO	A	2X4DB121 (E-8)	O/C	C	C	FST PI STC	Q RO Q		NA
2-HV-8825 RHR To Hot Leg Test Line Vlv	2	B	3/4"	GL	AO	A	2X4DB121 (D-8)	O/C	C	C	FST PI STC	Q RO Q		NA
2-HV-8835 SI Hdr Cold Leg Disch Stop Vlv	2	B	4"	GA	MO	A	2X4DB121 (C-5)	O	O/C	AI	PI STC STO	RO CS CS	 CSJ-V-9 CSJ-V-9	NA
2-HV-8840 Hot Leg Crossover Iso Vlv	2	B	12"	GA	MO	A	2X4DB121 (B-4)	C	O/C	AI	PI STC STO	RO CS CS	 CSJ-V-10 CSJ-V-10	NA
2-HV-8843 BIT Test/Recir Vlv	2	B	3/4"	GL	AO	A	2X4DB119 (D-6)	O/C	C	C	FST PI STC	Q RO Q		NA
2-HV-8871 Accum Test Line Inbrd Ctmt Iso Vlv	2	A	3/4"	GL	AO	A	2X4DB121 (H-6)	O/C	C	C	FST LT PI STC	Q CIV RO Q		NA
2-HV-8875A SI Accum Nitrogen Sup/Vent Vlv	2	B	1"	GL	SO	A	2X4DB120 (H-3)	C	O/C	C	FST PI STC STO	Q RO Q Q		NA

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
2-HV-8875B SI Accum Nitrogen Sup/Vent Vlv	2	B	1"	GL	SO	A	2X4DB120 (F-3)	C	O/C	C	FST PI STC STO	Q RO Q Q		NA
2-HV-8875C SI Accum Nitrogen Sup/Vent Vlv	2	B	1"	GL	SO	A	2X4DB120 (D-3)	C	O/C	C	FST PI STC STO	Q RO Q Q		NA
2-HV-8875D SI Accum Nitrogen Sup/Vent Vlv	2	B	1"	GL	SO	A	2X4DB120 (B-3)	C	O/C	C	FST PI STC STO	Q RO Q Q		NA
2-HV-8875E SI Accum Nitrogen Sup/Vent Vlv	2	B	1"	GL	SO	A	2X4DB120 (G-3)	C	O/C	C	FST PI STC STO	Q RO Q Q		NA
2-HV-8875F SI Accum Nitrogen Sup/Vent Vlv	2	B	1"	GL	SO	A	2X4DB120 (E-3)	C	O/C	C	FST PI STC STO	Q RO Q Q		NA
2-HV-8875G SI Accum Nitrogen Sup/Vent Vlv	2	B	1"	GL	SO	A	2X4DB120 (D-3)	C	O/C	C	FST PI STC STO	Q RO Q Q		NA
2-HV-8875H SI Accum Nitrogen Sup/Vent Vlv	2	B	1"	GL	SO	A	2X4DB120 (B-3)	C	O/C	C	FST PI STC STO	Q RO Q Q		NA
2-HV-8877A Accum Test Header Iso Vlv	2	B	3/4"	GL	AO	P	2X4DB120 (G-6)	C	C	C	PI	RO		NA
2-HV-8877B Accum Test Header Iso Vlv	2	B	3/4"	GL	AO	P	2X4DB120 (E-6)	C	C	C	PI	RO		NA

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
2-HV-8877C Accum Test Header Iso Viv	2	B	3/4"	GL	AO	P	2X4DB120 (D-6)	C	C	C	PI	RO		NA
2-HV-8877D Accum Test Header Iso Viv	2	B	3/4"	GL	AO	P	2X4DB120 (B-6)	C	C	C	PI	RO		NA
2-HV-8878A Accum Water Fill Viv	2	B	1"	GL	AO	P	2X4DB120 (G-2)	C	C	C	PI	RO		NA
2-HV-8878B Accum Water Fill Viv	2	B	1"	GL	AO	P	2X4DB120 (E-2)	C	C	C	PI	RO		NA
2-HV-8878C Accum Water Fill Viv	2	B	1"	GL	AO	P	2X4DB120 (C-2)	C	C	C	PI	RO		NA
2-HV-8878D Accum Water Fill Viv	2	B	1"	GL	AO	P	2X4DB120 (B-2)	C	C	C	PI	RO		NA
2-HV-8879A Accum CH Test Line Iso Viv	2	B	3/4"	GL	AO	P	2X4DB120 (G-7)	C	C	C	PI	RO		NA
2-HV-8879B Accum CH Test Line Iso Viv	2	B	3/4"	GL	AO	P	2X4DB120 (E-7)	C	C	C	PI	RO		NA
2-HV-8879C Accum CH Test Line Iso Viv	2	B	3/4"	GL	AO	P	2X4DB120 (C-7)	C	C	C	PI	RO		NA
2-HV-8879D Accum CH Test Line Iso Viv	2	B	3/4"	GL	AO	P	2X4DB120 (B-7)	C	C	C	PI	RO		NA
2-HV-8881 SI CH Hot Leg 1 and 4 Test Viv	2	B	3/4"	GL	AO	A	2X4DB121 (G-6)	O/C	C	C	FST PI STC	Q RO Q		NA
2-HV-8882 BIT Test/Recir Viv	2	B	3/4"	GL	AO	P	2X4DB119 (B-6)	C	C	C	PI	RO		NA
2-HV-8888 Accum Fill Iso Viv	2	A	3/4"	GL	AO	A	2X4DB121 (F-5)	O/C	C	C	FST LT PI STC	Q CIV RO Q		NA

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
2-HV-8889A SI CH Hot Leg Test Vlv	2	B	3/4"	GL	AO	P	2X4DB121 (G-8)	C	C	C	PI	RO		NA
2-HV-8889B SI CH Hot Leg Test Vlv	2	B	3/4"	GL	AO	P	2X4DB121 (F-8)	C	C	C	PI	RO		NA
2-HV-8889C SI CH Hot Leg Test Vlv	2	B	3/4"	GL	AO	P	2X4DB121 (F-8)	C	C	C	PI	RO		NA
2-HV-8889D SI CH Hot Leg Test Vlv	2	B	3/4"	GL	AO	P	2X4DB121 (D-8)	C	C	C	PI	RO		NA
2-HV-8890A SI RHR Pmp CH Test Vlv	2	B	3/4"	GL	AO	A	2X4DB121 (G-8)	O/C	C	C	FST PI STC	Q RO Q		NA
2-HV-8890B SI RHR Pmp CH Test Vlv	2	B	3/4"	GL	AO	A	2X4DB121 (E-8)	O/C	C	C	FST PI STC	Q RO Q		NA
2-HV-8920 SI Pmp Min Flow Line Iso Vlv	2	B	1.50"	GL	MO	A	2X4DB121 (D-3)	O	O/C	AI	PI STC STO	RO Q Q		NA
2-HV-8923A SI Pmp Suc Iso Vlv	2	B	8"	GA	MO	P	2X4DB121 (E-2)	O	O	AI	PI	RO		NA
2-HV-8923B SI Pmp Suc Iso Vlv	2	B	8"	GA	MO	P	2X4DB121 (D-2)	O	O	AI	PI	RO		NA
2-HV-8924 CVCS/SI Suc Hdr Intertie Iso Vlv	2	B	6"	GA	MO	A	2X4DB116-2 (A-7)	O	C	AI	PI STC	RO Q		NA
2-HV-8964 Accum Test Line Obrd Ctmt Iso Vlv	2	A	3/4"	GL	AO	A	2X4DB121 (H-5)	O/C	C	C	FST LT PI STC	Q CIV RO Q		NA
2-HV-9017A RWST to Ctmt Spray Pmp Iso Vlv	2	B	10"	GA	MO	A	2X4DB131 (F-3)	O	O/C	AI	PI STC STO	RO Q Q		NA

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
2-HV-9017B RWST to Ctmt Spray Pmp Iso Vlv	2	B	10"	GA	MO	A	2X4DB131 (E-3)	O	O/C	AI	PI STC STO	RO Q Q		NA
2-PSV-8851 SI Cold Leg Inj Hdr RV	2	C	3/4"	RV	SA	A	2X4DB121 (C-5)	C	O/C	NA	RVT	Note 6		NA
2-PSV-8853A SI Pmp Disch RV	2	C	3/4"	RV	SA	A	2X4DB121 (E-4)	C	O/C	NA	RVT	Note 6		NA
2-PSV-8853B SI Pmp Disch RV	2	C	3/4"	RV	SA	A	2X4DB121 (D-4)	C	O/C	NA	RVT	Note 6		NA
2-PSV-8858 SI Pmp Suc Hdr RV	2	C	3/4"	RV	SA	A	2X4DB121 (E-1)	C	O/C	NA	RVT	Note 6		NA
2-PSV-8871 Pen 41 Thermal RV	2	C	3/4"	RV	SA	A	2X4DB121 (H-5)	C	O/C	NA	RVT	Note 6		NA
2-PSV-8916A SI Pmp Suc RV	2	C	3/4"	RV	SA	A	2X4DB121 (E-3)	C	O/C	NA	RVT	Note 6		NA
2-PSV-8916B SI Pmp Suc RV	2	C	3/4"	RV	SA	A	2X4DB121 (D-2)	C	O/C	NA	RVT	Note 6		NA

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
2-1205-U4-122 RHR Pmp Suc CH from Ctmt Sump	2	C	14"	CH	SA	A	2X4DB122 (C-3)	C	O/C	NA	CKC CKO	RO RO	ROJ-V-14 ROJ-V-14	NA
2-1205-U4-123 RHR Pmp Suc CH from Ctmt Sump	2	C	14"	CH	SA	A	2X4DB122 (B-3)	C	O/C	NA	CKC CKO	RO RO	ROJ-V-14 ROJ-V-14	NA
2-1205-U6-001 RHR Pmp Sup Iso From RWST CH	2	C	12"	CH	SA	A	2X4DB122 (E-4)	C	O/C	NA	CKC CKO CKO	Q CS CS	CSJ-V-11	NA
2-1205-U6-002 RHR Pmp Sup Iso From RWST CH	2	C	12"	CH	SA	A	2X4DB122 (C-4)	C	O/C	NA	CKC CKO CKO	Q CS CS	CSJ-V-11	NA
2-1205-U6-009 RHR Pmp Disch CH	2	C	8"	CH	SA	A	2X4DB122 (G-5)	C	O	NA	BDTC CKO CKO	CS CS CS	CSJ-V-12	NA
2-1205-U6-010 RHR Pmp Disch CH	2	C	8"	CH	SA	A	2X4DB122 (D-5)	C	O	NA	BDTC CKO CKO	CS CS CS	CSJ-V-12	NA
2-FV-0610 RHR Pmp Min Flow Ctrl Vlv	2	B	3"	GA	MO	A	2X4DB122 (H-5)	O	O/C	AI	PI STC STO	RO Q Q		NA
2-FV-0611 RHR Pmp Min Flow Ctrl Vlv	2	B	3"	GA	MO	A	2X4DB122 (E-5)	O	O/C	AI	PI STC STO	RO Q Q		NA
2-FV-0618 RHR Hx Bypass Flow Ctrl Vlv	2	B	8"	BU	AO	P	2X4DB122 (F-7)	C	C	C	PI	RO		NA
2-FV-0619 RHR Hx Bypass Flow Ctrl Vlv	2	B	8"	BU	AO	P	2X4DB122 (C-7)	C	C	C	PI	RO		NA
2-HV-0606 RHR Hx Disch Flow Ctrl Vlv	2	B	8"	BU	AO	P	2X4DB122 (G-7)	O	O	O	PI	RO		NA
2-HV-0607 RHR Hx Disch Flow Ctrl Vlv	2	B	8"	BU	AO	P	2X4DB122 (D-7)	O	O	O	PI	RO		NA

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
2-HV-8716A RHR Train A to Hot Leg Cross-over Iso Viv	2	B	8"	GA	MO	A	2X4DB122 (F-7)	O	O/C	AI	PI STC STO	RO Q Q		NA
2-HV-8716B RHR Train B to Hot Leg Cross-over Iso Viv	2	B	8"	GA	MO	A	2X4DB122 (D-7)	O	O/C	AI	PI STC STO	RO Q Q		NA
2-HV-8804A RHR Pmp "A" Disch to Char Pmp Suc Hdrs	2	B	8"	GA	MO	A	2X4DB122 (F-8)	C	O/C	AI	PI STC STO	RO CS CS	 CSJ-V-13 CSJ-V-13	NA
2-HV-8804B RHR Pmp "B" To SI Pmp "B" Iso Viv	2	B	8"	GA	MO	A	2X4DB122 (B-8)	C	O/C	AI	PI STC STO	RO CS CS	 CSJ-V-14 CSJ-V-14	NA
2-HV-8811A RHR Pmp Suc Iso From Ctmt Sump	2	B	14"	GA	MO	A	2X4DB122 (B-3)	C	O/C	AI	PI STC STO	RO Q Q		NA
2-HV-8811B RHR Pmp Suc Iso From Ctmt Sump	2	B	14"	GA	MO	A	2X4DB122 (B-3)	C	O/C	AI	PI STC STO	RO Q Q		NA
2-HV-8812A RHR Pmp Sup Iso From RWST	2	B	12"	GA	MO	A	2X4DB122 (E-4)	O	O/C	AI	PI STC STO	RO Q Q		NA
2-HV-8812B RHR Pmp Sup Iso From RWST	2	B	12"	GA	MO	A	2X4DB122 (C-4)	O	O/C	AI	PI STC STO	RO Q Q		NA
2-PSV-8708A RHR Pmp Suc RV	2	C	3"	RV	SA	A	2X4DB122 (H-3)	C	O/C	NA	RVT	Note 6		NA
2-PSV-8708B RHR Pmp Suc RV	2	C	3"	RV	SA	A	2X4DB122 (E-3)	C	O/C	NA	RVT	Note 6		NA
2-PSV-8842 RHR Hot Leg Cross-over Line RV	2	C	3/4"	RV	SA	A	2X4DB121 (C-3)	C	O/C	NA	RVT	Note 6		NA
2-PSV-8856A RHR Hx Disch Hdr to Cold Leg RV	2	C	3/4"	RV	SA	A	2X4DB121 (B-4)	C	O/C	NA	RVT	Note 6		NA

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
2-PSV-8856B RHR Hx Disch Hdr to Cold Leg RV	2	C	3/4"	RV	SA	A	2X4DB121 (A-4)	C	O/C	NA	RVT	Note 6	NA	

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
2-1206-U6-001 Ctmt Spray Pmp Suc From RWST CH	2	C	10"	CH	SA	A	2X4DB131 (G-3)	C	O/C	NA	CKC CKO CKOP	RO RO RO	ROJ-V-15 ROJ-V-15	NA
2-1206-U6-008 Ctmt Spray Pmp Suc From RWST CH	2	C	10"	CH	SA	A	2X4DB131 (D-3)	C	O/C	NA	CKC CKO CKOP	RO RO RO	ROJ-V-15 ROJ-V-15	NA
2-1206-U6-015 Ctmt Spray Inbrd Ctmt Iso CH	2	AC	8"	CH	SA	A	2X4DB131 (G-7)	C	O/C	NA	CKC CKO LT	RO RO CIV	ROJ-V-16 ROJ-V-16	NA
2-1206-U6-016 Ctmt Spray Inbrd Ctmt Iso CH	2	AC	8"	CH	SA	A	2X4DB131 (C-7)	C	O/C	NA	CKC CKO LT	RO RO CIV	ROJ-V-16 ROJ-V-16	NA
2-HV-9001A Ctmt Spray Pmp Suc From Ctmt Sump Inbrd Iso Vlv	2	A	8"	GA	MO	A	2X4DB131 (G-6)	C	O/C	AI	LT PI STC STO	CIV RO Q Q		NA
2-HV-9001B Ctmt Spray Pmp Suc From Ctmt Sump Inbrd Iso Vlv	2	A	8"	GA	MO	A	2X4DB131 (C-6)	C	O/C	AI	LT PI STC STO	CIV RO Q Q		NA
2-HV-9002A Ctmt Spray Pmp Suc From Ctmt Sump Inbrd Iso Vlv	2	B	10"	GA	MO	A	2X4DB131 (B-6)	C	O/C	AI	PI STC STO	RO Q Q		NA
2-HV-9002B Ctmt Spray Pmp Suc From Ctmt Sump Inbrd Iso Vlv	2	B	10"	GA	MO	A	2X4DB131 (C-6)	C	O/C	AI	PI STC STO	RO Q Q		NA
2-HV-9003A Ctmt Spray Pmp Suc From Ctmt Sump Obrd Iso Vlv	2	B	10"	GA	MO	A	2X4DB131 (B-5)	C	O	AI	PI STO	RO Q		NA
2-HV-9003B Ctmt Spray Pmp Suc From Ctmt Sump Obrd Iso Vlv	2	B	10"	GA	MO	A	2X4DB131 (C-5)	C	O	AI	PI STO	RO Q		NA
2-PSV-9007A Ctmt Spray Suc Hdr SRV	2	C	3/4"	RV	SA	A	2X4DB131 (G-3)	C	O/C	NA	RVT	Note 6		NA

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
2-PSV-9007B Ctmt Spray Suc Hdr SRV	2	C	3/4"	RV	SA	A	2X4DB131 (D-3)	C	O/C	NA	RVT	Note 6	NA	

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
2-1208-U4-004 RCP Seal Inj Inbrd CH	2	C	1.5"	CH	SA	A	2X4DB114 (B-7)	O	C	NA	BDTO CKC	Normal Ops RO	 ROJ-V-17	NA
2-1208-U4-021 RCS Seal Water Ret Line Pressure Equalizing CH	2	AC	3/4"	CH	SA	A	2X4DB114 (D-4)	C	O/C	NA	CKC CKO LT	RO RO CIV	ROJ-V-18 ROJ-V-18	NA
2-1208-U4-140 Cent Char Pmp Disch Recir Line CH	2	C	2"	CH	SA	A	2X4DB116-2 (G-6)	C	O	NA	BDTC CKO	Q Q		NA
2-1208-U4-147 Cent Char Pmp Disch Recir Line CH	2	C	2"	CH	SA	A	2X4DB116-2 (C-6)	C	O/C	NA	CKC CKO	Q Q		NA
2-1208-U4-185 Emergency Boration to Char Pmp Suc CH	2	C	2"	CH	SA	A	2X4DB116-1 (D-1)	C	O	NA	BDTC CKO	CS CS	 CSJ-V-15	NA
2-1208-U4-284 Boric Acid Tran Pmp Disch CH	3	C	2"	CH	SA	A	2X4DB118 (D-5)	C	O/C	NA	CKC CKO	Q Q		NA
2-1208-U4-299 Boric Acid Tran Pmp Disch CH	3	C	2"	CH	SA	A	2X4DB118 (B-5)	C	O/C	NA	CKC CKO	Q Q		NA
2-1208-U4-353 RCP Seal Inj Inbrd CH	2	C	1.5"	CH	SA	A	2X4DB114 (B-7)	O	C	NA	BDTO CKC	Normal Ops RO	 ROJ-V-17	NA
2-1208-U4-354 RCP Seal Inj Inbrd CH	2	C	1.5"	CH	SA	A	2X4DB114 (B-7)	O	C	NA	BDTO CKC	Normal Ops RO	 ROJ-V-17	NA
2-1208-U4-355 RCP Seal Inj Inbrd CH	2	C	1.5"	CH	SA	A	2X4DB114 (B-7)	O	C	NA	BDTO CKC	Normal Ops RO	 ROJ-V-17	NA
2-1208-U6-032 Main Char Hdr CH	2	AC	3"	CH	SA	A	2X4DB114 (F-3)	O	O/C	NA	CKC CKO LT	RO Q CIV	ROJ-V-19	NA
2-1208-U6-124 Char Pmp Sup From VCT CH	2	C	4"	CH	SA	A	2X4DB116-1 (E-4)	O	C	NA	BDTO CKC	Normal Ops RO	 ROJ-V-20	NA
2-1208-U6-129 Normal Char Pmp Disch Line CH	2	C	3"	CH	SA	A	2X4DB116-1 (C-5)	O	C	NA	BDTO CKC	Normal Ops Q		NA
2-1208-U6-142 Cent Char Pmp Disch CH	2	C	4"	CH	SA	A	2X4DB116-2 (G-6)	C	O/C	NA	CKC CKO	RO RO	ROJ-V-21 ROJ-V-21	NA

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
2-1208-U6-149 Cent Char Pmp Disch CH	2	C	4"	CH	SA	A	2X4DB116-2 (C-6)	C	O/C	NA	CKC CKO	RO RO	ROJ-V-21 ROJ-V-21	NA
2-1208-U6-189 Cent Char Pmp Suc From RWST CH	2	C	8"	CH	SA	A	2X4DB116-2 (E-2)	C	O/C	NA	CKC CKO	RO RO	ROJ-V-22 ROJ-V-22	NA
2-1208-U6-436 RHR Pmp "A" Disch to Char Pmp Suc Hdrs CH	2	C	8"	CH	SA	A	2X4DB122 (F-8)	C	O	NA	BDTC CKO	RO RO	 ROJ-V-23	NA
2-HV-0190A Char Throttle Vlv	2	B	1"	GL	SO	A	2X4DB116-2 (G-7)	C	O	C	PI STO	RO Q		NA
2-HV-0190B Char Throttle Vlv	2	B	1"	GL	SO	A	2X4DB116-2 (B-7)	C	O	C	PI STO	RO Q		NA
2-HV-8100 RCP Seal Water Leakoff Ctmt Iso Vlv	2	A	2"	GL	MO	A	2X4DB114 (D-3)	O	C	AI	LT PI STC	CIV RO CS	 CSJ-V-16	NA
2-HV-8103A RCP Seal Inj Iso Vlv	2	B	1.5"	GL	MO	A	2X4DB114 (B-6)	O	C	AI	PI STC	RO RO	ROJ-V-24 ROJ-V-24	NA
2-HV-8103B RCP Seal Inj Iso Vlv	2	B	1.5"	GL	MO	A	2X4DB114 (B-6)	O	C	AI	PI STC	RO RO	ROJ-V-24 ROJ-V-24	NA
2-HV-8103C RCP Seal Inj Iso Vlv	2	B	1.5"	GL	MO	A	2X4DB114 (B-6)	O	C	AI	PI STC	RO RO	ROJ-V-24 ROJ-V-24	NA
2-HV-8103D RCP Seal Inj Iso Vlv	2	B	1.5"	GL	MO	A	2X4DB114 (B-6)	O	C	AI	PI STC	RO RO	ROJ-V-24 ROJ-V-24	NA
2-HV-8104 Emergency Borate Iso Vlv	2	B	2"	GL	MO	A	2X4DB116-1 (D-1)	C	O/C	AI	PI STC STO	RO Q Q		NA
2-HV-8105 Char Pmp to RCS Ctmt Iso Vlv	2	A	3"	GA	MO	A	2X4DB116-1 (C-8)	O	O/C	AI	LT PI STC STO	CIV RO CS CS	 CSJ-V-17 CSJ-V-17	NA
2-HV-8106 Char Pmp to RCS Iso Vlv	2	B	3"	GA	MO	A	2X4DB116-1 (C-7)	O	C	AI	PI STC	RO CS	 CSJ-V-18	NA

