VOGTLE ELECTRIC GENERATING PLANT

UNITS 1 & 2

SECOND 10 -YEAR INTERVAL

VALVE INSERVICE TESTING PROGRAM

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Inservice Valve Testing Program

Vogtle Electric Generating Plant

Units 1 and 2

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Vogtle IST Program Abbreviations

A	active
Accum	accumulator
ACCW	Auxiliary Component Cooling Water
ACT	active
Add	addition
Admis	admission
AFW	Auxiliary Feedwater
AI	as is
AJ	Appendix J
Alt	alternate
AN	angle valve
AO	air operated
ARV	Atmospheric Steam Relief Valve
ASME	American Society of Mechanical Engineers
AT	actuator
Aux	auxiliary
BIT	Boron Injection Tank
Bldg	building
BU	butterfly valve
C	close
Cav	cavity
CB	Control Building
CC	Code Class
CCW	Component Cooling Water
Cent	centrifugal
CH	check valve
Char	charging
Chem	chemical
Chlor	chlorination
Chlr	chiller
CIV	containment isolation valve
Cond	Condensate
Coord	coordinate
CS	cold shutdown
CSJ	Cold Shutdown Justification
CTB	containment building
Ctmt	Containment
Ctrl	control
CVCS	Chemical and Volume Control System
D/G	Diesel Generator
Demin	demineralized
DI	diaphragm valve
Disch	discharge
Disp	dispersant
Drn	drain
EH	electro-hydraulic
ESF	Engineered Safety Feature
Ess	essential
ET	exercise test
Evap	evaporator
Exh	exhaust
Exp	expansion
FP	fail position
FS	fail safe test
FSAR	Final Safety Analysis Report
FW	Main Feedwater
GA	gate valve
Gen	generator
GL	globe valve
Hdr	header
Hx	heat exchanger
ID	identification
Inbrd	inboard
Inj	injection
IRC	inside reactor containment
Iso	isolation
IST	Inservice Testing
Jac	jacket
LOSP	loss of offsite power
LT	leakage test
Ltdwn	letdown

Vogtle IST Program Abbreviations

Lub	lubrication
MA	manual
Man	manual
Max	maximum
MFIV	Main Feedwater Isolation Valve
Min	minimum
MO	motor operated
Mot	motor
MOV	motor operated valve
MS	Main Steam
MSIV	Main Steam Isolation Valve
NA	Not Applicable
NP	normal position
NSCW	Nuclear Service Cooling Water
O	open
Obrd	outboard
OM	O&M - Operation and Maintenance
ORC	outside reactor containment
P	passive
P&ID	Piping and Instrument Diagram
Pan	panel
PAS	passive
PASS	Post-accident Sampling System
PC	Project Class
PCS	Partial stroke test exercised cold shutdown
PDP	positive displacement pump
Pen	penetration
PI	position indication test
PIV	pressure isolation valve
Pmp	pump
PORV	Power Operated Relief Valve
PQ	Partial stroke test exercised quarterly
Proc	Processing
Prot	protection
PRT	Pressurizer Relief Tank
PRZR	Pressurizer
Pur	purification
Purif	Purification
Q	quarterly