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
2-HV-8110 Cent Char Pmp Common Recir to RCS Seal Water Iso Vlv	2	B	2"	GL	MO	A	2X4DB116-2 (E-7)	O	C	AI	PI STC	RO Q		NA
2-HV-8111A Cent Char Pmp Recir to RCS Seal Water Iso Vlv	2	B	2"	GL	MO	A	2X4DB116-2 (F-6)	O	C	AI	PI STC	RO Q		NA
2-HV-8111B Cent Char Pmp Recir to RCS Seal Water Iso Vlv	2	B	2"	GL	MO	A	2X4DB116-2 (D-6)	O	C	AI	PI STC	RO Q		NA
2-HV-8112 RCPS Seal Water Leakoff Ctmt Iso Vlv	2	A	2"	GL	MO	A	2X4DB114 (D-3)	O	C	AI	LT PI STC	CIV RO CS	 CSJ-V-16	NA
2-HV-8116 Char Iso Vlv	2	B	1"	GL	MO	A	2X4DB116-2 (G-8)	C	O	AI	PI STC STO	RO Q Q		NA
2-HV-8152 RCS Ltdwn Line Iso Vlv	2	A	3"	GL	AO	A	2X4DB114 (G-2)	O	C	C	FST LT PI STC	CS CIV RO CS	CSJ-V-19 CSJ-V-19	NA
2-HV-8160 RCS Ltdwn Line Iso Vlv	2	A	3"	GL	AO	A	2X4DB114 (G-3)	O	C	C	FST LT PI STC	CS CIV RO CS	CSJ-V-19 CSJ-V-19	NA
2-HV-8438 Cent Char Pmp Disch Hdr Cross-Connect Vlv	2	B	3"	GA	MO	P	2X4DB116-2 (D-7)	O	O	AI	PI	RO		NA
2-HV-8471A Cent Char Pmp Suc Iso Vlv	2	B	6"	GA	MO	A	2X4DB116-2 (G-3)	O	O/C	AI	PI STC STO	RO Q Q		NA
2-HV-8471B Cent Char Pmp Suc Iso Vlv	2	B	6"	GA	MO	A	2X4DB116-2 (C-3)	O	O/C	AI	PI STC STO	RO Q Q		NA
2-HV-8485A Cent Char Pmp Disch Iso Vlv	2	B	4"	GA	MO	P	2X4DB116-2 (G-7)	O	O	AI	PI	RO		NA
2-HV-8485B Cent Char Pmp Disch Iso Vlv	2	B	4"	GA	MO	P	2X4DB116-2 (C-7)	O	O	AI	PI	RO		NA

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
2-HV-8508A Cent Char Pmp Alt Mini-Flow to RWST Iso Vlv	2	B	2"	GL	MO	A	2X4DB116-2 (G-5)	C	O/C	AI	PI STC STO	RO CS CS	 CSJ-V-20 CSJ-V-20	NA
2-HV-8508B Cent Char Pmp Alt Mini-Flow to RWST Iso Vlv	2	B	2"	GL	MO	A	2X4DB116-2 (D-5)	C	O/C	AI	PI STC STO	RO CS CS	 CSJ-V-20 CSJ-V-20	NA
2-HV-8509A Cent Char Pmp Alt Mini-Flow to RWST Iso Vlv	2	B	2"	GL	MO	A	2X4DB116-2 (D-5)	O	O/C	AI	PI STC	RO Q		NA
2-HV-8509B Cent Char Pmp Alt Mini-Flow to RWST Iso Vlv	2	B	2"	GL	MO	A	2X4DB116-2 (G-5)	O	O/C	AI	PI STC	RO Q		NA
2-LV-0112B VCT Outlet Iso Vlv	2	B	4"	GA	MO	A	2X4DB116-1 (F-4)	O	C	AI	PI STC	RO CS	 CSJ-V-21	NA
2-LV-0112C VCT Outlet Iso Vlv	2	B	4"	GA	MO	A	2X4DB116-1 (E-4)	O	C	AI	PI STC	RO CS	 CSJ-V-21	NA
2-LV-0112D RWST To Char Pmp Suc Iso Vlv	2	B	8"	GA	MO	A	2X4DB116-2 (E-2)	C	O/C	AI	PI STC STO	RO CS CS	 CSJ-V-22 CSJ-V-22	NA
2-LV-0112E RWST To Char Pmp Suc Iso Vlv	2	B	8"	GA	MO	A	2X4DB116-2 (D-2)	C	O/C	AI	PI STC STO	RO CS CS	 CSJ-V-22 CSJ-V-22	NA
2-PSV-8121 RCP Seal Water Ret Hdr RV	2	C	2"	RV	SA	A	2X4DB114 (D-4)	C	O/C	NA	RVT	Note 6		NA
2-PSV-8124 Char Pmp Suc Hdr RV	2	C	3/4"	RV	SA	A	2X4DB116-1 (C-3)	C	O/C	C	RVT	Note 6		NA
2-PSV-8468B Cent Char Pmp Suc RV	2	C	3/4"	RV	SA	A	2X4DB116-2 (G-3)	C	O/C	NA	RVT	Note 6		NA
2-PSV-8468C Cent Char Pmp Suc RV	2	C	3/4"	RV	SA	A	2X4DB116-2 (C-3)	C	O/C	NA	RVT	Note 6		NA

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
2-HV-3502 RC Hot Legs Sam Hdr Ctmt Iso Vlv	2	A	1/2"	GL	AO	A	2X4DB140-1 (E-7)	O	C	C	FST LT PI STC	Q CIV RO Q		NA
2-HV-3507 PRZR Liquid Space Sam Line Ctmt Iso Vlv	2	A	1/2"	GL	AO	A	2X4DB140-1 (G-8)	C	C	C	FST LT PI STC	Q CIV RO Q		NA
2-HV-3508 PRZR Liquid Space Sam Line Ctmt Iso Vlv	2	A	1/2"	GL	AO	A	2X4DB140-1 (G-7)	C	C	C	FST LT PI STC	Q CIV RO Q		NA
2-HV-3513 PRZR Steam Space Sam Line Ctmt Iso Vlv	2	A	1/2"	GL	AO	A	2X4DB140-1 (F-8)	C	C	C	FST LT PI STC	Q CIV RO Q		NA
2-HV-3514 PRZR Steam Space Sam Line Ctmt Iso Vlv	2	A	1/2"	GL	AO	A	2X4DB140-1 (F-7)	C	C	C	FST LT PI STC	Q CIV RO Q		NA
2-HV-3548 RC Hot Legs Sam Hdr Ctmt Iso Vlv	2	A	1/2"	GL	MO	A	2X4DB140-1 (D-8)	O	C	AI	LT PI STC	CIV RO Q		NA

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
2-1213-U6-050 RF Pur from SFP Pmp to Rx Cav CIV	2	A	3"	DI	MA	P	2X4DB130 (G-8)	C	C	NA	LT	CIV		NA
2-1213-U6-051 RF Pur from SFP Pmp to Rx Cav CIV	2	A	3"	DI	MA	P	2X4DB130 (G-8)	C	C	NA	LT	CIV		NA

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
2-HV-0780 Ctmt/Rx Cav Sump Pmp Disch Ctmt Iso Vlv	2	A	3"	GA	AO	A	2X4DB143 (G-5)	O	C	C	FST LT PI STC	Q CIV RO Q		NA
2-HV-0781 Ctmt/Rx Cav Sump Pmp Disch Ctmt Iso Vlv	2	A	3"	GA	AO	A	2X4DB143 (G-6)	O	C	C	FST LT PI STC	Q CIV RO Q		NA
2-PSV-0780 Pen 78 Thermal RV	2	C	3/4"	RV	SA	A	2X4DB143 (H-6)	C	O/C	NA	RVT	Note 6		NA

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
2-1217-U4-084 ACCW To RCP Thermal Barrier Iso CH	3	C	2.50"	CH	SA	A	2X4DB138-2 (E-6)	O	C	NA	BDTO CKC	Normal Ops RO	ROJ-V-25	NA
2-1217-U4-085 ACCW To RCP Thermal Barrier Iso CH	3	C	2.50"	CH	SA	A	2X4DB138-2 (C-6)	O	C	NA	BDTO CKC	Normal Ops RO	ROJ-V-25	NA
2-1217-U4-086 ACCW To RCP Thermal Barrier Iso CH	3	C	2.50"	CH	SA	A	2X4DB138-2 (B-3)	O	C	NA	BDTO CKC	Normal Ops RO	ROJ-V-25	NA
2-1217-U4-087 ACCW To RCP Thermal Barrier Iso CH	3	C	2.50"	CH	SA	A	2X4DB138-2 (F-3)	O	C	NA	BDTO CKC	Normal Ops RO	ROJ-V-25	NA
2-1217-U4-113 ACCW Sup to Ctmt Iso Viv Bypass Viv	2	AC	3/4"	CH	SA	A	2X4DB138-2 (G-7)	C	O/C	NA	CKC CKO LT	RO RO CIV	ROJ-V-26 ROJ-V-26	NA
2-HV-19051 Individual RCP Thermal Barrier ACCW Ret Trip Viv	3	B	2.50"	GA	MO	A	2X4DB138-2 (E-7)	O	C	AI	PI STC	RO CS	CSJ-V-23	NA
2-HV-19053 Individual RCP Thermal Barrier ACCW Ret Trip Viv	3	B	2.50"	GA	MO	A	2X4DB138-2 (C-7)	O	C	AI	PI STC	RO CS	CSJ-V-23	NA
2-HV-19055 Individual RCP Thermal Barrier ACCW Ret Trip Viv	3	B	2.50"	GA	MO	A	2X4DB138-2 (B-2)	O	C	AI	PI STC	RO CS	CSJ-V-23	NA
2-HV-19057 Individual RCP Thermal Barrier ACCW Ret Trip Viv	3	B	2.50"	GA	MO	A	2X4DB138-2 (F-2)	O	C	AI	PI STC	RO CS	CSJ-V-23	NA
2-HV-1974 ACCW Ret From Ctmt Iso Viv	2	A	10"	BU	MO	A	2X4DB138-2 (G-7)	O	C	AI	LT PI STC	CIV RO CS	CSJ-V-24	NA
2-HV-1975 ACCW Ret From Ctmt Iso Viv	2	A	10"	BU	MO	A	2X4DB138-1 (B-2)	O	C	AI	LT PI STC	CIV RO CS	CSJ-V-24	NA
2-HV-1978 ACCW Sup to Ctmt Iso Viv	2	A	10"	BU	MO	A	2X4DB138-2 (H-7)	O	C	AI	LT PI STC	CIV RO CS	CSJ-V-24	NA
2-HV-1979 ACCW Sup to Ctmt Iso Viv	2	A	10"	BU	MO	A	2X4DB138-1 (D-3)	O	C	AI	LT PI STC	CIV RO CS	CSJ-V-24	NA

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
2-HV-2041 Common RCP Thermal Barrier ACCW Ret Trip Vlv	3	B	3"	GA	MO	A	2X4DB138-2 (F-7)	O	C	AI	PI STC	RO CS	CSJ-V-23	NA
2-PSV-1978 Pen 28 Thermal RV	2	C	3/4"	RV	SA	A	2X4DB138-2 (H-8)	C	O/C	NA	RVT	Note 6		NA

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
2-1301-U4-008 MS Hdr Sup CH to AFW Pmp	3	C	4"	CH	SA	A	2X4DB159-2 (E-4)	O	O/C	NA	CKC CKO CKOP	RO CS RO	ROJ-V-27 CSJ-V-25	NA
2-1301-U4-136 ARV Manual Isolation Vlv	2	B	8"	GA	MA	A	2X4DB159-2 (H-2)	O	O/C	NA	ETC FST PI	CS CS RO	CSJ-V-38	Note 3
2-1301-U4-137 ARV Manual Isolation Vlv	2	B	8"	GA	MA	A	2X4DB159-2 (F-2)	O	O/C	NA	ETC FST PI	CS CS RO	CSJ-V-38	Note 3
2-1301-U4-138 ARV Manual Isolation Vlv	2	B	8"	GA	MA	A	2X4DB159-2 (D-2)	O	O/C	NA	ETC FST PI	CS CS RO	CSJ-V-38	Note 3
2-1301-U4-139 ARV Manual Isolation Vlv	2	B	8"	GA	MA	A	2X4DB159-2 (B-2)	O	O/C	NA	ETC FST PI	CS CS RO	CSJ-V-38	Note 3
2-1301-U4-404 MS Hdr Sup CH to AFW Pmp	3	C	4"	CH	SA	A	2X4DB159-2 (E-4)	O	O/C	NA	CKC CKO CKOP	RO CS RO	ROJ-V-27 CSJ-V-25	NA
2-HV-13005A MSIV Bypass/Steam Drain Iso Vlv	2	B	4"	GL	AO	A	2X4DB159-2 (G-6)	O	C	C	FST PI STC	Q RO Q		NA
2-HV-13005B MSIV Bypass/Steam Drain Iso Vlv	2	B	4"	GL	AO	A	2X4DB159-2 (G-6)	O	C	C	FST PI STC	Q RO Q		NA
2-HV-13006A MSIV Bypass/Steam Drain Iso Vlv	2	B	4"	GL	AO	A	2X4DB159-2 (A-6)	O	C	C	FST PI STC	Q RO Q		NA
2-HV-13006B MSIV Bypass/Steam Drain Iso Vlv	2	B	4"	GL	AO	A	2X4DB159-2 (A-6)	O	C	C	FST PI STC	Q RO Q		NA
2-HV-13007A MSIV Bypass/Steam Drain Iso Vlv	2	B	4"	GL	AO	A	2X4DB159-2 (E-6)	O	C	C	FST PI STC	Q RO Q		NA

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
2-HV-13007B MSIV Bypass/Steam Drain Iso Viv	2	B	4"	GL	AO	A	2X4DB159-2 (E-6)	O	C	C	FST PI STC	Q RO Q		NA
2-HV-13008A MSIV Bypass/Steam Drain Iso Viv	2	B	4"	GL	AO	A	2X4DB159-2 (C-6)	O	C	C	FST PI STC	Q RO Q		NA
2-HV-13008B MSIV Bypass/Steam Drain Iso Viv	2	B	4"	GL	AO	A	2X4DB159-2 (C-6)	O	C	C	FST PI STC	Q RO Q		NA
2-HV-15212A SG Blowdown Inbrd Iso Viv	2	B	3"	GL	AO	A	2X4DB159-3 (F-4)	O	C	C	FST PI STC	Q RO Q		NA
2-HV-15212B SG Blowdown Inbrd Iso Viv	2	B	3"	GL	AO	A	2X4DB159-3 (B-4)	O	C	C	FST PI STC	Q RO Q		NA
2-HV-15212C SG Blowdown Inbrd Iso Viv	2	B	3"	GL	AO	A	2X4DB159-1 (F-3)	O	C	C	FST PI STC	Q RO Q		NA
2-HV-15212D SG Blowdown Inbrd Iso Viv	2	B	3"	GL	AO	A	2X4DB159-1 (B-3)	O	C	C	FST PI STC	Q RO Q		NA
2-HV-15216A SG Blowdown Inbrd Iso Viv	2	B	3"	GL	AO	A	2X4DB159-3 (F-3)	O	C	C	FST PI STC	Q RO Q		NA
2-HV-15216B SG Blowdown Inbrd Iso Viv	2	B	3"	GL	AO	A	2X4DB159-3 (B-3)	O	C	C	FST PI STC	Q RO Q		NA
2-HV-15216C SG Blowdown Inbrd Iso Viv	2	B	3"	GL	AO	A	2X4DB159-1 (F-3)	O	C	C	FST PI STC	Q RO Q		NA
2-HV-15216D SG Blowdown Inbrd Iso Viv	2	B	3"	GL	AO	A	2X4DB159-1 (B-3)	O	C	C	FST PI STC	Q RO Q		NA

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
2-HV-3006A MSIV	2	B	29.50"	GA	EH	A	2X4DB159-2 (H-6)	O	C	C	FST	CS	CSJ-V-26	NA
											PI	RO		
											STC	CS		
											STC_NPS	CS	CSJ-V-26	
											STC_PS	CS	CSJ-V-26	
2-HV-3006B MSIV	2	B	28"	GA	EH	A	2X4DB159-2 (H-7)	O	C	C	FST	CS	CSJ-V-26	NA
											PI	RO		
											STC	CS		
											STC_NPS	CS	CSJ-V-26	
											STC_PS	CS	CSJ-V-26	
2-HV-3009 MS Line to AFW Pmp Iso Vlv	2	B	4"	GA	MO	A	2X4DB159-2 (G-3)	O	O/C	AI	PI	RO		NA
											STC	Q		
											STO	Q		
2-HV-3016A MSIV	2	B	29.50"	GA	EH	A	2X4DB159-2 (F-6)	O	C	C	FST	CS	CSJ-V-26	NA
											PI	RO		
											STC	CS		
											STC_NPS	CS	CSJ-V-26	
											STC_PS	CS	CSJ-V-26	
2-HV-3016B MSIV	2	B	28"	GA	EH	A	2X4DB159-2 (F-7)	O	C	C	FST	CS	CSJ-V-26	NA
											PI	RO		
											STC	CS		
											STC_NPS	CS	CSJ-V-26	
											STC_PS	CS	CSJ-V-26	
2-HV-3019 MS Line to AFW Pmp Iso Vlv	2	B	4"	GA	MO	A	2X4DB159-2 (E-2)	O	O/C	AI	PI	RO		NA
											STC	Q		
											STO	Q		
2-HV-3026A MSIV	2	B	29.50"	GA	EH	A	2X4DB159-2 (D-6)	O	C	C	FST	CS	CSJ-V-26	NA
											PI	RO		
											STC	CS		
											STC_NPS	CS	CSJ-V-26	
											STC_PS	CS	CSJ-V-26	

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
2-HV-3026B MSIV	2	B	28"	GA	EH	A	2X4DB159-2 (D-7)	O	C	C	FST	CS	CSJ-V-26	NA
											PI	RO		
											STC	CS		
											STC_NPS	CS	CSJ-V-26	
											STC_PS	CS	CSJ-V-26	
2-HV-3036A MSIV	2	B	29.50"	GA	EH	A	2X4DB159-2 (B-6)	O	C	C	FST	CS	CSJ-V-26	NA
											PI	RO		
											STC	CS		
											STC_NPS	CS	CSJ-V-26	
											STC_PS	CS	CSJ-V-26	
2-HV-3036B MSIV	2	B	28"	GA	EH	A	2X4DB159-2 (B-7)	O	C	C	FST	CS	CSJ-V-26	NA
											PI	RO		
											STC	CS		
											STC_NPS	CS	CSJ-V-26	
											STC_PS	CS	CSJ-V-26	
2-HV-7603A SG Blowdown Iso Viv	2	B	3"	GL	AO	A	2X4DB159-3 (F-2)	O	C	C	FST	Q		NA
											PI	RO		
											STC	Q		
2-HV-7603B SG Blowdown Iso Viv	2	B	3"	GL	AO	A	2X4DB159-3 (B-2)	O	C	C	FST	Q		NA
											PI	RO		
											STC	Q		
2-HV-7603C SG Blowdown Iso Viv	2	B	3"	GL	AO	A	2X4DB159-1 (F-2)	O	C	C	FST	Q		NA
											PI	RO		
											STC	Q		
2-HV-7603D SG Blowdown Iso Viv	2	B	3"	GL	AO	A	2X4DB159-1 (B-2)	O	C	C	FST	Q		NA
											PI	RO		
											STC	Q		
2-HV-9451 SG Sam Iso Viv	2	B	1/2"	GL	SO	A	2X4DB159-3 (E-3)	O	C	C	FST	Q		NA
											PI	RO		
											STC	Q		
2-HV-9452 SG Sam Iso Viv	2	B	1/2"	GL	SO	A	2X4DB159-3 (B-3)	O	C	C	FST	Q		NA
											PI	RO		
											STC	Q		

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
2-HV-9453 SG Sam Iso Vlv	2	B	1/2"	GL	SO	A	2X4DB159-1 (E-2)	O	C	C	FST PI STC	Q RO Q		NA
2-HV-9454 SG Sam Iso Vlv	2	B	1/2"	GL	SO	A	2X4DB159-1 (B-3)	O	C	C	FST PI STC	Q RO Q		NA
2-PSV-3001 MS Safety Vlv	2	C	6"	RV	SA	A	2X4DB159-2 (H-3)	C	O/C	NA	RVT	Note 6		NA
2-PSV-3002 MS Safety Vlv	2	C	6"	RV	SA	A	2X4DB159-2 (H-4)	C	O/C	NA	RVT	Note 6		NA
2-PSV-3003 MS Safety Vlv	2	C	6"	RV	SA	A	2X4DB159-2 (H-4)	C	O/C	NA	RVT	Note 6		NA
2-PSV-3004 MS Safety Vlv	2	C	6"	RV	SA	A	2X4DB159-2 (H-5)	C	O/C	NA	RVT	Note 6		NA
2-PSV-3005 MS Safety Vlv	2	C	6"	RV	SA	A	2X4DB159-2 (H-5)	C	O/C	NA	RVT	Note 6		NA
2-PSV-3011 MS Safety Vlv	2	C	6"	RV	SA	A	2X4DB159-2 (F-3)	C	O/C	NA	RVT	Note 6		NA
2-PSV-3012 MS Safety Vlv	2	C	6"	RV	SA	A	2X4DB159-2 (F-4)	C	O/C	NA	RVT	Note 6		NA
2-PSV-3013 MS Safety Vlv	2	C	6"	RV	SA	A	2X4DB159-2 (F-4)	C	O/C	NA	RVT	Note 6		NA
2-PSV-3014 MS Safety Vlv	2	C	6"	RV	SA	A	2X4DB159-2 (F-5)	C	O/C	NA	RVT	Note 6		NA
2-PSV-3015 MS Safety Vlv	2	C	6"	RV	SA	A	2X4DB159-2 (F-5)	C	O/C	NA	RVT	Note 6		NA
2-PSV-3021 MS Safety Vlv	2	C	6"	RV	SA	A	2X4DB159-2 (D-3)	C	O/C	NA	RVT	Note 6		NA
2-PSV-3022 MS Safety Vlv	2	C	6"	RV	SA	A	2X4DB159-2 (D-4)	C	O/C	NA	RVT	Note 6		NA

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
2-PSV-3023 MS Safety Vlv	2	C	6"	RV	SA	A	2X4DB159-2 (D-4)	C	O/C	NA	RVT	Note 6		NA
2-PSV-3024 MS Safety Vlv	2	C	6"	RV	SA	A	2X4DB159-2 (D-5)	C	O/C	NA	RVT	Note 6		NA
2-PSV-3025 MS Safety Vlv	2	C	6"	RV	SA	A	2X4DB159-2 (D-5)	C	O/C	NA	RVT	Note 6		NA
2-PSV-3031 MS Safety Vlv	2	C	6"	RV	SA	A	2X4DB159-2 (B-3)	C	O/C	NA	RVT	Note 6		NA
2-PSV-3032 MS Safety Vlv	2	C	6"	RV	SA	A	2X4DB159-2 (B-4)	C	O/C	NA	RVT	Note 6		NA
2-PSV-3033 MS Safety Vlv	2	C	6"	RV	SA	A	2X4DB159-2 (B-4)	C	O/C	NA	RVT	Note 6		NA
2-PSV-3034 MS Safety Vlv	2	C	6"	RV	SA	A	2X4DB159-2 (B-5)	C	O/C	NA	RVT	Note 6		NA
2-PSV-3035 MS Safety Vlv	2	C	6"	RV	SA	A	2X4DB159-2 (B-5)	C	O/C	NA	RVT	Note 6		NA
2-PV-3000 ARV	2	B	10"	GL	EH	A	2X4DB159-2 (H-2)	C	O	NA	FST PI STC STO	RO RO RO Q	CSJ-V-38 CSJ-V-38	NA
2-PV-3010 ARV	2	B	10"	GL	EH	A	2X4DB159-2 (F-2)	C	O	NA	FST PI STC STO	RO RO RO RO	CSJ-V-38 CSJ-V-38 CSJ-V-38	NA
2-PV-3020 ARV	2	B	10"	GL	EH	A	2X4DB159-2 (D-2)	C	O	NA	FST PI STC STO	RO RO RO RO	CSJ-V-38 CSJ-V-38 CSJ-V-38	NA

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
2-PV-3030	2	B	10"	GL	EH	A	2X4DB159-2	C	O	NA	FST	RO	CSJ-V-38	NA
ARV							(C-2)				PI	RO		
											STC	RO	CSJ-V-38	
											STO	RO	CSJ-V-38	

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
2-1302-U4-001 AFW Pmp Disch CH	3	C	4"	CH	SA	A	2X4DB161-2 (B-5)	C	O	NA	BDTC CKO	CS CS	CSJ-V-27	NA
2-1302-U4-002 AFW Pmp Disch CH	3	C	4"	CH	SA	A	2X4DB161-2 (D-5)	C	O	NA	BDTC CKO	CS CS	CSJ-V-27	NA
2-1302-U4-013 AFW Pmp Suc CH	3	C	10"	CH	SA	A	2X4DB161-2 (F-7)	C	O	NA	BDTC CKO	CS CS	CSJ-V-28	NA
2-1302-U4-014 AFW Pmp Disch CH	3	C	6"	CH	SA	A	2X4DB161-2 (F-5)	C	O	NA	BDTC CKO	CS CS	CSJ-V-27	NA
2-1302-U4-017 AFW Hdr Stop/CH	2	C	4"	CH	SA	A	2X4DB161-2 (H-3)	C	O	NA	BDTC CKO	CS CS	CSJ-V-27	NA
2-1302-U4-020 AFW Hdr Stop/CH	2	C	4"	CH	SA	A	2X4DB161-2 (G-3)	C	O	NA	BDTC CKO	CS CS	CSJ-V-27	NA
2-1302-U4-023 AFW Hdr Stop/CH	2	C	4"	CH	SA	A	2X4DB161-2 (F-3)	C	O	NA	BDTC CKO	CS CS	CSJ-V-27	NA
2-1302-U4-026 AFW Hdr Stop/CH	2	C	4"	CH	SA	A	2X4DB161-2 (E-3)	C	O	NA	BDTC CKO	CS CS	CSJ-V-27	NA
2-1302-U4-033 AFW Pmp Suc CH	3	C	8"	CH	SA	A	2X4DB161-2 (B-7)	C	O	NA	BDTC CKO	CS CS	CSJ-V-28	NA
2-1302-U4-037 AFW Hdr Stop/CH	2	C	4"	CH	SA	A	2X4DB161-2 (D-3)	C	O	NA	BDTC CKO	CS CS	CSJ-V-27	NA
2-1302-U4-040 AFW Hdr Stop/CH	2	C	4"	CH	SA	A	2X4DB161-2 (C-3)	C	O	NA	BDTC CKO	CS CS	CSJ-V-27	NA
2-1302-U4-043 AFW Hdr Stop/CH	2	C	4"	CH	SA	A	2X4DB161-2 (B-3)	C	O	NA	BDTC CKO	CS CS	CSJ-V-27	NA
2-1302-U4-046 AFW Hdr Stop/CH	2	C	4"	CH	SA	A	2X4DB161-2 (B-3)	C	O	NA	BDTC CKO	CS CS	CSJ-V-27	NA
2-1302-U4-051 AFW Pmp Suc CH	3	C	10"	CH	SA	A	2X4DB161-2 (E-7)	C	O	NA	BDTC CKO	CS CS	CSJ-V-28	NA

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
2-1302-U4-052 AFW Pmp Suc CH	3	C	8"	CH	SA	A	2X4DB161-2 (A-7)	C	O	NA	BDTC CKO	CS CS	 CSJ-V-28	NA
2-1302-U4-058 AFW Pmp Suc CH	3	C	8"	CH	SA	A	2X4DB161-2 (D-7)	C	O	NA	BDTC CKO	CS CS	 CSJ-V-28	NA
2-1302-U4-061 AFW Pmp Suc CH	3	C	8"	CH	SA	A	2X4DB161-2 (C-7)	C	O	NA	BDTC CKO	CS CS	 CSJ-V-28	NA
2-1302-U4-085 AFW Pmp Recir Line CH	3	C	2.50"	CH	SA	A	2X4DB161-1 (G-6)	C	O	NA	BDTC CKO	CS Q		NA
2-1302-U4-086 AFW Pmp Recir Line CH	3	C	2.50"	CH	SA	A	2X4DB161-1 (B-6)	C	O	NA	BDTC CKO	CS Q		NA
2-1302-U4-087 AFW Pmp Recir Line CH	3	C	2.50"	CH	SA	A	2X4DB161-1 (B-6)	C	O	NA	BDTC CKO	CS Q		NA
2-1302-U4-113 AFW Hdr CH at FW Bypass Hdrs	2	C	4"	CH	SA	A	2X4DB168-3 (F-2)	C	O/C	NA	CKC CKO	Q CS	 CSJ-V-29	NA
2-1302-U4-114 AFW Hdr CH at FW Bypass Hdrs	2	C	4"	CH	SA	A	2X4DB168-3 (F-4)	C	O/C	NA	CKC CKO	Q CS	 CSJ-V-29	NA
2-1302-U4-115 AFW Hdr CH at FW Bypass Hdrs	2	C	4"	CH	SA	A	2X4DB168-3 (F-8)	C	O/C	NA	CKC CKO	Q CS	 CSJ-V-29	NA
2-1302-U4-116 AFW Hdr CH at FW Bypass Hdrs	2	C	4"	CH	SA	A	2X4DB168-3 (F-6)	C	O/C	NA	CKC CKO	Q CS	 CSJ-V-29	NA
2-1302-U4-117 Main FW Bypass Hdr CH (Obrd Ctmt)	2	C	6"	CH	SA	A	2X4DB168-3 (F-2)	O	C	NA	BDTO CKC	Normal Ops RO	 ROJ-V-28	NA
2-1302-U4-118 Main FW Bypass Hdr CH (Obrd Ctmt)	2	C	6"	CH	SA	A	2X4DB168-3 (F-4)	O	C	NA	BDTO CKC	Normal Ops RO	 ROJ-V-28	NA
2-1302-U4-119 Main FW Bypass Hdr CH (Obrd Ctmt)	2	C	6"	CH	SA	A	2X4DB168-3 (F-6)	O	C	NA	BDTO CKC	Normal Ops RO	 ROJ-V-28	NA
2-1302-U4-120 Main FW Bypass Hdr CH (Obrd Ctmt)	2	C	6"	CH	SA	A	2X4DB168-3 (F-8)	O	C	NA	BDTO CKC	Normal Ops RO	 ROJ-V-28	NA

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
2-1302-U4-125 Main FW Bypass Hdr Ctmt Iso CH	2	C	6"	CH	SA	A	2X4DB168-3 (G-2)	O	O	NA	BDTC CKO	RO CS	 CSJ-V-30	NA
2-1302-U4-126 Main FW Bypass Hdr Ctmt Iso CH	2	C	6"	CH	SA	A	2X4DB168-3 (G-4)	O	O	NA	BDTC CKO	RO CS	 CSJ-V-30	NA
2-1302-U4-127 Main FW Bypass Hdr Ctmt Iso CH	2	C	6"	CH	SA	A	2X4DB168-3 (G-6)	O	O	NA	BDTC CKO	RO CS	 CSJ-V-30	NA
2-1302-U4-128 Main FW Bypass Hdr Ctmt Iso CH	2	C	6"	CH	SA	A	2X4DB168-3 (G-8)	O	O	NA	BDTC CKO	RO CS	 CSJ-V-30	NA
2-FV-5154 Mot-Driven AFW Pmp Recir Line Stop Vlv	3	B	2"	GL	MO	A	2X4DB161-2 (C-5)	O	O/C	AI	PI STC STO	RO Q Q		NA
2-FV-5155 Mot-Driven AFW Pmp Recir Line Stop Vlv	3	B	2"	GL	MO	A	2X4DB161-2 (B-5)	O	O/C	AI	PI STC STO	RO Q Q		NA
2-HV-15196 Main FW Bypass Iso Vlv	2	B	6"	GA	AO	A	2X4DB168-3 (E-2)	O	C	C	FST PI STC_A STC_B	CS RO CS CS	CSJ-V-31 CSJ-V-31 CSJ-V-31	NA
2-HV-15197 Main FW Bypass Iso Vlv	2	B	6"	GA	AO	A	2X4DB168-3 (E-4)	O	C	C	FST PI STC_A STC_B	CS RO CS CS	CSJ-V-31 CSJ-V-31 CSJ-V-31	NA
2-HV-15198 Main FW Bypass Iso Vlv	2	B	6"	GA	AO	A	2X4DB168-3 (E-8)	O	C	C	FST PI STC_A STC_B	CS RO CS CS	CSJ-V-31 CSJ-V-31 CSJ-V-31	NA
2-HV-15199 Main FW Bypass Iso Vlv	2	B	6"	GA	AO	A	2X4DB168-3 (E-6)	O	C	C	FST PI STC_A STC_B	CS RO CS CS	CSJ-V-31 CSJ-V-31 CSJ-V-31	NA
2-HV-5106 AFW Steam Sup Stop Vlv	3	B	4"	GL	MO	A	2X4DB161-3 (G-5)	C	O	AI	PI STO	RO Q		NA

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
2-HV-5113 AFW Pmp Suc From CST Iso Vlv	3	B	10"	BU	MO	A	2X4DB161-2 (E-8)	C	O	AI	PI STO	RO Q		NA
2-HV-5118 AFW Pmp Suc From CST Iso Vlv	3	B	8"	BU	MO	A	2X4DB161-2 (C-8)	C	O	AI	PI STO	RO Q		NA
2-HV-5119 AFW Pmp Suc From CST Iso Vlv	3	B	8"	BU	MO	A	2X4DB161-2 (A-8)	C	O	AI	PI STO	RO Q		NA
2-HV-5120 AFW Pmp Disch Hdr Iso Vlv	2	B	4"	GL	MO	A	2X4DB161-2 (H-3)	O	O/C	AI	PI STC STO	RO Q Q		NA
2-HV-5122 AFW Pmp Disch Hdr Iso Vlv	2	B	4"	GL	MO	A	2X4DB161-2 (G-3)	O	O/C	AI	PI STC STO	RO Q Q		NA
2-HV-5125 AFW Pmp Disch Hdr Iso Vlv	2	B	4"	GL	MO	A	2X4DB161-2 (F-3)	O	O/C	AI	PI STC STO	RO Q Q		NA
2-HV-5127 AFW Pmp Disch Hdr Iso Vlv	2	B	4"	GL	MO	A	2X4DB161-2 (E-3)	O	O/C	AI	PI STC STO	RO Q Q		NA
2-HV-5132 AFW Pmp Disch Hdr Iso Vlv	2	B	4"	GL	MO	A	2X4DB161-2 (D-3)	O	O/C	AI	PI STC STO	RO Q Q		NA
2-HV-5134 AFW Pmp Disch Hdr Iso Vlv	2	B	4"	GL	MO	A	2X4DB161-2 (C-3)	O	O/C	AI	PI STC STO	RO Q Q		NA
2-HV-5137 AFW Pmp Disch Hdr Iso Vlv	2	B	4"	GL	MO	A	2X4DB161-2 (B-3)	O	O/C	AI	PI STC STO	RO Q Q		NA
2-HV-5139 AFW Pmp Disch Hdr Iso Vlv	2	B	4"	GL	MO	A	2X4DB161-2 (B-3)	O	O/C	AI	PI STC STO	RO Q Q		NA
2-PSV-5110 AFW Pmp Suc RV	3	C	3/4"	RV	SA	A	2X4DB161-2 (G-7)	C	O/C	NA	RVT	Note 6		NA

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
2-PSV-5128 AFW Pmp Suc RV	3	C	3/4"	RV	SA	A	2X4DB161-2 (D-7)	C	O/C	NA	RVT	Note 6	NA	
2-PSV-5129 AFW Pmp Suc RV	3	C	3/4"	RV	SA	A	2X4DB161-2 (B-7)	C	O/C	NA	RVT	Note 6	NA	

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
2-1305-U4-071 Main FW Iso CH	2	C	16"	CH	SA	A	2X4DB168-3 (G-5)	O	C	NA	BDTO CVC	Normal Ops RO	 ROJ-V-34	Notes 1, 2
2-1305-U4-073 Main FW Iso CH	2	C	16"	CH	SA	A	2X4DB168-3 (G-1)	O	C	NA	BDTO CVC	Normal Ops RO	 ROJ-V-34	Notes 1, 2
2-1305-U4-075 Main FW Iso CH	2	C	16"	CH	SA	A	2X4DB168-3 (G-7)	O	C	NA	BDTO CVC	Normal Ops RO	 ROJ-V-34	Notes 1, 2
2-1305-U4-077 Main FW Iso CH	2	C	16"	CH	SA	A	2X4DB168-3 (G-3)	O	C	NA	BDTO CVC	Normal Ops RO	 ROJ-V-34	Notes 1, 2
2-FV-0510 Main FW Reg Vlv	3	B	16"	AN	AO	A	2X4DB168-3 (D-2)	O	C	C	FST PI STC_A STC_B	CS RO CS CS	CSJ-V-32 CSJ-V-32 CSJ-V-32	NA
2-FV-0520 Main FW Reg Vlv	3	B	16"	AN	AO	A	2X4DB168-3 (D-3)	O	C	C	FST PI STC_A STC_B	CS RO CS CS	CSJ-V-32 CSJ-V-32 CSJ-V-32	NA
2-FV-0530 Main FW Reg Vlv	3	B	16"	AN	AO	A	2X4DB168-3 (D-7)	O	C	C	FST PI STC_A STC_B	CS RO CS CS	CSJ-V-32 CSJ-V-32 CSJ-V-32	NA
2-FV-0540 Main FW Reg Vlv	3	B	16"	AN	AO	A	2X4DB168-3 (D-5)	O	C	C	FST PI STC_A STC_B	CS RO CS CS	CSJ-V-32 CSJ-V-32 CSJ-V-32	NA
2-HV-5227 Main FW Iso Vlv	2	B	16"	GA	EH	A	2X4DB168-3 (F-1)	O	C	C	FST PI STC_A STC_B	CS RO CS CS	CSJ-V-33 CSJ-V-33 CSJ-V-33	NA
2-HV-5228 Main FW Iso Vlv	2	B	16"	GA	EH	A	2X4DB168-3 (F-3)	O	C	C	FST PI STC_A STC_B	CS RO CS CS	CSJ-V-33 CSJ-V-33 CSJ-V-33	NA

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
2-HV-5229	2	B	16"	GA	EH	A	2X4DB168-3	O	C	C	FST	CS	CSJ-V-33	NA
Main FW Iso Vlv							(F-7)				PI	RO		
											STC_A	CS	CSJ-V-33	
											STC_B	CS	CSJ-V-33	
2-HV-5230	2	B	16"	GA	EH	A	2X4DB168-3	O	C	C	FST	CS	CSJ-V-33	NA
Main FW Iso Vlv							(F-5)				PI	RO		
											STC_A	CS	CSJ-V-33	
											STC_B	CS	CSJ-V-33	
2-LV-5242	3	B	4"	GL	AO	A	2X4DB168-3	O/C	C	C	FST	Q		NA
Main FW Bypass Reg Vlv							(D-5)				PI	RO		
											STC_A	Q		
											STC_B	Q		
2-LV-5243	3	B	4"	GL	AO	A	2X4DB168-3	O/C	C	C	FST	Q		NA
Main FW Bypass Reg Vlv							(D-2)				PI	RO		
											STC_A	Q		
											STC_B	Q		
2-LV-5244	3	B	4"	GL	AO	A	2X4DB168-3	O/C	C	C	FST	Q		NA
Main FW Bypass Reg Vlv							(D-3)				PI	RO		
											STC_A	Q		
											STC_B	Q		
2-LV-5245	3	B	4"	GL	AO	A	2X4DB168-3	O/C	C	C	FST	Q		NA
Main FW Bypass Reg Vlv							(D-7)				PI	RO		
											STC_A	Q		
											STC_B	Q		

Unit 2

1411 - COND. CHEM. INJ.

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
2-1411-U4-676 Chem Sup to SG Ctmt Iso Vlv	2	A	1/2"	GL	MA	P	2X4DB159-1 (G-2)	C	C	NA	LT	CIV		NA
2-1411-U4-677 Chem Sup to SG Ctmt Iso Vlv	2	A	1/2"	GL	MA	P	2X4DB159-1 (C-2)	C	C	NA	LT	CIV		NA
2-1411-U4-678 Chem Sup to SG Ctmt Iso Vlv	2	A	1/2"	GL	MA	P	2X4DB159-3 (G-2)	C	C	NA	LT	CIV		NA
2-1411-U4-679 Chem Sup to SG Ctmt Iso Vlv	2	A	1/2"	GL	MA	P	2X4DB159-3 (C-3)	C	C	NA	LT	CIV		NA
2-HV-5278 Chem Sup to SG Ctmt Iso Vlv	2	A	1/2"	GL	AO	P	2X4DB159-3 (G-2)	C	C	NA	LT PI	CIV RO		NA
2-HV-5279 Chem Sup to SG Ctmt Iso Vlv	2	A	1/2"	GL	AO	P	2X4DB159-3 (C-2)	C	C	NA	LT PI	CIV RO		NA
2-HV-5280 Chem Sup to SG Ctmt Iso Vlv	2	A	1/2"	GL	AO	P	2X4DB159-1 (G-2)	C	C	NA	LT PI	CIV RO		NA
2-HV-5281 Chem Sup to SG Ctmt Iso Vlv	2	A	1/2"	GL	AO	P	2X4DB159-1 (C-2)	C	C	NA	LT PI	CIV RO		NA

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
2-1418-U4-005 Demin Water Sup to Ctmt Iso Viv	2	A	2"	GL	MA	P	AX4DB190-2 (B-4)	C	C	NA	LT	CIV		NA
2-1418-U4-038 Demin Water Sup to Ctmt Iso CH	2	AC	2"	CH	SA	P	AX4DB190-2 (B-3)	C	C	NA	LT	CIV		NA
2-PSV-17589 Demin Water Sup to Ctmt RV	2	AC	1.5"	RV	SA	A	AX4DB190-2 (C-3)	C	C	NA	LT	CIV		NA

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
2-HV-2626A Ctmt Purge Sup Ctmt Iso Vlv	2	A	24"	BU	MO	A	2X4DB213-1 (E-7)	O/C	C	AI	LT PI STC	CIV RO CS	CSJ-V-34	NA
2-HV-2626B Ctmt Mini-Purge Sup Ctmt Iso Vlv	2	A	14"	BU	AO	A	2X4DB213-1 (D-7)	O/C	C	C	FST LT PI STC	Q CIV RO Q		NA
2-HV-2627A Ctmt Purge Sup Ctmt Iso Vlv	2	A	24"	BU	MO	A	2X4DB213-1 (E-6)	O/C	C	AI	LT PI STC	CIV RO CS	CSJ-V-34	NA
2-HV-2627B Ctmt Mini-Purge Sup Ctmt Iso Vlv	2	A	14"	BU	AO	A	2X4DB213-1 (D-6)	O/C	C	C	FST LT PI STC	Q CIV RO Q		NA

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
2-HV-2628A Ctmt Purge Sup Ctmt Iso Vlv	2	A	24"	BU	MO	A	2X4DB213-1 (C-7)	O/C	C	AI	LT PI STC	CIV RO CS	CSJ-V-35	NA
2-HV-2628B Ctmt Mini-Purge Sup Ctmt Iso Vlv	2	A	14"	BU	AO	A	2X4DB213-1 (B-7)	O/C	C	C	FST LT PI STC	Q CIV RO Q		NA
2-HV-2629A Ctmt Purge Sup Ctmt Iso Vlv	2	A	24"	BU	MO	A	2X4DB213-1 (C-6)	O/C	C	AI	LT PI STC	CIV RO CS	CSJ-V-35	NA
2-HV-2629B Ctmt Mini-Purge Sup Ctmt Iso Vlv	2	A	14"	BU	AO	A	2X4DB213-1 (B-6)	O/C	C	C	FST LT PI STC	Q CIV RO Q		NA

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
2-1508-U4-012 Ctmt Post Accident Purge Exh Ctmt Man Iso Vlv	2	A	4"	GA	MA	P	2X4DB213-1 (G-6)	C	C	NA	LT	CIV	NA	
2-HV-2624A Ctmt Post Accident Purge Exh Ctmt Iso Vlv	2	A	4"	BU	MO	A	2X4DB213-1 (G-7)	C	C	NA	LT PI STC	CIV RO Q	NA	
2-HV-2624B Ctmt Post Accident Purge Exh Ctmt Iso Vlv	2	A	4"	BU	MO	A	2X4DB213-1 (F-7)	C	C	NA	LT PI STC	CIV RO Q	NA	

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
2-1513-U4-001 H2 Analyzer Ret to Ctmt Iso CH	2	AC	3/4"	CH	SA	A	2X4DB213-2 (B-7)	C	O/C	NA	CKC CKO LT	RO Q CIV	ROJ-V-29	NA
2-1513-U4-002 H2 Analyzer Ret to Ctmt Iso CH	2	AC	3/4"	CH	SA	A	2X4DB213-2 (B-7)	C	O/C	NA	CKC CKO LT	RO Q CIV	ROJ-V-29	NA
2-HV-2790A H2 Analyzer Sup From Ctmt Iso Vlv	2	A	3/4"	GL	SO	A	2X4DB213-2 (E-7)	C	O/C	C	FST LT PI STC STO	Q CIV RO Q Q		NA
2-HV-2790B H2 Analyzer Sup From Ctmt Iso Vlv	2	A	3/4"	GL	SO	A	2X4DB213-2 (D-7)	C	O/C	C	FST LT PI STC STO	Q CIV RO Q Q		NA
2-HV-2791A H2 Analyzer Sup From Ctmt Iso Vlv	2	A	3/4"	GL	SO	A	2X4DB213-2 (E-6)	C	O/C	C	FST LT PI STC STO	Q CIV RO Q Q		NA
2-HV-2791B H2 Analyzer Sup From Ctmt Iso Vlv	2	A	3/4"	GL	SO	A	2X4DB213-2 (C-6)	C	O/C	C	FST LT PI STC STO	Q CIV RO Q Q		NA
2-HV-2792A H2 Analyzer Sup From Ctmt Iso Vlv	2	A	3/4"	GL	SO	A	2X4DB213-2 (C-7)	C	O/C	C	FST LT PI STC STO	Q CIV RO Q Q		NA

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
2-HV-2792B	2	A	3/4"	GL	SO	A	2X4DB213-2	C	O/C	C	FST	Q		NA
H2 Analyzer Sup From Ctmt Iso Vlv							(C-7)				LT	CIV		
											PI	RO		
											STC	Q		
											STO	Q		
2-HV-2793A	2	A	3/4"	GL	SO	A	2X4DB213-2	C	O/C	C	FST	Q		NA
H2 Analyzer Ret to Ctmt Iso Vlv							(B-6)				LT	CIV		
											PI	RO		
											STC	Q		
											STO	Q		
2-HV-2793B	2	A	3/4"	GL	SO	A	2X4DB213-2	C	O/C	C	FST	Q		NA
H2 Analyzer Ret to Ctmt Iso Vlv							(B-6)				LT	CIV		
											PI	RO		
											PI	RO		
											STC	Q		
											STO	Q		

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
2-1592-U4-188 Chilled Water Makeup From Demin Water Sys CH	3	C	1"	CH	SA	A	2X4DB221 (F-7)	O/C	C	NA	BDTO CKC	RO Q	NA	
2-1592-U4-192 Chilled Water Makeup From Demin Water Sys CH	3	C	1"	CH	SA	A	2X4DB221 (C-7)	O/C	C	NA	BDTO CKC	RO Q	NA	
2-PSV-22404 Demin Water to Exp Tank RV	3	C	3/4"	RV	SA	A	2X4DB221 (G-7)	C	O/C	NA	RVT	Note 6	NA	
2-PSV-22405 Demin Water to Exp Tank RV	3	C	3/4"	RV	SA	A	2X4DB221 (D-7)	C	O/C	NA	RVT	Note 6	NA	

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
2-HV-12975 Sam Line To Air Sam Pan Ctmt Iso Vlv	2	A	1"	GA	SO	A	2X4DB213-2 (E-3)	O	C	C	FST LT PI STC	Q CIV RO Q	NA	
2-HV-12976 Sam Line To Air Sam Pan Ctmt Iso Vlv	2	A	1"	GA	SO	A	2X4DB213-2 (E-2)	O	C	C	FST LT PI STC	Q CIV RO Q	NA	
2-HV-12977 Sam Line Ret From Air Sam Pan Ctmt Iso Vlv	2	A	1"	GL	SO	A	2X4DB213-2 (D-2)	O	C	C	FST LT PI STC	Q CIV RO Q	NA	
2-HV-12978 Sam Line Ret From Air Sam Pan Ctmt Iso Vlv	2	A	1"	GL	SO	A	2X4DB213-2 (D-3)	O	C	C	FST LT PI STC	Q CIV RO Q	NA	

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
2-HV-7126 RCDT Vent/H2 Sup Ctmt Iso Vlv	2	A	3/4"	DI	AO	A	2X4DB127 (G-5)	O	C	C	FST LT PI STC	Q CIV RO Q		NA
2-HV-7136 RCDT Pmp Disch Ctmt Iso Vlv	2	A	3"	DI	AO	A	2X4DB127 (E-1)	O	C	C	FST LT PI STC	Q CIV RO Q		NA
2-HV-7150 RCDT Vent/H2 Sup Ctmt Iso Vlv	2	A	3/4"	DI	AO	A	2X4DB127 (G-4)	O	C	C	FST LT PI STC	Q CIV RO Q		NA
2-HV-7699 RCDT Pmp Disch Ctmt Iso Vlv	2	A	3"	DI	AO	A	2X4DB127 (D-1)	O	C	C	FST LT PI STC	Q CIV RO Q		NA
2-PSV-7699 Pen 77 Thermal RV	2	C	3/4"	RV	SA	A	2X4DB127 (E-1)	C	O/C	NA	RVT	Note 6		NA

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
2-2301-U4-036 Fire Prot Water Sup to Ctmt Iso CH	2	AC	6"	CH	SA	P	2X4DB174-4 (B-7)	C	C	NA	LT	CIV		NA
2-HV-27901 Fire Prot Water Sup to Ctmt Iso Viv	2	A	4"	GA	AO	A	2X4DB174-4 (B-7)	C	C	C	FST LT PI STC_A STC_B	CS CIV RO CS CS	CSJ-V-36 CSJ-V-36 CSJ-V-36	NA

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
2-2401-U4-034 Ser Air Sup Inbrd Ctmt Iso CH	2	AC	4"	CH	SA	P	2X4DB186-1 (D-3)	C	C	NA	LT	CIV		NA
2-2401-U4-184 Breathing Air Sup Ctmt Iso CH	2	AC	1.50"	CH	SA	P	2X4DB186-1 (C-3)	C	C	NA	LT	CIV		NA
2-2401-U4-211 Breathing Air Sup Ctmt Iso Vlv	2	A	1.50"	GA	MA	P	2X4DB186-1 (C-3)	C	C	NA	LT	CIV		NA
2-HV-9385 Ser Air Sup Obrd Ctmt Iso Vlv	2	A	4"	GA	AO	A	2X4DB186-1 (D-4)	C	C	C	FST LT PI STC	Q CIV RO Q		NA

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
2-2402-U4-017	2	AC	1"	CH	SA	A	2X4DB120 (G-1)	C	C	NA	BDTO CKC LT	RO RO CIV	ROJ-V-30	NA
Nitrogen Sup to Accums, Inbrd Ctmt Iso CH														
2-HV-8880	2	A	1"	GL	AO	A	2X4DB120 (G-1)	O/C	C	C	FST LT PI STC	Q CIV RO Q		NA
Nitrogen Sup To Accums, Obrd Ctmt Iso Vlv														

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
2-2420-U4-049	2	AC	2"	CH	SA	A	2X4DB186-4	O	C	NA	BDTO	Normal Ops		NA
Inst Air Sup Inbrd Ctmt Iso CH							(A-7)				CKC	RO	ROJ-V-31	
											LT	CIV		
2-HV-9378	2	A	2"	GL	AO	A	2X4DB186-4	O	C	C	FST	CS	CSJ-V-37	NA
Inst Air Sup to Ctmt Obrd Ctmt Iso Viv							(A-7)				LT	CIV		
											PI	RO		
											STC_A	CS	CSJ-V-37	
											STC_B	CS	CSJ-V-37	

Valve ID	CC	Cat.	Size	Type	Act.	AP	PID (Coord)	NP	SP	FP	Test	Freq	RR/CSJ/ROJ	Remarks
2-HV-8211	2	A	1"	GL	SO	A	2X4DB110 (C-8)	C	C	C	FST LT PI STC	Q CIV RO Q		NA
PASS Gaseous Sam Ret Ctmt Iso Vlv														
2-HV-8212	2	A	1"	GL	SO	A	2X4DB110 (C-7)	C	C	C	FST LT PI STC	Q CIV RO Q		NA
PASS Gaseous Sam Ret Ctmt Iso Vlv														

12.0 VALVE RELIEF REQUEST LOG

Relief Request	Component	Status *
RR-V-1	Class 2 and 3 safety/relief valves in compressible fluid and water systems	Submitted to the NRC for 3rd 10 Year IST Interval

* Status as result of latest revision to IST Program.

SOUTHERN NUCLEAR OPERATING COMPANY
IST PROGRAM – RELIEF REQUEST
PROPOSED ALTERNATIVE IN ACCORDANCE WITH 10 CFR 50.55a(a)(3)(i)
RR-V-1, Version 1.0

PLANT/UNIT: Vogtle Electric Generating Plant/Unit 1 and 2

INTERVAL: 3rd Interval beginning June 1, 2007 and ending May 31, 2017

COMPONENTS AFFECTED: Class 2 and 3 safety/relief valves in compressible fluid and water systems

CODE EDITION AND ADDENDA: ASME OM Code-2001 Edition with Addenda through OMb-2003

REQUIREMENTS: Appendix I, Section I-8000 of ASME OM Code contains test methods for compressible fluid services other than steam and liquid service safety/relief valves. Paragraphs I-8120(h) and I-8130(g) provide the requirement associated with the time between valve openings. The requirement from these paragraphs states:

A minimum of 5 min shall elapse between successive openings.

REASON FOR REQUEST: At Vogtle Electric Generating Plant (VEGP), pressure relief valves from various plant systems are tested in accordance with the provisions of ASME OM Code, Appendix I. A minimum of two consecutive valve actuations are measured to determine the set pressure of the valve. Under the provisions of ASME OM Code, the minimum elapsed time between valve openings is 5 minutes. The omission of this hold time between valve actuations would minimize test performance and system outage times. A reduction in system outage time enhances plant safety by the timely return of plant systems to service.

SOUTHERN NUCLEAR OPERATING COMPANY
IST PROGRAM – RELIEF REQUEST
PROPOSED ALTERNATIVE IN ACCORDANCE WITH 10 CFR 50.55a(a)(3)(i)
RR-V-1, Version 1.0

PROPOSED ALTERNATIVE AND BASIS: At VEGP, pressure relief valves in ASME Class 2 and 3 compressible fluid and water systems are bench tested at ambient conditions using water or air/nitrogen as the test medium, as applicable. Testing of these valves is conducted at ambient conditions in a shop environment. The test medium and the valve in this environment are in thermal equilibrium. The valve is placed on a stand and pressurized air/nitrogen is used to achieve test pressure of the test medium. There is no thermal source introduced during the test, which would result in a thermal imbalance or skew the accuracy of the test. Repeated valve actuations are conducted in a controlled environment under steady-state conditions.
Consequently, accurate and repeatable test results are achieved when measuring the set pressure of the compressible fluid and water system pressure relief valves.

VEGP's proposed request for relief from the provisions of ASME OM Code provides an alternative methodology for testing ASME Class 2 and 3 pressure relief valves. Alternative testing would shorten the time between valve openings from 5 minutes to no hold time for all compressible fluid and water system relief valves. VEGP's proposed alternative would demonstrate satisfactory repeatability and accuracy for determining set pressures of relief valves and would provide a commensurate level of quality and safety.

The above proposed alternative is considered reasonable since it provides an acceptable level of quality and safety. This proposed alternative should be granted pursuant to 10 CFR 50.55a(a)(3)(i).

DURATION: 3rd IST Interval, June 1, 2007 through May 31, 2017.

PRECEDENTS: This Relief Request was approved as RR-V-1 for the Second 10 Year IST Interval.

REFERENCES: NRC Safety Evaluation dated September 16, 2002– TAC Nos. MB5518 and MB5519.

STATUS: Submitted for NRC review.

13.0 COLD SHUTDOWN JUSTIFICATION (CSJ) LOG

CSJ	Components	Status*
CSJ-V-1	1(2)-HV-0442A 1(2)-HV-0442B 1(2)-HV-8095A 1(2)-HV-8095B 1(2)-HV-8096A 1(2)-HV-8096B	Submitted to the NRC for 3rd 10 Year IST Interval
CSJ-V-2	1(2)-HV-8701A 1(2)-HV-8701B 1(2)-HV-8702A 1(2)-HV-8702B	Submitted to the NRC for 3rd 10 Year IST Interval
CSJ-V-3	1(2)-1204-U6-125 1(2)-1204-U6-126 1(2)-1204-U6-128 1(2)-1204-U6-129	Submitted to the NRC for 3rd 10 Year IST Interval
CSJ-V-4	1(2)-1204-U6-147 1(2)-1204-U6-148 1(2)-1204-U6-149 1(2)-1204-U6-150	Submitted to the NRC for 3rd 10 Year IST Interval
CSJ-V-5	1(2)-HV-8802A 1(2)-HV-8802B	Submitted to the NRC for 3rd 10 Year IST Interval
CSJ-V-6	1(2)-HV-8806	Submitted to the NRC for 3rd 10 Year IST Interval
CSJ-V-7	1(2)-HV-8809A 1(2)-HV-8809B	Submitted to the NRC for 3rd 10 Year IST Interval
CSJ-V-8	1(2)-HV-8813	Submitted to the NRC for 3rd 10 Year IST Interval
CSJ-V-9	1(2)-HV-8835	Submitted to the NRC for 3rd 10 Year IST Interval
CSJ-V-10	1(2)-HV-8840	Submitted to the NRC for 3rd 10 Year IST Interval
CSJ-V-11	1(2)-1205-U6-001 1(2)-1205-U6-002	Submitted to the NRC for 3rd 10 Year IST Interval
CSJ-V-12	1(2)-1205-U6-009 1(2)-1205-U6-010	Submitted to the NRC for 3rd 10 Year IST Interval
CSJ-V-13	1(2)-HV-8804A	Submitted to the NRC for 3rd 10 Year IST Interval
CSJ-V-14	1(2)-HV-8804B	Submitted to the NRC for 3rd 10 Year IST Interval
CSJ-V-15	1(2)-1208-U4-185	Submitted to the NRC for 3rd 10 Year IST Interval

13.0 COLD SHUTDOWN JUSTIFICATION (CSJ) LOG (Cont.)

CSJ	Components	Status*
CSJ-V-16	1(2)-HV-8100 1(2)-HV-8112	Submitted to the NRC for 3rd 10 Year IST Interval
CSJ-V-17	1(2)-HV-8105	Submitted to the NRC for 3rd 10 Year IST Interval
CSJ-V-18	1(2)-HV-8106	Submitted to the NRC for 3rd 10 Year IST Interval
CSJ-V-19	1(2)-HV-8152 1(2)-HV-8160	Submitted to the NRC for 3rd 10 Year IST Interval
CSJ-V-20	1(2)-HV-8508A 1(2)-HV-8508B	Submitted to the NRC for 3rd 10 Year IST Interval
CSJ-V-21	1(2)-LV-0112B 1(2)-LV-0112C	Submitted to the NRC for 3rd 10 Year IST Interval
CSJ-V-22	1(2)-LV-0112D 1(2)-LV-0112E	Submitted to the NRC for 3rd 10 Year IST Interval
CSJ-V-23	1(2)-HV-2041 1(2)-HV-19051 1(2)-HV-19053 1(2)-HV-19055 1(2)-HV-19057	Submitted to the NRC for 3rd 10 Year IST Interval
CSJ-V-24	1(2)-HV-1974 1(2)-HV-1975 1(2)-HV-1978 1(2)-HV-1979	Submitted to the NRC for 3rd 10 Year IST Interval
CSJ-V-25	1(2)-1301-U4-008 1(2)-1301-U4-404	Submitted to the NRC for 3rd 10 Year IST Interval
CSJ-V-26	1(2)-HV-3006A 1(2)-HV-3006B 1(2)-HV-3016A 1(2)-HV-3016B 1(2)-HV-3026A 1(2)-HV-3026B 1(2)-HV-3036A 1(2)-HV-3036B	Submitted to the NRC for 3rd 10 Year IST Interval

13.0 COLD SHUTDOWN JUSTIFICATION (CSJ) LOG (Cont.)

CSJ	Components	Status*
CSJ-V-27	1(2)-1302-U4-001 1(2)-1302-U4-002 1(2)-1302-U4-014 1(2)-1302-U4-017 1(2)-1302-U4-020 1(2)-1302-U4-023 1(2)-1302-U4-026 1(2)-1302-U4-037 1(2)-1302-U4-040 1(2)-1302-U4-043 1(2)-1302-U4-046	Submitted to the NRC for 3rd 10 Year IST Interval
CSJ-V-28	1(2)-1302-U4-013 1(2)-1302-U4-033 1(2)-1302-U4-051 1(2)-1302-U4-052 1(2)-1302-U4-058 1(2)-1302-U4-061	Submitted to the NRC for 3rd 10 Year IST Interval
CSJ-V-29	1(2)-1302-U4-113 1(2)-1302-U4-114 1(2)-1302-U4-115 1(2)-1302-U4-116	Submitted to the NRC for 3rd 10 Year IST Interval
CSJ-V-30	1(2)-1302-U4-125 1(2)-1302-U4-126 1(2)-1302-U4-127 1(2)-1302-U4-128	Submitted to the NRC for 3rd 10 Year IST Interval
CSJ-V-31	1(2)-HV-15196 1(2)-HV-15197 1(2)-HV-15198 1(2)-HV-15199	Submitted to the NRC for 3rd 10 Year IST Interval
CSJ-V-32	1(2)-FV-0510 1(2)-FV-0520 1(2)-FV-0530 1(2)-FV-0540	Submitted to the NRC for 3rd 10 Year IST Interval
CSJ-V-33	1(2)-HV-5227 1(2)-HV-5228 1(2)-HV-5229 1(2)-HV-5230	Submitted to the NRC for 3rd 10 Year IST Interval
CSJ-V-34	1(2)-HV-2626A 1(2)-HV-2627A	Submitted to the NRC for 3rd 10 Year IST Interval
CSJ-V-35	1(2)-HV-2628A 1(2)-HV-2629A	Submitted to the NRC for 3rd 10 Year IST Interval

13.0 COLD SHUTDOWN JUSTIFICATION (CSJ) LOG (Cont.)

CSJ	Components	Status*
CSJ-V-36	1(2)-HV-27901	Submitted to the NRC for 3rd 10 Year IST Interval
CSJ-V-37	1(2)-HV-9378	Submitted to the NRC for 3rd 10 Year IST Interval
CSJ-V-38	1(2)-PV-3000 1(2)-PV-3010 1(2)-PV-3020 1(2)-PV-3030 1(2)-1301-U4-136 1(2)-1301-U4-137 1(2)-1301-U4-138 1(2)-1301-U4-139	Submitted to the NRC for 3rd 10 Year IST Interval

* Status as result of latest revision to IST Program.

Note: All Cold Shutdown Test Justifications were included in the Second 10 Year Interval IST Program and received NRC concurrence via SER dated 11/27/96. Second interval CSJ-V-3 was deleted since PORVs will be exercised each fuel cycle per ISTC-3510.

COLD SHUTDOWN JUSTIFICATION

CSJ-V-1

SYSTEM:	Reactor Coolant System - System No. 1201
VALVE(S):	1(2)-HV-0442A, 1(2)-HV-0442B, 1(2)-HV-8095A, 1(2)-HV-8095B, 1(2)-HV-8096A, 1(2)-HV-8096B
CATEGORY:	B
CLASS:	1 & 2 (valves 1(2)-1201-HV-0442A and 1(2)-1201-HV-0442B are Class 2)
FUNCTION:	These normally closed valves open to vent the reactor vessel.
QUARTERLY TEST REQUIREMENT:	Exercise, stroke time and fail-safe test (ISTC-3510)
COLD SHUTDOWN JUSTIFICATION:	Testing of these normally closed valves during power operation could cause a loss of reactor coolant which would produce unwarranted pressure and level fluctuations in the reactor coolant system. These valves, which are Target Rock solenoid valves, will open if subjected to a pressure surge. With the RCS pressurized, opening one of these valves would cause a pressure surge across the corresponding valve in series which could open it. This allows a direct flow path from the RCS to the pressurizer relief tank.
QUARTERLY PARTIAL STROKE TESTING:	None
COLD SHUTDOWN TESTING:	Exercise, stroke time and fail-safe test

COLD SHUTDOWN JUSTIFICATION

CSJ-V-2

SYSTEM:	Reactor Coolant System - System No. 1201
VALVE(S):	1(2)-HV-8701A, 1(2)-HV-8701B, 1(2)-HV-8702A, 1(2)-HV-8702B
CATEGORY:	A
CLASS:	1
FUNCTION:	These valves open to allow suction to the RHR pumps from the RCS.
QUARTERLY TEST REQUIREMENT:	Exercise and stroke time (ISTC-3510)
COLD SHUTDOWN JUSTIFICATION:	These valves isolate the low pressure RHR system from the high pressure RCS, and therefore, cannot be opened during normal operation since this would overpressurize the RHR system.
QUARTERLY PARTIAL STROKE TESTING:	None
COLD SHUTDOWN TESTING:	Exercise and stroke time

COLD SHUTDOWN JUSTIFICATION

CSJ-V-3

SYSTEM:	Safety Injection - System No. 1204
VALVE(S):	1(2)-1204-U6-125, 1(2)-1204-U6-126, 1(2)-1204-U6-128, 1(2)-1204-U6-129
CATEGORY:	AC
CLASS:	1
FUNCTION:	These valves open to allow hot leg injection into the RCS.
QUARTERLY TEST REQUIREMENT:	Forward flow exercise (ISTC-3510)
COLD SHUTDOWN JUSTIFICATION:	The only possible way to confirm full flow exercising of these check valves is by using the RHR pumps to inject into the RCS. During normal operation the RHR pumps cannot overcome RCS operating pressure.
QUARTERLY PARTIAL STROKE TESTING:	None
COLD SHUTDOWN TESTING:	These valves will be tested with flow from the RHR pumps. The maximum required flowrate through each valve will be confirmed.

COLD SHUTDOWN JUSTIFICATION

CSJ-V-4

SYSTEM:	Safety Injection - System No. 1204
VALVE(S):	1(2)-1204-U6-147, 1(2)-1204-U6-148, 1(2)-1204-U6-149, 1(2)-1204-U6-150
CATEGORY:	AC
CLASS:	1
FUNCTION:	These check valves open to allow cold leg injection into the RCS.
QUARTERLY TEST REQUIREMENT:	Forward flow exercise (ISTC-3510)
COLD SHUTDOWN JUSTIFICATION:	Forward flow exercising of these normally closed check valves can be confirmed only by injecting RHR water into the RCS. During normal operation the RHR pumps cannot overcome RCS operating pressure.
QUARTERLY PARTIAL STROKE TESTING:	None
COLD SHUTDOWN TESTING:	The maximum required accident condition flow through each valve will be confirmed.

COLD SHUTDOWN JUSTIFICATION

CSJ-V-5

SYSTEM:	Safety Injection - System No. 1204
VALVE(S):	1(2)-HV-8802A, 1(2)-HV-8802B
CATEGORY:	B
CLASS:	2
FUNCTION:	These valves open for hot leg injection.
QUARTERLY TEST REQUIREMENT:	Exercise and stroke time (ISTC-3510)
COLD SHUTDOWN JUSTIFICATION:	During power operation the Technical Specifications require that the power be removed from the valve operators with the valves in the closed position. Therefore, these valves cannot be stroked quarterly. Also, if these valves would not re-close following testing during power operation it would render that portion of safety injection inoperable.
QUARTERLY PARTIAL STROKE TESTING:	None
COLD SHUTDOWN TESTING:	Exercise and stroke time

COLD SHUTDOWN JUSTIFICATION

CSJ-V-6

SYSTEM:	Safety Injection - System No. 1204
VALVE(S):	1(2)-HV-8806
CATEGORY:	B
CLASS:	2
FUNCTION:	This valve isolates the refueling water storage tank from the safety injection pumps during post-accident recirculation.
QUARTERLY TEST REQUIREMENT:	Exercise and stroke time (ISTC-3510)
COLD SHUTDOWN JUSTIFICATION:	To close this valve for purposes of testing places the plant in an unsafe condition. Failure of this valve in the closed position would render both safety injection pumps inoperable. In addition, the Technical Specifications require that power be removed from this valve during power operation; therefore, the valve cannot be stroked quarterly.
QUARTERLY PARTIAL STROKE TESTING:	None
COLD SHUTDOWN TESTING:	Exercise and stroke time

COLD SHUTDOWN JUSTIFICATION

CSJ-V-7

SYSTEM:	Safety Injection - System No. 1204
VALVE(S):	1(2)-HV-8809A, 1(2)-HV-8809B
CATEGORY:	B
CLASS:	2
FUNCTION:	These valves close to isolate the RHR discharge from the SIS cold leg.
QUARTERLY TEST REQUIREMENT:	Exercise and stroke time (ISTC-3510)
COLD SHUTDOWN JUSTIFICATION:	During normal operation these valves are aligned to their accident position which is open. To close these valves for testing purposes unnecessarily places the plant in an unsafe condition. If these valves did not reopen following testing it would render that portion of low head safety injection inoperable. In addition, the Technical Specifications require that power be removed from these valves during power operation; therefore, they cannot be stroked quarterly.
QUARTERLY PARTIAL STROKE TESTING:	None
COLD SHUTDOWN TESTING:	Exercise and stroke time

COLD SHUTDOWN JUSTIFICATION

CSJ-V-8

SYSTEM:	Safety Injection - System No. 1204
VALVE(S):	1(2)-HV-8813
CATEGORY:	B
CLASS:	2
FUNCTION:	Safety injection pump miniflow. Valve closes during hot leg recirculation.
QUARTERLY TEST REQUIREMENT:	Exercise and stroke time (ISTC-3510)
COLD SHUTDOWN JUSTIFICATION:	During power operation the Technical Specifications require that the power be removed from the valve operator with the valve in the open position. Therefore, this valve cannot be stroked quarterly. Also, if this valve would not re-open following testing during power operation it would render both trains of safety injection inoperable.
QUARTERLY PARTIAL STROKE TESTING:	None
COLD SHUTDOWN TESTING:	Exercise and stroke time

COLD SHUTDOWN JUSTIFICATION

CSJ-V-9

SYSTEM:	Safety Injection - System No. 1204
VALVE(S):	1(2)-HV-8835
CATEGORY:	B
CLASS:	2
FUNCTION:	This valve closes when Safety Injection is aligned from cold leg injection to hot leg injection.
QUARTERLY TEST REQUIREMENT:	Exercise and stroke time (ISTC-3510)
COLD SHUTDOWN JUSTIFICATION:	To close this valve for purposes of testing places the plant in an unsafe condition. Failure of this valve in the closed position renders both safety injection pumps incapable of cold leg injection. In addition, the Technical Specifications require that power be removed from this valve during power operation; therefore, the valve cannot be stroked quarterly.
QUARTERLY PARTIAL STROKE TESTING:	None
COLD SHUTDOWN TESTING:	Exercise and stroke time

COLD SHUTDOWN JUSTIFICATION

CSJ-V-10

SYSTEM:	Safety Injection - System No. 1204
VALVE(S):	1(2)-HV-8840
CATEGORY:	B
CLASS:	2
FUNCTION:	This valve open for hot leg injection.
QUARTERLY TEST REQUIREMENT:	Exercise and stroke time (ISTC-3510)
COLD SHUTDOWN JUSTIFICATION:	During power operation the Technical Specifications require that the power be removed from the valve operator with the valve in the closed position. Therefore, this valve cannot be stroked quarterly. Also, if this valve would not re-close following testing during power operation it would render that portion of safety injection inoperable.
QUARTERLY PARTIAL STROKE TESTING:	None
COLD SHUTDOWN TESTING:	Exercise and stroke time

COLD SHUTDOWN JUSTIFICATION

CSJ-V-11

SYSTEM:	Residual Heat Removal - System No. 1205
VALVE(S):	1(2)-1205-U6-001, 1(2)-1205-U6-002
CATEGORY:	C
CLASS:	2
FUNCTION:	These check valves open to allow flow from the refueling water storage tank to the residual heat removal pumps. These valves close to prevent reverse flow to the refueling water storage tank.
QUARTERLY TEST REQUIREMENT:	Forward flow exercise (ISTC-3510)
COLD SHUTDOWN JUSTIFICATION:	During normal operation, the RHR pumps cannot overcome RCS operating pressure. Forward flow exercising of these normally closed check valves during normal operation can be confirmed only by aligning the RHR system to circulate water to and from the RWST. However, this alignment provides only partial flow through the check valves.
QUARTERLY PARTIAL STROKE TESTING:	None
COLD SHUTDOWN TESTING:	These valves will be tested during cold shutdown. The maximum required flowrate through each valve will be confirmed.

COLD SHUTDOWN JUSTIFICATION

CSJ-V-12

SYSTEM:	Residual Heat Removal - System No. 1205
VALVE(S):	1(2)-1205-U6-009, 1(2)-1205-U6-010
CATEGORY:	C
CLASS:	2
FUNCTION:	These valves are the RHR pump discharge check valves which are required to open to support various safety functions.
QUARTERLY TEST REQUIREMENT:	Forward flow exercise (ISTC-3510)
COLD SHUTDOWN JUSTIFICATION:	During normal operation, the RHR pumps cannot overcome RCS operating pressure. Forward flow exercising of these normally closed check valves during normal operation can only be confirmed by pumping in the miniflow circuit or by pumping back to the RWST. However, both of these test circuits allow only partial flow through the check valves.
QUARTERLY PARTIAL STROKE TESTING:	None
COLD SHUTDOWN TESTING:	These valves will be tested during cold shutdown. The maximum required flowrate through each valve will be confirmed.

COLD SHUTDOWN JUSTIFICATION

CSJ-V-13

SYSTEM:	Residual Heat Removal - System No. 1205
VALVE(S):	1(2)-HV-8804A
CATEGORY:	B
CLASS:	2
FUNCTION:	This valve opens to allow flow from the RWST through the RHR pumps to the centrifugal charging pumps during post-accident recirculation.
QUARTERLY TEST REQUIREMENT:	Exercise and stroke time (ISTC-3510)
COLD SHUTDOWN JUSTIFICATION:	Exercising this valve during normal operation could introduce refueling water into the RCS through the normally operating charging pump. RCS boron concentration could be adversely affected and could cause a plant shutdown.
QUARTERLY PARTIAL STROKE TESTING:	None
COLD SHUTDOWN TESTING:	Exercise and stroke time

COLD SHUTDOWN JUSTIFICATION

CSJ-V-14

SYSTEM:	Residual Heat Removal - System No. 1205
VALVE(S):	1(2)-HV-8804B
CATEGORY:	B
CLASS:	2
FUNCTION:	This normally closed valve opens to provide a flow path to the suction of the SI pumps from the RHR system. While closed it directs flow from the RHR pumps to the RCS for low pressure injection and shutdown cooling.
QUARTERLY TEST REQUIREMENT:	Exercise and stroke time (ISTC-3510)
COLD SHUTDOWN JUSTIFICATION:	Testing this valve during normal operation requires defeating the associated ECCS interlocks. To defeat the interlock, a jumper must be installed across energized terminals. Installation of electrical jumpers across energized terminals during normal operation is undesirable because of the possibility of shorting the terminals and causing undesirable effects. In addition, during the time the valve is opened and coincident with a small break LOCA the potential to overpressurize the SI suction piping exists. With the valve open and coincident with a large break LOCA and one or both RHR pumps running, the potential exists to runout either or both of the RHR pumps. Either one of these cases could cause component damage and place the plant in an undesirable condition.
QUARTERLY PARTIAL STROKE TESTING:	None for same reasons provided above.
COLD SHUTDOWN TESTING:	Exercise and stroke time

COLD SHUTDOWN JUSTIFICATION

CSJ-V-15

SYSTEM:	Chemical and Volume Control System - System No. 1208
VALVE(S):	1(2)-1208-U4-185
CATEGORY:	C
CLASS:	2
FUNCTION:	This valve opens to allow flow of boric acid from the boric acid transfer pumps to the suction of the charging pumps.
QUARTERLY TEST REQUIREMENT:	Forward flow exercise (ISTC-3510)
COLD SHUTDOWN JUSTIFICATION:	Forward flow exercising this check valve during power operation would adversely affect the boric acid concentrations in the RCS and potentially cause a plant shutdown.
QUARTERLY PARTIAL STROKE TESTING:	None
COLD SHUTDOWN TESTING:	This valve will be exercised during cold shutdown with flow from the boric acid transfer pumps to the RCS. The maximum required flow rate through these valves will be confirmed.

COLD SHUTDOWN JUSTIFICATION

CSJ-V-16

SYSTEM:	Chemical and Volume Control System - System No. 1208
VALVE(S):	1(2)-HV-8100, 1(2)-HV-8112
CATEGORY:	A
CLASS:	2
FUNCTION:	These valves close to isolate containment penetration 49.
QUARTERLY TEST REQUIREMENT:	Exercise and stroke time (ISTC-3510)
COLD SHUTDOWN JUSTIFICATION:	These valves isolate seal water flow from the reactor coolant pumps. Closing these valves during normal operation could damage the reactor coolant pump seals, resulting in a plant shutdown.
QUARTERLY PARTIAL STROKE TESTING:	None
COLD SHUTDOWN TESTING:	Exercise and stroke time when reactor coolant pumps are stopped during cold shutdown.

COLD SHUTDOWN JUSTIFICATION

CSJ-V-17

SYSTEM:	Chemical and Volume Control System - System No. 1208
VALVE(S):	1(2)-HV-8105
CATEGORY:	A
CLASS:	2
FUNCTION:	This valve closes for containment isolation and to isolate the charging pumps from the regenerative heat exchanger. It opens to provide a pathway for boration and inventory control to enable cold shutdown.
QUARTERLY TEST REQUIREMENT:	Exercise and stroke time (ISTC-3510)
COLD SHUTDOWN JUSTIFICATION:	Closing this valve during operation stops normal charging water flow to the reactor coolant system. Interruption of normal charging water could result in loss of pressurizer water level control and could result in a plant shutdown.
QUARTERLY PARTIAL STROKE TESTING:	None
COLD SHUTDOWN TESTING:	Exercise and stroke time to the open and close position.

COLD SHUTDOWN JUSTIFICATION

CSJ-V-18

SYSTEM:	Chemical and Volume Control System - System No. 1208
VALVE(S):	1(2)-HV-8106
CATEGORY:	B
CLASS:	2
FUNCTION:	This valve closes to isolate the charging pumps from the regenerative heat exchanger.
QUARTERLY TEST REQUIREMENT:	Exercise and stroke time (ISTC-3510)
COLD SHUTDOWN JUSTIFICATION:	Closing this valve during operation stops normal charging water flow to the reactor coolant system. Interruption of normal charging water could result in loss of pressurizer water level control and could result in a plant shutdown.
QUARTERLY PARTIAL STROKE TESTING:	None
COLD SHUTDOWN TESTING:	Exercise and stroke time

COLD SHUTDOWN JUSTIFICATION

CSJ-V-19

SYSTEM:	Chemical and Volume Control System - System No. 1208
VALVE(S):	1(2)-HV-8152, 1(2)-HV-8160
CATEGORY:	A
CLASS:	2
FUNCTION:	These valves close to isolate CVCS Letdown.
QUARTERLY TEST REQUIREMENT:	Exercise, stroke time, and fail-safe test (ISTC-3510)
COLD SHUTDOWN JUSTIFICATION:	Failure of either of these valves to open after exercising could cause a loss of control of the pressurizer water level. Loss of pressurizer water level control could require shutting the plant down. Closing any of these valves at power causes thermal shock to the regenerative heat exchanger and associated piping.
QUARTERLY PARTIAL STROKE TESTING:	None
COLD SHUTDOWN TESTING:	Exercise, stroke time, and fail-safe test

COLD SHUTDOWN JUSTIFICATION

CSJ-V-20

SYSTEM:	Chemical and Volume Control System - System No. 1208
VALVE(S):	1(2)-HV-8508A, 1(2)-HV-8508B
CATEGORY:	B
CLASS:	2
FUNCTION:	Provides alternate miniflow path for charging pumps following isolation of normal miniflow line.
QUARTERLY TEST REQUIREMENT:	Exercise and stroke time (ISTC-3510)
COLD SHUTDOWN JUSTIFICATION:	These valves have interlocks such that they cannot be opened unless the volume control tank discharge valves (LV-0112B, LV-0112C) and RHR discharge to SI and charging pumps valves (HV-8804A, HV-8804B) are closed. Valves LV-0112B and LV-0112C are tested on a cold shutdown frequency as discussed in Cold Shutdown Justification CSJ-V-22. Therefore, these valves (HV-8508A, HV-8508B) can only be tested on a cold shutdown frequency.
QUARTERLY PARTIAL STROKE TESTING:	None
COLD SHUTDOWN TESTING:	Exercise and stroke time

COLD SHUTDOWN JUSTIFICATION

CSJ-V-21

SYSTEM:	Chemical and Volume Control System - System No. 1208
VALVE(S):	1(2)-LV-0112B, 1(2)-LV-0112C
CATEGORY:	B
CLASS:	2
FUNCTION:	These valves close to isolate the volume control tank.
QUARTERLY TEST REQUIREMENT:	Exercise and stroke time (ISTC-3510)
COLD SHUTDOWN JUSTIFICATION:	The volume control tank provides the normal charging water and seal water flow to the RCS and RCS pumps. Because the VCT acts as a head tank for the charging pump an alternate source of water would be required during valve testing. Injection into the RCS of any available alternate source of water would cause changes in RCS boron concentration and could result in a plant shutdown.
QUARTERLY PARTIAL STROKE TESTING:	None
COLD SHUTDOWN TESTING:	Exercise and stroke time

COLD SHUTDOWN JUSTIFICATION

CSJ-V-22

SYSTEM:	Chemical and Volume Control System - System No. 1208
VALVE(S):	1(2)-LV-0112D, 1(2)-LV-0112E
CATEGORY:	B
CLASS:	2
FUNCTION:	These valves open to allow flow from the RWST to the centrifugal charging pumps and re-close during post-accident recirculation.
QUARTERLY TEST REQUIREMENT:	Exercise and stroke time (ISTC-3510)
COLD SHUTDOWN JUSTIFICATION:	Exercising these valves during normal operation could introduce refueling water into the RCS through the normally operating charging pump. RCS boron concentration could be adversely affected and could cause a plant shutdown.
QUARTERLY PARTIAL STROKE TESTING:	None
COLD SHUTDOWN TESTING:	Exercise and stroke time

COLD SHUTDOWN JUSTIFICATION

CSJ-V-23

SYSTEM:	Auxiliary Component Cooling Water - System No. 1217
VALVE(S):	1(2)-HV-2041, 1(2)-HV-19051, 1(2)-HV-19053, 1(2)-HV-19055, 1(2)-HV-19057
CATEGORY:	B
CLASS:	3
FUNCTION:	These valves isolate if a thermal barrier rupture occurs.
QUARTERLY TEST REQUIREMENT:	Exercise and stroke time (ISTC-3510)
COLD SHUTDOWN JUSTIFICATION:	These valves are normally open to allow cooling water to the thermal barriers. To close these valves during normal operation would stop cooling water to the thermal barriers which could potentially damage the reactor coolant pumps.
QUARTERLY PARTIAL STROKE TESTING:	None
COLD SHUTDOWN TESTING:	Exercise and stroke time during cold shutdown when reactor coolant pumps are stopped.

COLD SHUTDOWN JUSTIFICATION

CSJ-V-24

SYSTEM:	Auxiliary Component Cooling Water - System No. 1217
VALVE(S):	1(2)-HV-1974, 1(2)-HV-1975, 1(2)-HV-1978, 1(2)-HV-1979
CATEGORY:	A
CLASS:	2
FUNCTION:	These valves close to perform a containment isolation function.
QUARTERLY TEST REQUIREMENT:	Exercise and stroke time (ISTC-3510)
COLD SHUTDOWN JUSTIFICATION:	Auxiliary component cooling water is used to maintain cooling of the reactor coolant pump bearing oil coolers and thermal barriers. A loss of cooling water to the thermal barriers could result in a temperature increase of the oil and motor bearing metal. Any extended loss of cooling water could result in extensive damage to the reactor coolant pumps.
QUARTERLY PARTIAL STROKE TESTING:	None
COLD SHUTDOWN TESTING:	Exercise and stroke time during cold shutdown when reactor coolant pumps are stopped.

COLD SHUTDOWN JUSTIFICATION

CSJ-V-25

SYSTEM:	Main Steam - System No. 1301
VALVE(S):	1(2)-1301-U4-008, 1(2)-1301-U4-404
CATEGORY:	C
CLASS:	3
FUNCTION:	These valves open to allow steam to the AFW pump turbine and close to prevent reverse flow.
QUARTERLY TEST REQUIREMENT:	Forward flow exercise (ISTC-3510)
COLD SHUTDOWN JUSTIFICATION:	Forward flow exercising these valves during full power operation would require establishing full AFW pump flow into the steam generators. The introduction of cold water into the hot steam generators during full power operation results in a significant thermal shock to the feedwater nozzles. Subjecting the feedwater nozzles to this thermal transient on a quarterly basis decreases the fatigue life of the nozzles and could possibly result in the nozzles cracking.
QUARTERLY PARTIAL STROKE TESTING:	These valves are partial flow exercised subsequent to reassembly (See ROJ-V-27).
COLD SHUTDOWN TESTING:	These valves will be forward flow exercised on a cold shutdown frequency by confirming that the AFW pump is delivering the required flow through valves 1(2)-1302-U4-014, 1(2)-1302-U4-017, 1(2)-1302-U4-020, 1(2)-1302-U4-023 and 1(2)-1302-U4-026 as discussed in CSJ-V-27.

COLD SHUTDOWN JUSTIFICATION

CSJ-V-26

SYSTEM:	Main Steam - System No. 1301
VALVE(S):	1(2)-HV-3006A, 1(2)-HV-3006B, 1(2)-HV-3016A, 1(2)-HV-3016B, 1(2)-HV-3026A, 1(2)-HV-3026B, 1(2)-HV-3036A, 1(2)-HV-3036B
CATEGORY:	B
CLASS:	2
FUNCTION:	These valves close to isolate main steam.
QUARTERLY TEST REQUIREMENT:	Exercise, stroke time, and fail-safe test (ISTC-3510)
COLD SHUTDOWN JUSTIFICATION:	Exercising these main steam isolation valves (MSIVs) during normal operation would cause a severe pressure transient in the associated main steam lines which could cause a plant shutdown. It would be necessary to reduce reactor power during normal operation to facilitate closure exercising quarterly. Such power reduction is not warranted just to exercise the valves quarterly. NUREG-1482, Rev.1, addresses partial exercising testing of the MSIVs in paragraph 4.2.6. The NUREG indicates that the revised standard technical specifications recommends that the MSIVs should not be tested at power, because even a partial exercise increases the risk of a valve closure when the unit is generating power.
QUARTERLY PARTIAL STROKE TESTING:	None. ISTC-3521(b) requires a partial exercise test quarterly if practical. The MSIV are equipped with a test circuit that allows the valve to be partial exercised (approx. 10% closure) during normal power operation. However, there have been numerous plant events reported in NPRDS associated with partial exercising the MSIVs during normal operation. These events involved instances where the test circuit did not function properly and the tested valve went full closed resulting in a pressure transient and a subsequent plant trip. Therefore, no partial exercising will be performed during normal power operation.
COLD SHUTDOWN TESTING:	Exercise, stroke time, and fail-safe test

COLD SHUTDOWN JUSTIFICATION

CSJ-V-27

SYSTEM:	Auxiliary Feedwater - System No. 1302
VALVE(S):	1(2)-1302-U4-001, 1(2)-1302-U4-002, 1(2)-1302-U4-014, 1(2)-1302-U4-017, 1(2)-1302-U4-020, 1(2)-1302-U4-023, 1(2)-1302-U4-026, 1(2)-1302-U4-037, 1(2)-1302-U4-040, 1(2)-1302-U4-043, 1(2)-1302-U4-046
CATEGORY:	C
CLASS:	2 and 3
FUNCTION:	These valves open to allow auxiliary feedwater flow to the steam generators.
QUARTERLY TEST REQUIREMENT:	Forward flow exercise (ISTC-3510)
COLD SHUTDOWN JUSTIFICATION:	The only way to confirm forward exercising of these valves is by operating the auxiliary feedwater pumps and injecting relatively cold condensate water directly into the steam generators. The introduction of cold water into the hot steam generators during operation would result in large thermal shock to the feedwater nozzles and could cause cracking of the nozzles.
QUARTERLY PARTIAL STROKE TESTING:	None
COLD SHUTDOWN TESTING:	Forward flow exercising will be performed by confirming required flow through each valve during cold shutdown.

COLD SHUTDOWN JUSTIFICATION

CSJ-V-28

SYSTEM:	Auxiliary Feedwater - System No. 1302
VALVE(S):	1(2)-1302-U4-013, 1(2)-1302-U4-033, 1(2)-1302-U4-051, 1(2)-1302-U4-052, 1(2)-1302-U4-058, 1(2)-1302-U4-061
CATEGORY:	C
CLASS:	3
FUNCTION:	These check valves open to allow flow from the condensate storage tanks to the suction of the AFW pumps.
QUARTERLY TEST REQUIREMENT:	Forward flow exercise (ISTC-3510)
COLD SHUTDOWN JUSTIFICATION:	The only way to forward flow exercise these valves is by operating the auxiliary feedwater pumps and injecting relatively cold condensate water directly into the steam generators. The introduction of cold water into the hot steam generators during power operation would result in large thermal shock to the feedwater nozzles and could cause cracking of the nozzles.
QUARTERLY PARTIAL STROKE TESTING:	None
COLD SHUTDOWN TESTING:	These valves will be confirmed capable of opening to their required safety position during cold shutdown. This test will be performed by taking pump suction from each condensate storage tank and verifying the required flow to the steam generators.

COLD SHUTDOWN JUSTIFICATION

CSJ-V-29

SYSTEM:	Auxiliary Feedwater - System No. 1302
VALVE(S):	1(2)-1302-U4-113, 1(2)-1302-U4-114, 1(2)-1302-U4-115, 1(2)-1302-U4-116
CATEGORY:	C
CLASS:	2
FUNCTION:	These valves open to allow auxiliary feedwater flow to the steam generators.
QUARTERLY TEST REQUIREMENT:	Forward flow exercise (ISTC-3510)
COLD SHUTDOWN JUSTIFICATION:	The only way to confirm forward flow exercising of these valves is by operating the auxiliary feedwater pumps and injecting relatively cold condensate water directly into the steam generators. The introduction of cold water into the hot steam generators during operation would result in large thermal shock to the feedwater nozzles and could cause cracking of the nozzles.
QUARTERLY PARTIAL STROKE TESTING:	None
COLD SHUTDOWN TESTING:	Forward flow exercising will be performed by confirming that required flow is passed through each valve during cold shutdown.

COLD SHUTDOWN JUSTIFICATION

CSJ-V-30

SYSTEM:	Auxiliary Feedwater - System No. 1302
VALVE(S):	1(2)-1302-U4-125, 1(2)-1302-U4-126, 1(2)-1302-U4-127, 1(2)-1302-U4-128
CATEGORY:	C
CLASS:	2
FUNCTION:	These valves open to allow auxiliary feedwater flow to the steam generators.
QUARTERLY TEST REQUIREMENT:	Forward flow exercise (ISTC-3510)
COLD SHUTDOWN JUSTIFICATION:	These valves are in the feedwater bypass line and, as such, are open during full power. However, flow instrumentation is not installed in this line to facilitate confirmation of flow. Therefore, the test frequency for these valves will be cold shutdown in order to use existing flow instrumentation which is installed in the auxiliary feedwater system.
QUARTERLY PARTIAL STROKE TESTING:	None
COLD SHUTDOWN TESTING:	These valves will be confirmed capable of opening to their required safety position during cold shutdown. This test will be performed by injecting auxiliary feedwater into the steam generators.

COLD SHUTDOWN JUSTIFICATION

CSJ-V-31

SYSTEM:	Auxiliary Feedwater - System No. 1302
VALVE(S):	1(2)-HV-15196, 1(2)-HV-15197, 1(2)-HV-15198, 1(2)-HV-15199
CATEGORY:	B
CLASS:	2
FUNCTION:	These valves close to stop flow if a feedwater line ruptures.
QUARTERLY TEST REQUIREMENT:	Exercise, stroke time, and fail-safe test (ISTC-3510)
COLD SHUTDOWN JUSTIFICATION:	Exercising these valves during normal operation partially isolates normal feedwater flow to the steam generators. This isolation of the bypass line could cause a feedwater transient resulting in a reactor trip due to steam generator water level oscillation during the opening and closing of the valves.
QUARTERLY PARTIAL STROKE TESTING:	None
COLD SHUTDOWN TESTING:	Exercise, stroke time, and fail-safe test

COLD SHUTDOWN JUSTIFICATION

CSJ-V-32

SYSTEM:	Condensate and Feedwater - System No. 1305
VALVE(S):	1(2)-FV-0510, 1(2)-FV-0520, 1(2)-FV-0530, 1(2)-FV-0540
CATEGORY:	B
CLASS:	3
FUNCTION:	These valves regulate feedwater flow and close to stop flow if a feedwater line ruptures.
QUARTERLY TEST REQUIREMENT:	Exercise, stroke time, and fail-safe test (ISTC-3510)
COLD SHUTDOWN JUSTIFICATION:	Exercising these valves during normal operation isolates primary normal feedwater flow to the steam generators. Isolation of the primary normal feedwater flow would cause a steam generator transient and could cause a plant shutdown.
QUARTERLY PARTIAL STROKE TESTING:	None
COLD SHUTDOWN TESTING:	Exercise, stroke time, and fail-safe test

COLD SHUTDOWN JUSTIFICATION

CSJ-V-33

SYSTEM:	Condensate and Feedwater - System No. 1305
VALVE(S):	1(2)-HV-5227, 1(2)-HV-5228, 1(2)-HV-5229, 1(2)-HV-5230
CATEGORY:	B
CLASS:	2
FUNCTION:	These valves close to stop flow if a feedwater line ruptures.
QUARTERLY TEST REQUIREMENT:	Exercise, stroke time, and fail-safe test (ISTC-3510)
COLD SHUTDOWN JUSTIFICATION:	Exercising these valves during normal operation isolates normal feedwater flow to the steam generators. Isolation of the normal feedwater flow results in a steam generator transient (low level) and could cause a plant trip.
QUARTERLY PARTIAL STROKE TESTING:	None. ISTC-3521(b) requires a partial exercise test quarterly if practical. The main feedwater isolation valves (MFIVs) are equipped with a test circuit that allows the valve to be partial exercised (approx. 10% closure) during normal power operation. However, a malfunction of the test circuit could result in a transient or a plant trip. There have been numerous plant events reported in NPRDS associated with partial exercising main steam isolation valves (MSIVs) during normal operation. These events involved instances where the test circuit did not function properly and the tested valve went full closed resulting in a pressure transient and a subsequent plant trip. The MFIVs utilize a similar test circuit and should the test circuit fail, a steam generator transient would result and the potential for a plant trip would increase significantly. NUREG-1482, Rev.1, paragraph 2.4.5, cites examples of impractical conditions which would allow testing to be deferred to cold shutdown. A specific example given is if a test could cause a power reduction or plant trip. Since a partial test of the MFIVs could result in a plant trip, it is impractical to perform this test quarterly. Therefore, no partial exercising will be performed during normal power operation.
COLD SHUTDOWN TESTING:	Exercise, stroke time, and fail-safe test

COLD SHUTDOWN JUSTIFICATION

CSJ-V-34

SYSTEM:	Containment Air Purification and Cleanup - System No. 1505
VALVE(S):	1(2)-HV-2626A, 1(2)-HV-2627A
CATEGORY:	A
CLASS:	2
FUNCTION:	These valves close to perform their containment isolation function.
QUARTERLY TEST REQUIREMENT:	Exercise and stroke time (ISTC-3510)
COLD SHUTDOWN JUSTIFICATION:	The Plant Technical Specifications preclude opening of these valves during modes 1, 2, 3, and 4.
QUARTERLY PARTIAL STROKE TESTING:	None
COLD SHUTDOWN TESTING:	Exercise and stroke time

COLD SHUTDOWN JUSTIFICATION

CSJ-V-35

SYSTEM:	Containment Air Purification and Cleanup - System No. 1506
VALVE(S):	1(2)-HV-2628A, 1(2)-HV-2629A
CATEGORY:	A
CLASS:	2
FUNCTION:	These valves close to perform their containment isolation function.
QUARTERLY TEST REQUIREMENT:	Exercise and stroke time (ISTC 4.2.1)
COLD SHUTDOWN JUSTIFICATION:	The Plant Technical Specifications preclude opening of these valves during modes 1, 2, 3, and 4.
QUARTERLY PARTIAL STROKE TESTING:	None
COLD SHUTDOWN TESTING:	Exercise and stroke time

COLD SHUTDOWN JUSTIFICATION

CSJ-V-36

SYSTEM:	Fire Protection Water - System No. 2301
VALVE(S):	1(2)-HV-27901
CATEGORY:	A
CLASS:	2
FUNCTION:	This valve closes to perform its containment isolation function.
QUARTERLY TEST REQUIREMENT:	Exercise, stroke time, and fail-safe test (ISTC-3510)
COLD SHUTDOWN JUSTIFICATION:	This valve is normally closed during power operation. It is opened during refueling and possibly cold shutdown to support fire protection requirements. To open this valve for testing purposes unnecessarily compromises the containment boundary.
QUARTERLY PARTIAL STROKE TESTING:	None
COLD SHUTDOWN TESTING:	Exercise, stroke time, and fail-safe test

COLD SHUTDOWN JUSTIFICATION

CSJ-V-37

SYSTEM:	Instrument Air - System No. 2420
VALVE(S):	1(2)-HV-9378
CATEGORY:	A
CLASS:	2
FUNCTION:	This valve closes to perform its containment isolation function.
QUARTERLY TEST REQUIREMENT:	Exercise, stroke time, and fail-safe test (ISTC-3510)
COLD SHUTDOWN JUSTIFICATION:	Testing of this valve during normal operation would cause an interruption of instrument air supply to instruments and equipment within containment. Also, a failure in a non-conservative position during a cycling test would cause a complete loss of instrument air supply to the containment. The loss of instrument air to containment would cause the letdown isolation valves (1(2)-HV-15214, 1(2)-HV-8160 and 1(2)-HV-8152) to fail closed. These CVCS valves (1(2)-HV-8160 and 1(2)-HV-8152) are not stroked closed during power operation, as explained in CSJ-V-19. Therefore, this instrument air isolation valve cannot be stroked closed during power operation.
QUARTERLY PARTIAL STROKE TESTING:	None
COLD SHUTDOWN TESTING:	Exercise, stroke time, and fail-safe test

COLD SHUTDOWN JUSTIFICATION

CSJ-V-38

SYSTEM:	Main Steam – System No. 1301
VALVE(S):	1(2)-PV-3000, 1(2)-PV-3010, 1(2)-PV-3020 and 1(2)-PV-3030 1(2)-1301-U4-136, 1(2)-1301-U4-137, 1(2)-1301-U4-138 and 1(2)-1301-U4-139
CATEGORY:	B
CLASS:	2
FUNCTION:	ARVs are installed to provide for controlled removal of reactor decay heat during normal reactor cooldown when the MSIVs are closed or the turbine bypass system is not available. Each ARV is located outside the containment and upstream of the MSIV, in the safety-related portion of the main steam line associated with each SG, to permit valve operation following all accident conditions, including those which could result in closure of the MSIVs. Each ARV line is provided with a block valve to isolate the associated ARV for testing during normal operation, if needed, or ARV maintenance or isolation during an accident scenario. During plant cooldown, the ARVs are automatically controlled by steam line pressure, with remote manual adjustment of the pressure set-point from the PSDB or PSDA. Local manual operators (hand pump) are provided to permit operation of the ARVs in the event of a complete loss of automatic or remote manual control. On the loss of power and/or signal, the actuator will extend the operator and close the valve (i.e., ARVs Fail Closed). The primary function of the hydraulic operator is for ARV modulation. However, the design bases do not take credit for the hydraulic operator for ARV manipulation and credit is taken for the local manual hand pump.
QUARTERLY TEST REQUIREMENT:	Exercise and stroke time per ISTC 4.2.4.

COLD SHUTDOWN JUSTIFICATION:	These valves are located in the main steam valve room. Access to this area is restricted because of the personnel hazards associated with the high ambient temperatures and contact temperatures of piping and components located in the room. There is also the potential for steam relief from the main steam safety valves and/or atmospheric relief valves. Equally important is the potential for plant tripping due to the sensitive nature of the equipment in room. Inadvertent contact with the limit switches on the main steam isolation valves can cause an unwanted initiation of plant protective equipment including turbine overspeed protection and reactor protection systems.
QUARTERLY PARTIAL STROKE TESTING:	None, due to reason above.
COLD SHUTDOWN TESTING:	Exercise and stroke time. Valve Fail-Safe testing and Remote Position Verification will also be performed on a Refueling Outage frequency not to exceed once every 24-months.

14.0 REFUELING OUTAGE JUSTIFICATION (ROJ) LOG

ROJ	Components	Status*
ROJ-V-1	1(2)-1201-U4-251 1(2)-1201-U4-252	Submitted to the NRC for 3rd 10 Year IST Interval
ROJ-V-2	1(2)-1201-U6-112	Submitted to the NRC for 3rd 10 Year IST Interval
ROJ-V-3	1(2)-1204-U4-026 1(2)-1204-U4-027 1(2)-1204-U4-028 1(2)-1204-U4-029	Submitted to the NRC for 3rd 10 Year IST Interval
ROJ-V-4	1(2)-1204-U4-120 1(2)-1204-U4-121 1(2)-1204-U4-122 1(2)-1204-U4-123 1(2)-1204-U4-143 1(2)-1204-U4-144 1(2)-1204-U4-145 1(2)-1204-U4-146 1(2)-1204-U6-124 1(2)-1204-U6-127	Submitted to the NRC for 3rd 10 Year IST Interval
ROJ-V-5	1(2)-1204-U4-262 1(2)-1204-U4-263	Submitted to the NRC for 3rd 10 Year IST Interval
ROJ-V-6	1(2)-1204-U6-013	Submitted to the NRC for 3rd 10 Year IST Interval
ROJ-V-7	1(2)-1204-U6-079 1(2)-1204-U6-080 1(2)-1204-U6-081 1(2)-1204-U6-082	Submitted to the NRC for 3rd 10 Year IST Interval
ROJ-V-8	1(2)-1204-U6-083 1(2)-1204-U6-084 1(2)-1204-U6-085 1(2)-1204-U6-086	Submitted to the NRC for 3rd 10 Year IST Interval
ROJ-V-9	1(2)-1204-U6-090	Submitted to the NRC for 3rd 10 Year IST Interval
ROJ-V-10	1(2)-1204-U6-098 1(2)-1204-U6-099	Submitted to the NRC for 3rd 10 Year IST Interval
ROJ-V-11	1(2)-1204-U6-125 1(2)-1204-U6-126 1(2)-1204-U6-128 1(2)-1204-U6-129	Submitted to the NRC for 3rd 10 Year IST Interval

14.0 REFUELING OUTAGE JUSTIFICATION (ROJ) LOG (Cont.)

ROJ	Components	Status*
ROJ-V-12	1(2)-1204-U6-147 1(2)-1204-U6-148 1(2)-1204-U6-149 1(2)-1204-U6-150	Submitted to the NRC for 3rd 10 Year IST Interval
ROJ-V-13	1(2)-1204-U6-163	Submitted to the NRC for 3rd 10 Year IST Interval
ROJ-V-14	1(2)-1205-U4-122 1(2)-1205-U4-123	Submitted to the NRC for 3rd 10 Year IST Interval
ROJ-V-15	1(2)-1206-U6-001 1(2)-1206-U6-008	Submitted to the NRC for 3rd 10 Year IST Interval
ROJ-V-16	1(2)-1206-U6-015 1(2)-1206-U6-016	Submitted to the NRC for 3rd 10 Year IST Interval
ROJ-V-17	1(2)-1208-U4-004 1(2)-1208-U4-353 1(2)-1208-U4-354 1(2)-1208-U4-355	Submitted to the NRC for 3rd 10 Year IST Interval
ROJ-V-18	1(2)-1208-U4-021	Submitted to the NRC for 3rd 10 Year IST Interval
ROJ-V-19	1(2)-1208-U6-032	Submitted to the NRC for 3rd 10 Year IST Interval
ROJ-V-20	1(2)-1208-U6-124	Submitted to the NRC for 3rd 10 Year IST Interval
ROJ-V-21	1(2)-1208-U6-142 1(2)-1208-U6-149	Submitted to the NRC for 3rd 10 Year IST Interval
ROJ-V-22	1(2)-1208-U6-189	Submitted to the NRC for 3rd 10 Year IST Interval
ROJ-V-23	1(2)-1208-U6-436	Submitted to the NRC for 3rd 10 Year IST Interval
ROJ-V-24	1(2)-1208-HV-8103A 1(2)-1208-HV-8103B 1(2)-1208-HV-8103C 1(2)-1208-HV-8103D	Submitted to the NRC for 3rd 10 Year IST Interval
ROJ-V-25	1(2)-1217-U4-084 1(2)-1217-U4-085 1(2)-1217-U4-086 1(2)-1217-U4-087	Submitted to the NRC for 3rd 10 Year IST Interval

14.0 REFUELING OUTAGE JUSTIFICATION (ROJ) LOG (Cont.)

ROJ	Components	Status*
ROJ-V-26	1(2)-1217-U4-113	Submitted to the NRC for 3rd 10 Year IST Interval
ROJ-V-27	1(2)-1301-U4-008 1(2)-1301-U4-404	Submitted to the NRC for 3rd 10 Year IST Interval
ROJ-V-28	1(2)-1302-U4-117 1(2)-1302-U4-118 1(2)-1302-U4-119 1(2)-1302-U4-120	Submitted to the NRC for 3rd 10 Year IST Interval
ROJ-V-29	1(2)-1513-U4-001 1(2)-1513-U4-002	Submitted to the NRC for 3rd 10 Year IST Interval
ROJ-V-30	1(2)-2402-U4-017	Submitted to the NRC for 3rd 10 Year IST Interval
ROJ-V-31	1(2)-2420-U4-0497	Submitted to the NRC for 3rd 10 Year IST Interval
ROJ-V-32	1(2)-1202-U4-A07 1(2)-1202-U4-A08 1(2)-1202-U4-A09 1(2)-1202-U4-A13 1(2)-1202-U4-A14 1(2)-1202-U4-A15	Submitted to the NRC for 3rd 10 Year IST Interval
ROJ-V-33	1(2)-1202-U4-466 1(2)-1202-U4-467 1(2)-1202-U4-468 1(2)-1202-U4-471 1(2)-1202-U4-472 1(2)-1202-U4-473	Submitted to the NRC for 3rd 10 Year IST Interval
ROJ-V-34	1(2)-1305-U4-071 1(2)-1305-U4-073 1(2)-1305-U4-075 1(2)-1305-U4-077	Submitted to the NRC for 3rd 10 Year IST Interval

* Status as result of latest revision to IST Program.

Note: All Refueling Outage Test Justifications were included in the Second 10 Year Interval IST Program and received NRC concurrence via SER dated 11/27/96.

REFUELING OUTAGE JUSTIFICATION

ROJ-V-1

SYSTEM:	Reactor Coolant System - System No. 1201
VALVE(S):	1(2)-1201-U4-251, 1(2)-1201-U4-252
CATEGORY:	C
CLASS:	2
FUNCTION:	These valves provide overpressure protection from thermal expansion between RHR suction isolation valves.
QUARTERLY TEST REQUIREMENT:	Forward flow exercise (ISTC-3510)
BASIS FOR JUSTIFICATION:	Forward flow exercise can be confirmed only by doing a flow/pressure test or disassembly. A flow/pressure test would require personnel entry into containment and the installation of test equipment. Furthermore, there exists a potential for injecting cold water and/or nitrogen into the RCS hot legs when performing this test. It is impractical and potentially hazardous to perform such testing quarterly or at cold shutdown.
PARTIAL QUARTERLY EXERCISE:	Subsequent to reassembly.
ALTERNATE TESTING:	A flow/pressure test or valve disassembly will be performed at each refueling outage. If disassembly is chosen to confirm operational readiness, one of these valves (each unit) will be disassembled and manually stroked at refueling on a rotating basis. If disassembly reveals that the valve is degraded, the remaining valve will be disassembled.

REFUELING OUTAGE JUSTIFICATION

ROJ-V-2

SYSTEM:	Reactor Coolant System - System No. 1201
VALVE(S):	1(2)-1201-U6-112
CATEGORY:	AC
CLASS:	2
FUNCTION:	This valve is required to close to perform its containment isolation function.
QUARTERLY TEST REQUIREMENT:	Reverse flow closure (ISTC-3510)
BASIS FOR JUSTIFICATION:	The subject valve is located inside containment on the primary grade water supply line to the RCP standpipes and the PRT. Since the valve performs a containment isolation function it is subject to periodic leakrate testing as required by 10 CFR 50 Appendix J. There are only two methods available to confirm reverse flow closure of this check valve. These methods are (1) Type C local leakrate testing conducted per Appendix J, or (2) the use of nonintrusive check valve testing equipment. To perform a local leakrate test requires that a portion of the line be isolated and drained. Personnel entry into containment is required to set up test equipment and perform the test. Similarly, performing nonintrusive testing requires entry into containment to set up test equipment and perform the test. Since performance of either test requires personnel entry into containment and the installation of test equipment, it is impractical to perform such testing quarterly or at cold shutdown.
PARTIAL QUARTERLY EXERCISE:	None
ALTERNATE TESTING:	Reverse flow closure of the valve will be proven by either the Appendix J Type C Test, a pressure test, or by nonintrusive means each refueling outage.

REFUELING OUTAGE JUSTIFICATION

ROJ-V-3

SYSTEM:	Safety Injection - System No. 1204
VALVE(S):	1(2)-1204-U4-026, 1(2)-1204-U4-027, 1(2)-1204-U4-028, 1(2)-1204-U4-029
CATEGORY:	C
CLASS:	1
FUNCTION:	Valves open to allow cold leg injection from the charging pumps during an accident.
QUARTERLY TEST REQUIREMENT:	Forward flow exercise (ISTC-3510)
BASIS FOR JUSTIFICATION:	The only possible way to perform forward flow exercising of these check valves is by using the CVCS charging pump flow through the boron injection tank into the RCS cold legs. However, injecting water into the RCS through the boron injection tank during power operation exposes the safety injection nozzles to thermal shock and interrupts normal charging and letdown. Injection of CVCS charging pump flow at cold shutdown could result in a low temperature overpressurization of the RCS.
PARTIAL QUARTERLY EXERCISE:	None
ALTERNATE TESTING:	Forward flow exercising will be confirmed at refueling when the reactor vessel head is removed and full CVCS charging pump flow can be used. The maximum required accident condition flow through each valve will be confirmed.

REFUELING OUTAGE JUSTIFICATION

ROJ-V-4

SYSTEM:	Safety Injection - System No. 1204
VALVE(S):	1(2)-1204-U4-120, 1(2)-1204-U4-121, 1(2)-1204-U4-122, 1(2)-1204-U4-123, 1(2)-1204-U4-143, 1(2)-1204-U4-144, 1(2)-1204-U4-145, 1(2)-1204-U4-146, 1(2)-1204-U6-124, 1(2)-1204-U6 127
CATEGORY:	AC
CLASS:	1
FUNCTION:	Valves U4-143, U4-144, U4-145 and U4-146 open to allow cold leg injection from the SIS pumps during an accident. Valves U4-120, U4-121, U4-122, U4-123, U6-124, and U6-127, open to allow hot leg injection from the SIS pumps during an accident.
QUARTERLY TEST REQUIREMENT:	Forward flow exercise and reverse flow closure. (ISTC-3510)
BASIS FOR JUSTIFICATION:	Forward flow exercise and reverse flow closure of these normally closed check valves can be performed only by injecting SIS water into the reactor coolant system and allowing reactor pressure to reclose the valves. During normal operation the SIS pumps cannot overcome RCS operating pressure. During cold shutdown, injecting SIS flow into the RCS could cause low temperature overpressurization of the RCS.
PARTIAL QUARTERLY EXERCISE:	None
ALTERNATE TESTING:	Forward flow exercise will be confirmed at refueling when the reactor vessel head is removed and full SIS pump flow can be initiated. The maximum required accident condition flow through each valve will be confirmed. Reverse flow closure will be demonstrated by the leakage test, required by Technical Specifications, during startup after a refueling outage.

REFUELING OUTAGE JUSTIFICATION

ROJ-V-5

SYSTEM:	Safety Injection - System No. 1204
VALVE(S):	1(2)-1204-U4-262, 1(2)-1204-U4-263
CATEGORY:	C
CLASS:	2
FUNCTION:	These valves close to isolate the refueling water storage tank if an upstream line breaks.
QUARTERLY TEST REQUIREMENT:	Reverse flow closure (ISTC-3510)
BASIS FOR JUSTIFICATION:	Due to piping design, reverse flow closure can be confirmed only by disassembling the check valves and observing the disk position or by performing a non-intrusive check valve test.
PARTIAL QUARTERLY EXERCISE:	None
ALTERNATE TESTING:	One of these valves will be disassembled and manually exercised each refueling outage on a rotating basis. Alternately, the valves will be tested using nonintrusive check valve testing technology in accordance with the guidance in NRC NUREG-1482, Rev.1, section 4.1.2.

REFUELING OUTAGE JUSTIFICATION

ROJ-V-6

SYSTEM:	Safety Injection - System No. 1204
VALVE(S):	1(2)-1204-U6-013
CATEGORY:	C
CLASS:	1
FUNCTION:	Valve opens to allow cold leg injection from the charging pumps during an accident.
QUARTERLY TEST REQUIREMENT:	Forward flow exercise and reverse flow closure (ISTC-3510)
BASIS FOR JUSTIFICATION:	The only possible way to confirm forward flow exercise and reverse flow closure of this check valve is by using the CVCS charging pump flow through the boron injection tank into the RCS cold legs. However, injecting water into the RCS through the boron injection tank during power operation exposes the safety injection nozzles to thermal shock and interrupts normal charging and letdown. Injection of CVCS charging pump flow at cold shutdown could result in a low temperature overpressurization of the RCS.
PARTIAL QUARTERLY EXERCISE:	Subsequent to reassembly, if disassembled.
ALTERNATE TESTING:	Forward flow exercise will be confirmed at refueling when the reactor vessel head is removed and full CVCS charging pump flow can be used. The maximum required accident condition flow through this valve will be confirmed. Reverse flow closure of this valve will be verified by disassembly and manually exercising each refueling outage or as endorsed by the NRC in NUREG-1482, Rev.1, section 4.1.2, by non-intrusive testing techniques during full flow testing.

REFUELING OUTAGE JUSTIFICATION

ROJ-V-7

SYSTEM:	Safety Injection - System No. 1204
VALVE(S):	1(2)-1204-U6-079, 1(2)-1204-U6-080, 1(2)-1204-U6 081, 1(2)-1204-U6-082
CATEGORY:	AC
CLASS:	1
FUNCTION:	These valves open when the downstream pressure is less than the upstream pressure which allows cold leg injection from the accumulator tanks.
QUARTERLY TEST REQUIREMENT:	Forward flow exercise and reverse flow closure.(ISTC-3510)
BASIS FOR JUSTIFICATION:	The Safety Injection System (SIS) accumulator tanks are isolated from the Reactor Coolant System (RCS) by these normally closed check valves. Each accumulator is charged with a nitrogen blanket of approximately 650 psig. This pressure is insufficient during normal operation to inject into the RCS. If these valves were to be exercised at cold shutdown, the contents of the tank would be dumped into the RCS at the charge pressure of 650 psig which could result in a low temperature over-pressurization of the RCS.
PARTIAL QUARTERLY EXERCISE:	None
ALTERNATE TESTING:	The use of non-intrusive check valve testing techniques is endorsed in NUREG-1482, Rev.1, section 4.1.2 for confirming full flow exercising of check valves. In accordance with the guidance provided in the NUREG for valve grouping, all four Unit valves in this group will be non-intrusively tested initially during the same refueling outage. Subsequent testing will consist of one valve being non-intrusively tested on a rotating basis while the other three valves are flow tested each refueling outage. However, if the non-intrusive test indicates that a valve is inoperable, then all four valves in the group will be non-intrusively tested and the appropriate corrective actions will be implemented to return the valves to the operable condition. Reverse flow closure will be demonstrated by the leakage test, required by Technical Specifications, during startup after a refueling outage.

REFUELING OUTAGE JUSTIFICATION

ROJ-V-8

SYSTEM:	Safety Injection - System No. 1204
VALVE(S):	1(2)-1204-U6-083, 1(2)-1204-U6-084, 1(2)-1204-U6-085, 1(2)-1204-U6-086
CATEGORY:	AC
CLASS:	1
FUNCTION:	These valves open when the downstream pressure is less than the upstream pressure which allows cold leg injection from the accumulator tanks. These valves also open for RHR flow.
QUARTERLY TEST REQUIREMENT:	Forward flow exercise and reverse flow closure (ISTC-3510)
BASIS FOR JUSTIFICATION:	The SIS accumulator tanks are isolated from the RCS by these normally closed check valves. Each accumulator is charged with a nitrogen blanket of 650 psig. This pressure is insufficient during operation to inject into the RCS. If these valves were to be exercised at cold shutdown, the contents of the tank would be dumped into the RCS at the charge pressure of 650 psig which could result in a low temperature overpressurization of the RCS. Similarly, these valves isolate the RHR system during normal operation. During normal operation, the discharge head of the RHR pumps is insufficient to inject into the RCS.
PARTIAL QUARTERLY EXERCISE:	None

ALTERNATE TESTING:

The use of non-intrusive check valve testing techniques is endorsed in NUREG-1482, Rev.1, section 4.1.2 for confirming full flow exercising of check valves. In accordance with the guidance provided in the NUREG for valve grouping, all four Unit valves in this group will be non-intrusively tested initially during the same refueling outage. Subsequent testing will consist of one valve being non-intrusively tested on a rotating basis while the other three valves are flow tested each refueling outage.

However, if the non-intrusive test indicates that a valve is inoperable, then all four valves in the group will be non-intrusively tested and the appropriate corrective actions will be implemented to return the valves to the operable condition.

REFUELING OUTAGE JUSTIFICATION

ROJ-V-9

SYSTEM:	Safety Injection - System No. 1204
VALVE(S):	1(2)-1204-U6-090
CATEGORY:	C
CLASS:	2
FUNCTION:	Valve opens to allow SIS pump suction from the RWST.
QUARTERLY TEST REQUIREMENT:	Forward flow exercise (ISTC-3510)
BASIS FOR JUSTIFICATION:	The only possible flow test during normal operation is during pump testing using the 3-inch miniflow line back to the RWST. Full flow testing using the SI pumps is not possible because the maximum SI pump pressure is less than the RCS operating pressure. Using the SI pumps to test the valve at cold shutdown could cause low temperature overpressurization of the RCS.
PARTIAL QUARTERLY EXERCISE:	None
ALTERNATE TESTING:	Forward flow exercise will be confirmed at refueling when the reactor vessel head is removed and full SIS pump flow can be used.

REFUELING OUTAGE JUSTIFICATION

ROJ-V-10

SYSTEM:	Safety Injection - System No. 1204
VALVE(S):	1(2)-1204-U6-098, 1(2)-1204-U6-099
CATEGORY:	C
CLASS:	2
FUNCTION:	The SIS pump discharge check valves open to allow flow from the pumps for safety injection.
QUARTERLY TEST REQUIREMENT:	Forward flow exercise (ISTC-3510)
BASIS FOR JUSTIFICATION:	Forward flow exercising of these normally closed check valves can be confirmed only by injecting SIS water into the reactor coolant system. During normal operation the SIS pumps can not overcome RCS operating pressure. During cold shutdown, injecting SIS flow into the RCS could cause low temperature overpressurization of the RCS.
PARTIAL QUARTERLY EXERCISE:	None
ALTERNATE TESTING:	Forward flow exercising will be confirmed at refueling when the reactor vessel head is removed and full SIS pump flow can be used.

REFUELING OUTAGE JUSTIFICATION

ROJ-V-11

SYSTEM:	Safety Injection - System No. 1204
VALVE(S):	1(2)-1204-U6-125, 1(2)-1204-U6-126, 1(2)-1204-U6-128, 1(2)-1204-U6-129
CATEGORY:	AC
CLASS:	1
FUNCTION:	These valves may be required to cycle depending on whether cold leg or hot leg safety injection is being performed.
QUARTERLY TEST REQUIREMENT:	Reverse flow closure (ISTC-3510)
BASIS FOR JUSTIFICATION:	The only possible way to confirm reverse flow closure of these check valves is by performing the pressure isolation valve leakage test as required by Technical Specifications section 3.4.14.1.
PARTIAL QUARTERLY EXERCISE:	None
ALTERNATE TESTING:	Reverse flow closure will be confirmed at startup, after a refueling outage, by the performance of the Technical Specifications required pressure isolation valve leakage test.

REFUELING OUTAGE JUSTIFICATION

ROJ-V-12

SYSTEM:	Safety Injection - System No. 1204
VALVE(S):	1(2)-1204-U6-147, 1(2)-1204-U6-148, 1(2)-1204-U6-149, 1(2)-1204-U6-150
CATEGORY:	AC
CLASS:	1
FUNCTION:	These check valves close to divert flow during safety injection evolution necessary for recovery.
QUARTERLY TEST REQUIREMENT:	Reverse flow closure (ISTC-3510)
BASIS FOR JUSTIFICATION:	Reverse flow closure testing of these check valves would require the closing of 1(2)-1204-HV-8809A or B. This action would render the A or B train of RHR Safety Injection inoperable and put the Plant in a Limiting Condition for Operation (LCO).
PARTIAL QUARTERLY EXERCISE:	None
ALTERNATE TESTING:	The ECCS test line subsystem provides the capability for determination of the integrity of the high pressure boundaries. The subsystem is used to verify that the above check valves can independently sustain operational differential pressure and are capable of reverse flow closure. These are required periodic tests performed per Technical Specification SR 3.4.14.1.

REFUELING OUTAGE JUSTIFICATION

ROJ-V-13

SYSTEM:	Safety Injection - System No. 1204
VALVE(S):	1(2)-1204-U6-163
CATEGORY:	C
CLASS:	2
FUNCTION:	Valve opens to allow suction to the safety injection pumps from the RHR system.
QUARTERLY TEST REQUIREMENT:	Forward flow exercise (ISIC-3510)
BASIS FOR JUSTIFICATION:	Forward flow exercising requires full flow operation of the SIS injection pump. During normal RCS operation the SIS pumps cannot overcome RCS operating pressure. During cold shutdown injection into the RCS using the SIS pumps could cause a low temperature overpressurization of the RCS.
PARTIAL QUARTERLY EXERCISE:	None
ALTERNATE TESTING:	Forward flow exercising will be confirmed at refueling when the reactor vessel head is removed and full SIS pump flow can be used.

REFUELING OUTAGE JUSTIFICATION

ROJ-V-14

SYSTEM:	Residual Heat Removal - System No. 1205
VALVE(S):	1(2)-1205 U4-122, 1(2)-1205 U4-123
CATEGORY:	A
CLASS:	2
FUNCTION:	These valves open to allow flow from the containment sumps to the RHR pumps. They close to prevent the RWST tank from draining to the containment sumps.
QUARTERLY TEST REQUIREMENT:	Forward flow exercise and reverse flow closure (ISTC-3510)
BASIS FOR JUSTIFICATION:	Forward flow exercising can be confirmed only by initiating flow through the valves from the containment sumps. The sumps are maintained in a dry condition during all modes of plant operation; therefore, there is no fluid available for a forward flow test. The only method available to confirm reverse flow closure is subjecting the valves to differential head pressure between the RWST and the containment sumps by opening the containment sump motor isolation valve. If the isolation fails to close, there exist the potential for flooding the containment.
PARTIAL QUARTERLY EXERCISE:	No for the preceding reason.
ALTERNATE TESTING:	One of these valves will be disassembled and manually stroked every refueling on a rotating basis. If disassembly reveals that the valve is not functional, the remaining valve will be disassembled. Sample disassembly and inspection complies with the requirements specified in ISTC-5221(c).

REFUELING OUTAGE JUSTIFICATION

ROJ-V-15

SYSTEM:	Containment Spray - System No. 1206
VALVE(S):	1(2)-1206-U6 001, 1(2)-1206-U6 008
CATEGORY:	C
CLASS:	2
FUNCTION:	Valves open to allow flow from the RWST to the suction of the containment spray pumps.
QUARTERLY TEST REQUIREMENT:	Forward flow exercise and reverse flow closure (ISTC-3510)
BASIS FOR JUSTIFICATION:	Forward flow exercise can be confirmed only by operating the containment spray pumps during pump testing. The pump test return line to the refueling water storage tank is only a 2-inch line, which precludes full-flow testing of these 10-inch check valves. The only flow path possible to achieve full flow would require initiating spray into the containment. Reverse flow closure verification would require filling the containment sumps and initiating containment spray system recirculation mode operation. Either of these tests would result in extensive damage to components inside containment. In addition, verification of closure capability by measuring differential pressure was evaluated. However, the system does not contain the required isolation valves to observe a pressure differential across these check valves.
PARTIAL QUARTERLY EXERCISE:	Partial forward flow testing will be performed subsequent to reassembly.
ALTERNATE TESTING:	One of these valves will be disassembled and manually stroked at refueling on a rotating basis. If disassembly reveals that the valve is not functional, the remaining valve will be disassembled. Sample disassembly and inspection complies with the requirements specified in ISTC-5221(c).

REFUELING OUTAGE JUSTIFICATION

ROJ-V-16

SYSTEM:	Containment Spray - System No. 1206
VALVE(S):	1(2)-1206-U6-015, 1(2)-1206-U6-016
CATEGORY:	AC
CLASS:	2
FUNCTION:	Valve opens to allow flow for containment spray. Valve closes to perform containment isolation function.
QUARTERLY TEST REQUIREMENT:	Forward flow exercise and reverse flow closure (ISTC-3510)
BASIS FOR JUSTIFICATION:	Forward flow exercise can be confirmed only by initiating flow through the valves into the containment structure. The initiation of containment spray into the containment would result in extensive damage to equipment inside containment. The only method available to confirm reverse flow closure is valve leak testing during Appendix J, type C, testing at refueling.

The following actions, as required by Position 2 of NRC Generic Letter 89-04, have been taken to justify extending the disassembly and manual stroking to every other refueling on a rotating basis:

- The Maintenance Work Order history for each of these valves was reviewed and indicated that there was no degradation of these valves.
- EPIX was queried and no failures of these valves were found.
- The installation of each valve addressing the "EPRI Application Guidelines for Check Valves in Nuclear Power Plants" was reviewed for problematic locations and no problematic locations for these valves were identified.

PARTIAL QUARTERLY EXERCISE:	No for the preceding reason.

ALTERNATE TESTING:	One of these valves will be disassembled and manually stroked every other refueling on a rotating basis. If disassembly reveals that the valve is not functional, the remaining valve will be disassembled. In addition, reverse flow closure will be confirmed during Appendix J, type C, testing at refueling.

REFUELING OUTAGE JUSTIFICATION

ROJ-V-17

SYSTEM:	Chemical and Volume Control System - System No. 1208
VALVE(S):	1(2)-1208-U4 004, 1(2)-1208-U4 353, 1(2)-1208-U4 354, 1(2)-1208-U4 355
CATEGORY:	C
CLASS:	2
FUNCTION:	These valves are required to close to perform their containment isolation function.
QUARTERLY TEST REQUIREMENT:	Reverse flow closure (ISTC-3510)
BASIS FOR JUSTIFICATION:	Reverse flow closure testing of these valves will require isolation of seal injection flow to the reactor coolant pumps. Reactor coolant pump manual X6AB09-119 Section 6 Part 1 Note 3 states that seal water "flow should be maintained at all times when reactor coolant system pressure is above atmospheric." Therefore, testing during normal operation (quarterly) or at cold shutdown is impractical. Test performance will require personnel entry into the containment to position associated system valves and to set up testing equipment. Personnel entry into the containment and performance of this test has the potential to: • Increase personnel radiation exposure, • Increase the potential for RCP seal and bearing damage due to the interruption of seal injection flow, and • Prolong the shutdown due to the stringent requirements on personnel entry into containment and the time required to perform the test. Therefore the only practical method to confirm reverse flow closure is by a leakage test at each refueling outage.
PARTIAL QUARTERLY EXERCISE:	None
ALTERNATE TESTING:	Reverse flow closure will be confirmed by a leakage test at each refueling outage.

REFUELING OUTAGE JUSTIFICATION

ROJ-V-18

SYSTEM:	Chemical and Volume Control System - System No. 1208
VALVE(S):	1(2)-1208-U4-021
CATEGORY:	AC
CLASS:	2
FUNCTION:	This valve is relied upon to open to prevent overpressurization between the containment isolation valves (HV-8100 and HV-8112) due to thermal expansion and to close for containment isolation.
QUARTERLY TEST REQUIREMENT:	Forward exercise and reverse flow closure (ISTC-3510)
BASIS FOR JUSTIFICATION:	Exercising these valves during normal operation or at cold shutdown would require the isolation of the seal water to the RCS pump seals. If seal water is terminated, reactor coolant is forced from the high pressure RCS into the seals. Reactor coolant normally contains a high particulate matter concentration which is carried with RCS in-leakage and contaminates the seals. Reactor coolant pump manual X6AB09-119 Section 6 Part 1 Note 3 states that seal water "flow should be maintained at all times when reactor coolant system pressure is above atmospheric." Therefore, testing during normal operation (quarterly) or at cold shutdown is impractical.
PARTIAL QUARTERLY EXERCISE:	None
ALTERNATE TESTING:	Forward exercise and reverse flow closure will be verified each refueling outage by performing a flow/pressure test.

REFUELING OUTAGE JUSTIFICATION

ROJ-V-19

SYSTEM:	Chemical and Volume Control System - System No. 1208
VALVE(S):	1(2)-1208-U6-032
CATEGORY:	AC
CLASS:	2
FUNCTION:	CVCS to regenerative heat exchanger check valve which closes to perform a containment isolation function and opens to allow boric acid flow for a safety grade cold shutdown.
QUARTERLY TEST REQUIREMENT:	Reverse flow closure (ISTC-3510)
BASIS FOR JUSTIFICATION:	The subject valve is located inside containment on the charging line upstream of the regenerative heat exchanger. The valve opens to serve as a boration flowpath for safety grade cold shutdown and is verified opened quarterly by flow. The valve also has a safety function to close for containment isolation and is subject to periodic leakrate testing as required by Appendix J. There are only two methods available to confirm reverse flow closure of this check valve. These methods are (1) Type C local leakrate testing conducted per Appendix J, or (2) the use of nonintrusive check valve testing equipment. To perform either of these tests requires personnel entry into containment to set up test equipment and perform the test. Since performance of the test requires a personnel entry into containment and the installation of test equipment, it is impractical to perform either test quarterly or at cold shutdown.
PARTIAL QUARTERLY EXERCISE:	None
ALTERNATE TESTING:	Reverse flow closure will be confirmed each refueling outage, either by performing leakrate testing or by the use of nonintrusive check valve testing equipment. The refueling outage frequency is consistent with the guidelines set forth in NUREG-1482, Rev.1, section 4.1.6.

REFUELING OUTAGE JUSTIFICATION

ROJ-V-20

SYSTEM:	Chemical and Volume Control System - System 1208
VALVE(S):	1(2)-1208-U6-124
CATEGORY:	C
CLASS:	2
FUNCTION:	Isolate potential leakage path outside containment.
QUARTERLY TEST REQUIREMENT:	Reverse flow closure (ISTC-3510)
BASIS FOR JUSTIFICATION:	Testing this check valve requires that letdown and Reactor Coolant Pump (RCP) seal water return to the Volume Control Tank (VCT) be isolated, thus, removing the Chemical and Volume Control System (CVCS) from service. The CVCS is required to be in service during normal operation. Therefore, quarterly testing is not possible. Similarly, performing the test at cold shutdown would require isolating seal water to the RCPs. RCP seal water is typically only isolated during mid-loop operations when the Reactor Coolant System (RCS) level is below the RCP seals thus preventing crud intrusion into the seal packages. There have been numerous undesirable events throughout the industry which have resulted from mid-loop operations, e.g., vortexing / cavitation of the Residual Heat Removal (RHR) pumps due to improper RCS level indication. Mid-loop operation reduces RCS inventory which thereby reduces the plant's margin of safety. Reactor Coolant Pump manual X6AB09-119 Section 6 Part 1 Note 3 states that seal water "flow should be maintained at all times when reactor coolant system pressure is above atmospheric." Therefore, the safety risks associated with testing this check valve during cold shutdowns are unwarranted.
PARTIAL QUARTERLY EXERCISE:	None

ALTERNATE TESTING:

Reverse flow closure will be confirmed during each refueling outage by measuring a change in VCT level over time.

This test will be performed in conjunction with the Emergency Core Cooling Systems (ECCS) check valve flow tests when the RHR system is providing flow to the suction of the centrifugal charging pumps. This check valve must close to prevent flow diversion to the VCT.

The proposed alternate testing method is consistent with the discussion provided in NUREG-1482, Rev.1, section 4.1.5.

REFUELING OUTAGE JUSTIFICATION

ROJ-V-21

SYSTEM:	Chemical and Volume Control System - System No. 1208
VALVE(S):	1(2)-1208-U6-142, and 1(2)-1208-U6-149
CATEGORY:	C
CLASS:	2
FUNCTION:	Valves open for high head safety injection into the RCS.
QUARTERLY TEST REQUIREMENT:	Forward flow exercise (ISTC-3510)
BASIS FOR JUSTIFICATION:	During normal operation CVCS is aligned for normal charging. Injecting through flow paths other than normal charging exposes the safety injection nozzles to thermal shock. Full-stroke testing of these valves during cold shutdown could cause low temperature overpressurization of the RCS.
PARTIAL QUARTERLY EXERCISE:	None
ALTERNATE TESTING:	These valves will be full flow exercised during refueling. During refueling forward flow exercise will be confirmed when the reactor vessel head is removed and full charging pump flow can be used.

REFUELING OUTAGE JUSTIFICATION

ROJ-V-22

SYSTEM:	Chemical and Volume Control System - System No. 1208
VALVE(S):	1(2)-1208-U6-189
CATEGORY:	C
CLASS:	2
FUNCTION:	This valve opens to allow flow to the suction of the centrifugal charging pumps from the RWST and it closes after switchover from injection phase to recirculation to prevent diversion of reactor coolant to the RWST.
QUARTERLY TEST REQUIREMENT:	Forward flow exercise and reverse flow closure (ISTC-3510)
BASIS FOR JUSTIFICATION:	The only possible way to perform forward flow exercising of this check valve is by using the CVCS charging pump flow through the boron injection tank into the RCS cold legs. However, injecting water into the RCS through the boron injection tank during power operation exposes the safety injection nozzles to thermal shock and interrupts normal charging and letdown. Injection of CVCS charging pump flow at cold shutdown could result in a low temperature overpressurization of the RCS. There are no provisions for utilizing flow, pressure or any other system parameters as an indication of reverse flow closure.
PARTIAL QUARTERLY EXERCISE:	None
ALTERNATE TESTING:	This valve will be forward flow exercised when the reactor vessel head is removed at refueling and the centrifugal charging pumps can be operated. Closure of this valve will be determined during ECCS flow testing by closing LV-0112D and LV-0112E; a failure of the 1208-U6-189 to close will be indicated by an increase in suction pressure at the Centrifugal Charging Pumps.

REFUELING OUTAGE JUSTIFICATION

ROJ-V-23

SYSTEM:	Chemical and Volume Control System - System No. 1208
VALVE(S):	1(2)-1208-U6-436
CATEGORY:	C
CLASS:	2
FUNCTION:	This valve opens to allow flow to the suction of the centrifugal charging pumps from the RHR system.
QUARTERLY TEST REQUIREMENT:	Forward flow exercise (ISTC-3510)
BASIS FOR JUSTIFICATION:	The only possible way to perform forward flow exercising of this check valve is by using the CVCS charging pump flow through the boron injection tank into the RCS cold legs. However, injecting water into the RCS through the boron injection tank during power operation exposes the safety injection nozzles to thermal shock and interrupts normal charging and letdown. Injection of CVCS charging pump flow at cold shutdown could result in a low temperature overpressurization of the RCS.
PARTIAL QUARTERLY EXERCISE:	None
ALTERNATE TESTING:	This valve will be forward flow exercised when the reactor vessel head is removed at refueling and the centrifugal charging pumps can be operated.

REFUELING OUTAGE JUSTIFICATION

ROJ-V-24

SYSTEM:	Chemical and Volume Control System - System No. 1208
VALVE(S):	1(2)-HV-8103A, 1(2)-HV-8103B, 1(2)-HV-8103C, 1(2)-HV-8103D
CATEGORY:	A
CLASS:	2
FUNCTION:	Seal water flow to the reactor coolant pumps containment isolation valves.
QUARTERLY TEST REQUIREMENT:	Exercise and stroke time (ISTC-3510)
BASIS FOR JUSTIFICATION:	Exercising these valves during normal operation or at cold shutdown results in a loss of normal seal water to the RCS pump seals. If seal water is terminated, reactor coolant is forced from the high pressure RCS into the seals. Reactor coolant normally contains a high particulate matter concentration which is carried with RCS in-leakage and contaminates the seals. Reactor Coolant Pump manual X6AB09-119 Section 6 Part 1 Note 3 states that seal water "flow should be maintained at all times when reactor coolant system pressure is above atmospheric." Therefore, testing during normal operation (quarterly) or at cold shutdown (unless the RCS is vented to atmosphere) is impractical.
PARTIAL QUARTERLY EXERCISE:	None
ALTERNATE TESTING:	Exercise and stroke time at cold shutdown or refueling outage when the RCS is vented to the atmosphere.

REFUELING OUTAGE JUSTIFICATION

ROJ-V-25

SYSTEM:	Auxiliary Component Cooling Water - System No. 1217
VALVE(S):	1(2)-1217-U4-084, 1(2)-1217-U4-085, 1(2)-1217-U4-086, 1(2)-1217-U4-087
CATEGORY:	C
CLASS:	3
FUNCTION:	Valves close to prevent reverse flow if a reactor coolant pump thermal barrier ruptures.
QUARTERLY TEST REQUIREMENT:	Reverse flow closure (ISTC-3510)
BASIS FOR JUSTIFICATION:	Reverse flow closure will be confirmed during refueling by performing a reverse flow/pressure test. These tests cannot be performed quarterly during power operation because the system is in operation and cannot be isolated. Also, these valves are inside containment. These tests are too complex to be performed during cold shutdown and will be scheduled for refueling outages.
PARTIAL QUARTERLY EXERCISE:	None
ALTERNATE TESTING:	Reverse flow closure will be confirmed during refueling by performing a reverse flow/pressure test.

REFUELING OUTAGE JUSTIFICATION

ROJ-V-26

SYSTEM:	Auxiliary Component Cooling Water - System No. 1217
VALVE(S):	1(2)-1217-U4-113
CATEGORY:	AC
CLASS:	2
FUNCTION:	This valve is relied upon to open to prevent overpressurization between the containment isolation valves (HV-1974 and HV-1975) due to thermal expansion and to close for containment isolation.
QUARTERLY TEST REQUIREMENT:	Forward flow exercise and reverse flow closure (ISTC-3510)
BASIS FOR JUSTIFICATION:	The subject valve is located inside containment on a line which bypasses the 1(2)-HV-1974 containment isolation valve. The valve also has a safety function to close for containment isolation and is subject to periodic leakrate testing as required by Appendix J. Forward flow exercise and reverse flow closure of this check valve can only be confirmed by the performance of a flow/pressure test. To perform this test would require that cooling water to the reactor coolant pump motor coolers be isolated. Also it would require personnel entry into containment to set up test equipment and perform the test. Since performance of the test requires that the reactor coolant pumps be shutdown and personnel entry into containment and the installation of test equipment, it is impractical to perform either test quarterly or at cold shutdown.
PARTIAL QUARTERLY EXERCISE:	None
ALTERNATE TESTING:	Forward ~~flow~~ exercise and reverse flow closure will be confirmed each refueling outage by performing a flow/pressure test.

REFUELING OUTAGE JUSTIFICATION

ROJ-V-27

SYSTEM:	Main Steam - System No. 1301
VALVE(S):	1(2)-1301-U4-008, 1(2)-1301-U4-404
CATEGORY:	C
CLASS:	3
FUNCTION:	These valves open to allow steam to the AFW pump turbine and close to prevent reverse flow.
QUARTERLY TEST REQUIREMENT:	Reverse flow closure (ISTC-3510)
BASIS FOR JUSTIFICATION:	There are no system provisions for utilizing flow or pressure as an indication of reverse flow closure.
PARTIAL QUARTERLY EXERCISE:	Subsequent to reassembly.
ALTERNATE TESTING:	These valves will be forward flow exercised on a cold shutdown frequency by verifying that the AFW pump is delivering the required flow through valves 1(2)-1302-U4-014, 1(2)-1302-U4-017, 1(2)-1302-U4-020, 1(2)-1302-U4-023 and 1(2)-1302-U4-026 as discussed in CSJ-V-25. Reverse flow closure will be demonstrated by disassembly and manual full-stroke exercising every refueling on a rotating basis. If disassembly reveals that the valve is not functional, the remaining valve will be disassembled. Valves will be exercised with flow after reassembly. This refueling outage justification complies with the requirements specified in ISTC-5221(c).

REFUELING OUTAGE JUSTIFICATION

ROJ-V-28

SYSTEM:	Auxiliary Feedwater - System No. 1302
VALVE(S):	1(2)-1302-U4 117, 1(2)-1302-U4 118, 1(2)-1302-U4 119, 1(2)-1302-U4 120
CATEGORY:	C
CLASS:	2
FUNCTION:	These valves close to ensure that AFW flows to the steam generators.
QUARTERLY TEST REQUIREMENT:	Reverse flow closure (ISTC-3510)
BASIS FOR JUSTIFICATION:	There are no provisions for utilizing flow, pressure or any other system parameters as an indication of reverse flow closure.
PARTIAL QUARTERLY EXERCISE:	Subsequent to reassembly.
ALTERNATE TESTING:	One of these valves will be disassembled and manually stroked at refueling on a rotating basis. If disassembly reveals that the valve is not functional, the remaining valves will be disassembled. This refueling outage justification complies with the requirements specified in ISTC-5221(c).

REFUELING OUTAGE JUSTIFICATION

ROJ-V-29

SYSTEM:	Containment Air Purification and Cleanup - System No. 1513
VALVE(S):	1(2)-1513-U4-001, 1(2)-1513-U4-002
CATEGORY:	AC
CLASS:	2
FUNCTION:	Valves open to allow air from inside containment to be monitored for the presence of hydrogen and close to provide containment isolation.
QUARTERLY TEST REQUIREMENT:	Reverse flow closure (ISTC-3510)
BASIS FOR JUSTIFICATION:	The subject valves are located inside containment on the return lines from the containment hydrogen monitors. During certain accident conditions it may be required to sample the containment atmosphere for the presence of hydrogen. These valves would open to allow the air to return to containment from the hydrogen monitor. Additionally, they close to provide containment isolation. As such, they are subject to periodic leakrate testing in accordance with Appendix J. There are only two methods available to confirm reverse flow closure. These methods are (1) Type C local leakrate testing conducted per Appendix J, or (2) the use of nonintrusive check valve testing equipment. To perform a local leakrate test of the valve would require personnel entry into containment to install test equipment and perform the test. Similarly, to perform a nonintrusive test, valves would have to be cycled and personnel would have to enter containment and install test equipment. Since performance of either test requires personnel entry into containment and the installation of test equipment, it is impractical to perform either test quarterly or at cold shutdown.
PARTIAL QUARTERLY EXERCISE:	None
ALTERNATE TESTING:	Reverse flow closure will be confirmed each refueling outage by performing the Appendix J, Type C, local leakrate test or by utilizing nonintrusive check valve testing equipment. The refueling outage frequency is consistent with the guidelines set forth in NUREG-1482, Rev.1, section 4.1.6.

REFUELING OUTAGE JUSTIFICATION

ROJ-V-30

SYSTEM:	Nitrogen to Instrument Air - System No. 2402
VALVE(S):	1(2)-2402-U4-017
CATEGORY:	AC
CLASS:	2
FUNCTION:	Valve closes to provide containment isolation.
QUARTERLY TEST REQUIREMENT:	Reverse flow closure (ISTC-3510)
BASIS FOR JUSTIFICATION:	The subject valve is located inside containment on the nitrogen supply line to the accumulators and steam generators. Since the valve performs a containment isolation function, it is subject to periodic leakrate testing as required by Appendix J. There are only two methods available to confirm reverse flow closure of this check valve. These methods are (1) Type C local leakrate testing conducted per Appendix J, or (2) the use of nonintrusive check valve testing equipment. To perform a local leakrate test of the valve would require that the nitrogen line to containment be isolated and depressurized. Personnel would be required to enter containment to install test equipment and perform the test. Similarly, to perform a nonintrusive test, valves would have to be cycled to vent nitrogen downstream of the check valve. Personnel would have to enter containment and install test equipment to perform the test. Since performance of either test requires personnel entry into containment and the installation of test equipment, it is impractical to perform either test quarterly or at cold shutdown.
PARTIAL QUARTERLY EXERCISE:	None
ALTERNATE TESTING:	Reverse flow closure will be confirmed each refueling outage by performing the Appendix J, Type C, local leakrate test or by utilizing nonintrusive check valve testing equipment. The refueling outage frequency is consistent with the guidelines set forth in NUREG-1482, Rev.1, section 4.1.6.

REFUELING OUTAGE JUSTIFICATION

ROJ-V-31

SYSTEM:	Instrument Air - System No. 2420
VALVE(S):	1(2)-2420-U4-049
CATEGORY:	AC
CLASS:	2
FUNCTION:	Valve closes to perform a containment isolation function.
QUARTERLY TEST REQUIREMENT:	Reverse flow closure (ISTC-3510)
BASIS FOR JUSTIFICATION:	The only method available to confirm reverse flow closure is valve leak testing during Appendix J, type C, testing at refueling.
PARTIAL QUARTERLY EXERCISE:	None
ALTERNATE TESTING:	Reverse flow closure will be confirmed during Appendix J, type C, testing at refueling. The refueling outage frequency is consistent with the guidelines set forth in NUREG-1482, Rev.1, section 4.1.6.

REFUELING OUTAGE JUSTIFICATION

ROJ-V-32

SYSTEM:	Nuclear Service Cooling Water - System No. 1202
VALVE(S):	1(2)-1202-U4-A07, 1(2)-1202-U4-A08, 1(2)-1202-U4-A09, 1(2)-1202-U4-A13, 1(2)-1202-U4-A14, 1(2)-1202-U4-A15
CATEGORY:	C
CLASS:	3
FUNCTION:	These valves open to enable the slow fill function to maintain water hammer forces within design allowances during startup following a dual train outage.
QUARTERLY TEST REQUIREMENT:	Forward flow exercise (ISTC-3510)
BASIS FOR JUSTIFICATION:	Due to piping and system design, forward flow exercise can be confirmed only by disassembling the check valves and observing the disk position.
PARTIAL QUARTERLY EXERCISE:	Subsequent to reassembly.
ALTERNATE TESTING:	In accordance with the requirements of ISTC-5221(c)(1), the following groups were established: • Group 1 1-1202-U4-A07, 1-1202-U4-A08 • Group 2 1-1202-U4-A09, 1-1202-U4-A13, 1-1202-U4-A14, 1-1202-U4-A15 • Group 3 2-1202-U4-A07, 2-1202-U4-A08, 2-1202-U4-A09, 2-1202-U4-A13, 2-1202-U4-A14, 2-1202-U4-A15 Either 1-1202-U4-A07 or 1-1202-U4-A08 will be disassembled and manually exercised each refueling outage on a rotating basis. One of either 1-1202-U4-A09, 1-1202-U4-A13, 1-1202-U4-A14 or 1-1202-U4-A15 will be disassembled and manually exercised each refueling outage on a rotating basis. Two of either 2-1202-U4-A07, 2-1202-U4-A08, 2-1202-U4-A09, 2-1202-U4-A13, 2-1202-U4-A14 or 2-1202-U4-A15 will be disassembled and manually exercised each refueling outage on a rotating basis. If disassembly reveals that a valve has degraded, the remaining valve or valves in that group will be disassembled.

REFUELING OUTAGE JUSTIFICATION

ROJ-V-33

SYSTEM:	Nuclear Service Cooling Water - System No. 1202
VALVE(S):	1(2)-1202-U4-466, 1(2)-1202-U4-467, 1(2)-1202-U4-468, 1(2)-1202-U4-471, 1(2)-1202-U4-472, 1(2)-1202-U4-473
CATEGORY:	C
CLASS:	2
FUNCTION:	These valves close to prevent voiding of the containment coolers and the associated piping to maintain water hammer forces within design allowances during pump start following a loss of off site power.
QUARTERLY TEST REQUIREMENT:	Reverse flow closure (ISTC-3510)
BASIS FOR JUSTIFICATION:	Because these valves are not equipped with direct indication of obturator position nor are there other parameters that can be measured to indicate obturator position, movement to the closed position cannot be confirmed by direct or indirect means. Reverse flow closure can be confirmed during a refueling outage by disassembling the check valves and observing the disk position.
PARTIAL QUARTERLY EXERCISE:	Subsequent to reassembly.
ALTERNATE TESTING:	In accordance with the requirements of ISTC-5221(c)(1), the following groups were established: • Group 1 1(2)-1202-U4-466, 1(2)-1202-U4-471, 1(2)-1202-U4-472, 1(2)-1202-U4-473 • Group 2 1(2)-1202-U4-467, 1(2)-1202-U4-468 One of either 1(2)-1202-U4-466, 1(2)-1202-U4-471, 1(2)-1202-U4-472, or 1(2)-1202-U4-473 will be disassembled, inspected, and manually exercised each refueling outage on a rotating basis. Either 1(2)-1202-U4-467, or 1(2)-1202-U4-468 will be disassembled, inspected, and manually exercised each refueling outage on a rotating basis. If disassembly reveals that a valve has degraded, the remaining valve or valves in that group will be disassembled and inspected.

REFUELING OUTAGE JUSTIFICATION

ROJ-V-34

SYSTEM:	Condensate and Feedwater - System No. 1305
VALVE(S):	1(2)-1305-U4-071, 1(2)-1305-U4-073, 1(2)-1305-U4-075, 1(2)-1305-U4-077
CATEGORY:	C
CLASS:	2
FUNCTION:	These valves are required to close, subsequent to a loss of normal feedwater, providing redundant isolation capability to the feedwater isolation valves. When considering single failure for an MFIV to close, these checks would prevent uncontrolled blowdown from more than one S/G in the event of a break outside containment coincident with a MFIV failure to close. Also in this instance, the checks would provide pressure boundary for the controlled addition of AFW to the three intact loops.
QUARTERLY TEST REQUIREMENT:	Reverse flow closure (ISTC-3510)
BASIS FOR JUSTIFICATION:	These check valves are normally open during operation at power to provide main feedwater flow to the steam generators. Since these valves must remain open during normal operation reverse exercising is not possible. Demonstrating closure capability of these check valves will require establishing a differential pressure across the valve disc either by utilizing steam generator level or an outside pressure source. Closure capability may also be demonstrated by the use of non-intrusive test equipment. Since performance of this test may potentially require the installation of temporary test equipment, it is impractical to perform quarterly or at cold shutdown.
PARTIAL QUARTERLY EXERCISE:	None
ALTERNATE TESTING:	Reverse flow closure will be confirmed each refueling outage by establishing a differential pressure across the valve disc or by other positive means.

Enclosure 2

Vogtle Electric Generating Plant
Third Interval Inservice Testing (IST) Program Update

Detailed Phase-in Schedule for VEGP Units 1 & 2 Affected Procedures

Listing of all affected procedures for VEGP Unit 1 and Unit 2

FIRST QUARTER – 6/1/2007 – 8/31/2007

Procedure number	CPT* Procedure needed	Procedure Title	Effective date
00412-C		INSERVICE TESTING PROGRAM	8/31/2007
83001-C		TRENDING EVALUATION OF PUMP AND VALVE TEST DATA	8/31/2007
83003-C		INSERVICE PROGRAM CHANGE REQUEST	8/31/2007
28210-C		MAIN STEAM LINE CODE SAFETY VALVE SETPOINT VERIFICATION	8/31/2007
28212-C		IST PROGRAM VALVE SET PRESSURE TESTING	8/31/2007
28215-C		PRESSURIZER CODE SAFETY VALVE SETPOINT VERIFICATION	8/31/2007
28713-C		ENERTECH MODEL DRV-Z CHECK VALVE ISI SURVEILLANCE	8/31/2007
28715-C		ANCHOR DARLING SWING CHECK VALVE ISI SURVEILLANCE	8/31/2007
28716-C		WESTINGHOUSE STYLE "B" CHECK VALVE ISI SURVEILLANCE	8/31/2007
28718-C		ANCHOR DARLING TILT DISC CHECK VALVE ISI SURVEILLANCE	8/31/2007
28722-C		ANCHOR DARLING CHECK VALVE IST	8/31/2007
28723-C		ROCKWELL UNIVALVE CHECK VALVE IST	8/31/2007
28916-C		CONTAINMENT TYPE A, B, AND C LEAKAGE TOTALIZATION	8/31/2007
14311-1		CONTAINMENT PENETRATION NO. 05 SLUDGE LANCING/EDDY CURRENT/SPARE LOCAL LEAK RATE TEST	8/31/2007
14312-1		CONTAINMENT PENETRATION NO. 12/69A STEAM GENERATOR CHEMICAL ADDITION LOCAL LEAK RATE TEST	8/31/2007
14313A-1		CONTAINMENT PENETRATION NO. 13A CONTAINMENT RADIATION MONITOR RE-2562 SUPPLY LOCAL LEAK RATE TEST	8/31/2007
14313B-1		CONTAINMENT PENETRATION NO. 13B CONTAINMENT RADIATION MONITOR RE-2562 RETURN LOCAL LEAK RATE TEST	8/31/2007
14315-1		CONTAINMENT PENETRATION NO. 15 REFUELING CAVITY SUPPLY LOCAL LEAK RATE TEST	8/31/2007
14322-1		CONTAINMENT PENETRATION NO. 22 CONTAINMENT DEMINERALIZE WATER SUPPLY LOCAL LEAK RATE TEST	8/31/2007
14748-1	YES	AFW PUMP AND CHECK VALVE COLD S/D IST AND TDAFWP AUTO START TEST	8/31/2007
14801-1	YES	NSCW TRANSFER PUMP INSERVICE TEST	8/31/2007
14802-1	YES	NSCW PUMPS AND CHECK VALVE IST AND RESPONSE TIME TEST	8/31/2007
14803-1	YES	CCW PUMPS AND CHECK VALVE IST AND RESPONSE TIME TESTS	8/31/2007
14804-1	YES	SAFETY INJECTION PUMP INSERVICE AND RESPONSE TIME TESTS	8/31/2007
14805-1	YES	RESIDUAL HEAT REMOVAL PUMP AND CHECK VALVE IST AND RESPONSE TIME TESTS	8/31/2007

* CPT: Comprehensive Pump Test

Listing of all affected procedures for VEGP Unit 1 and Unit 2

SECOND QUARTER – 9/1/2007 – 11/30/2007

Procedure number	CPT* Procedure needed	Procedure Title	Effective date
14363-1		CONTAINMENT PENETRATION NO. 63 PRT MAKEUP WATER SUPPLY LOCAL LEAK RATE TEST	11/30/2007
14370A-1		CONTAINMENT PENETRATION NO. 70A TRAIN B HYDROGEN MONITOR SUCTION LOCAL LEAK RATE TEST	11/30/2007
14370B-1		CONTAINMENT PENETRATION NO. 70B TRAIN B HYDROGEN MONITOR DISCHARGE LOCAL LEAK RATE TEST	11/30/2007
14371A-1		CONTAINMENT PENETRATION NO. 71A TRAIN A HYDROGEN MONITOR SUCTION LOCAL LEAK RATE TEST	11/30/2007
14371B-1		CONTAINMENT PENETRATION NO. 71B TRAIN A HYDROGEN MONITOR DISCHARGE LOCAL LEAK RATE TEST	11/30/2007
14381-1		CONTAINMENT PENETRATION NO. 81 CONTAINMENT INSTRUMENT AIR SUPPLY LINE LOCAL LEAK RATE TEST	11/30/2007
14386A-1		CONTAINMENT PENETRATION NO 86A PASS GAS SAMPLE RETURN LOCAL LEAK RATE TEST	11/30/2007
14825-1		QUARTERLY INSERVICE VALVE TEST	11/30/2007
14830-1		QUARTERLY CHECK VALVE INSERVICE TEST	11/30/2007
14831-1		REFUELING CHECK VALVE TEST	11/30/2007
14835-1		BORIC ACID INJECTION CHECK VALVE COLD SHUTDOWN INSERVICE TEST	11/30/2007
14850-1		COLD SHUTDOWN VALVE INSERVICE TEST	11/30/2007
14860-1		PORV COLD SHUTDOWN INSERVICE TEST	11/30/2007
14896-1		ECCS CHECK VALVE COLD SHUTDOWN INSERVICE TEST	11/30/2007
14897-1		ECCS ACCUMULATOR INSERVICE CHECK VALVE TEST	11/30/2007
28724-1		UNIT ONE RCP SEAL WATER INJECTION CHECK VALVE SURVEILLANCE	11/30/2007
14450-1		RCS PRESSURE ISOLATION VALVE LEAK TEST	11/30/2007
14721-1		ECCS SUBSYSTEM FLOW BALANCE AND CHECK VALVE REFUELING INSERVICE TEST	11/30/2007
14725-1		REACTOR VESSEL HEAD VENT PATH OPERATIONAL FLOW TEST	11/30/2007
14806-1	YES	CONTAINMENT SPRAY PUMP INSERVICE AND RESPONSE TIME TEST	11/30/2007
14807-1	YES	MOTOR DRIVEN AUXILIARY FEEDWATER PUMP AND CHECK VALVE INSERVICE AND RESPONSE TIME TEST	11/30/2007
14808-1	YES	CENTRIFUGAL CHARGING PUMP AND CHECK VALVE IST AND RESPONSE TIME TEST	11/30/2007
14809-1	YES	ESF CHILLED WATER PUMP INSERVICE TEST	11/30/2007
14810-1	YES	TDAFW PUMP OPERABILITY, RESPONSE TIME AND CHECK VALVE IST	11/30/2007
14811-1	YES	BORIC ACID TRANSFER PUMPS AND DISCHARGE CHECK VALVE INSERVICE TEST	11/30/2007
14812-1	YES	RESIDUAL HEAT REMOVAL PUMP AND CHECK VALVE IST	11/30/2007

* CPT: Comprehensive Pump Test

Listing of all affected procedures for VEGP Unit 1 and Unit 2

THIRD QUARTER – 12/1/2007 – 2/29/2008

Procedure number	CPT* Procedure needed	Procedure Title	Effective date
14329-1		CONTAINMENT PENETRATION NO. 29 ACCW RETURN LOCAL LEAK RATE TEST	2/29/2008
14340-1		CONTAINMENT PENETRATION NO. 40 FIRE PROTECTION WATER SUPPLY LOCAL LEAK RATE TEST	2/29/2008
14342-1		CONTAINMENT PENETRATION NO. 42 ACCUMULATOR N2 SUPPLY LOCAL LEAK RATE TEST	2/29/2008
14348-1		CONTAINMENT PENETRATION NO. 48 CVCS NORMAL LETDOWN LOCAL LEAK RATE TEST	2/29/2008
14349-1		CONTAINMENT PENETRATION NO. 49 EXCESS LETDOWN AND SEAL WATER LEAKOFF LOCAL LEAK RATE TEST	2/29/2008
14350-1		CONTAINMENT PENETRATION NO. 50 CVCS CHARGING LOCAL LEAK RATE TEST	2/29/2008
14825-2		QUARTERLY INSERVICE VALVE TEST	2/29/2008
14830-2		QUARTERLY CHECK VALVE INSERVICE TEST	2/29/2008
14831-2		REFUELING CHECK VALVE TEST	2/29/2008
14835-2		BORIC ACID INJECTION CHECK VALVE COLD SHUTDOWN INSERVICE TEST	2/29/2008
14850-2		COLD SHUTDOWN VALVE INSERVICE TEST	2/29/2008
14860-2		PORV COLD SHUTDOWN INSERVICE TEST	2/29/2008
14896-2		ECCS CHECK VALVE COLD SHUTDOWN INSERVICE TEST	2/29/2008
14897-2		ECCS ACCUMULATOR INSERVICE CHECK VALVE TEST	2/29/2008
28724-2		UNIT TWO RCP SEAL WATER INJECTION CHECK VALVE SURVEILLANCE	2/29/2008
14450-2		RCS PRESSURE ISOLATION VALVE LEAK TEST	2/29/2008
14721-2		ECCS SUBSYSTEM FLOW BALANCE AND CHECK VALVE REFUELING INSERVICE TEST	2/29/2008
14725-2		REACTOR VESSEL HEAD VENT PATH OPERATIONAL FLOW TEST	2/29/2008
14748-2	YES	AFW PUMP AND CHECK VALVE COLD S/D IST AND TDAFWP AUTO START TEST	2/29/2008
14801-2	YES	NSCW TRANSFER PUMP INSERVICE TEST	2/29/2008
14802-2	YES	NSCW PUMPS AND CHECK VALVE IST AND RESPONSE TIME TEST	2/29/2008
14803-2	YES	CCW PUMPS AND CHECK VALVE IST AND RESPONSE TIME TESTS	2/29/2008
14804-2	YES	SAFETY INJECTION PUMP INSERVICE AND RESPONSE TIME TESTS	2/29/2008
14805-2	YES	RESIDUAL HEAT REMOVAL PUMP AND CHECK VALVE IST AND RESPONSE TIME TESTS	2/29/2008
14806-2	YES	CONTAINMENT SPRAY PUMP INSERVICE AND RESPONSE TIME TEST	2/29/2008

* CPT: Comprehensive Pump Test

Listing of all affected procedures for VEGP Unit 1 and Unit 2

FORTH QUARTER – 3/1/2008 – 5/31/2008

Procedure number	CPT* Procedure needed	Procedure Title	Effective date
14311-2		CONTAINMENT PENETRATION NO. 05 SLUDGE LANCING/EDDY CURRENT/SPARE LOCAL LEAK RATE TEST	5/31/2008
14312-2		CONTAINMENT PENETRATION NO. 12/69A STEAM GENERATOR CHEMICAL ADDITION LOCAL LEAK RATE TEST	5/31/2008
14313A-2		CONTAINMENT PENETRATION NO. 13A CONTAINMENT RADIATION MONITOR RE-2562 SUPPLY \LOCAL LEAK RATE TEST	5/31/2008
14313B-2		CONTAINMENT PENETRATION NO. 13B CONTAINMENT RADIATION MONITOR RE-2562 RETURN LOCAL LEAK RATE TEST	5/31/2008
14315-2		CONTAINMENT PENETRATION NO. 15 REFUELING CAVITY SUPPLY LOCAL LEAK RATE TEST	5/31/2008
14322-2		CONTAINMENT PENETRATION NO. 22 CONTAINMENT DEMINERALIZE WATER SUPPLY LOCAL LEAK RATE TEST	5/31/2008
14329-2		CONTAINMENT PENETRATION NO. 29 ACCW RETURN LOCAL LEAK RATE TEST	5/31/2008
14340-2		CONTAINMENT PENETRATION NO. 40 FIRE PROTECTION WATER SUPPLY LOCAL LEAK RATE TEST	5/31/2008
14342-2		CONTAINMENT PENETRATION NO. 42 ACCUMULATOR N2 SUPPLY LOCAL LEAK RATE TEST	5/31/2008
14348-2		CONTAINMENT PENETRATION NO. 48 CVCS NORMAL LETDOWN LOCAL LEAK RATE TEST	5/31/2008
14349-2		CONTAINMENT PENETRATION NO. 49 EXCESS LETDOWN AND SEAL WATER LEAKOFF LOCAL LEAK RATE TEST	5/31/2008
14350-2		CONTAINMENT PENETRATION NO. 50 CVCS CHARGING LOCAL LEAK RATE TEST	5/31/2008
14363-2		CONTAINMENT PENETRATION NO. 63 PRT MAKEUP WATER SUPPLY LOCAL LEAK RATE TEST	5/31/2008
14370A-2		CONTAINMENT PENETRATION NO. 70A TRAIN B HYDROGEN MONITOR SUCTION LOCAL LEAK RATE TEST	5/31/2008
14370B-2		CONTAINMENT PENETRATION NO. 70B TRAIN B HYDROGEN MONITOR DISCHARGE LOCAL LEAK RATE TEST	5/31/2008
14371A-2		CONTAINMENT PENETRATION NO. 71A TRAIN A HYDROGEN MONITOR SUCTION LOCAL LEAK RATE TEST	5/31/2008
14371B-2		CONTAINMENT PENETRATION NO. 71B TRAIN A HYDROGEN MONITOR DISCHARGE LOCAL LEAK RATE TEST	5/31/2008
14381-2		CONTAINMENT PENETRATION NO. 81 CONTAINMENT INSTRUMENT AIR SUPPLY LINE LOCAL LEAK RATE TEST	5/31/2008
14386A-2		CONTAINMENT PENETRATION NO 86A PASS GAS SAMPLE RETURN LOCAL LEAK RATE TEST	5/31/2008
14807-2	YES	MOTOR DRIVEN AUXILIARY FEEDWATER PUMP AND CHECK VALVE INSERVICE AND RESPONSE TIME TEST	5/31/2008
14808-2	YES	CENTRIFUGAL CHARGING PUMP AND CHECK VALVE IST AND RESPONSE TIME TEST	5/31/2008
14809-2	YES	ESF CHILLED WATER PUMP INSERVICE TEST	5/31/2008
14810-2	YES	TDAFW PUMP OPERABILITY, RESPONSE TIME AND CHECK VALVE IST	5/31/2008
14811-2	YES	BORIC ACID TRANSFER PUMPS AND DISCHARGE CHECK VALVE INSERVICE TEST	5/31/2008
14812-2	YES	RESIDUAL HEAT REMOVAL PUMP AND CHECK VALVE IST	5/31/2008

* CPT: Comprehensive Pump Test

Enclosure 3

Vogtle Electric Generating Plant
Third Interval Inservice Testing (IST) Program Update

SNC Regulatory Commitment

Enclosure 3

Regulatory Commitment

The following table identifies those actions committed to by Southern Nuclear Operating Company in this document for Vogtle Electric Generating Plant. Any other statements in this submittal are provided for information purposes and are not considered to be regulatory commitments.

Commitment	Type		Scheduled Completion Date (If Required)
	One-Time Action	Continuing Compliance	
VEGP surveillance procedures will be updated and the Third Interval IST Program will be fully implemented.	X		May 31, 2008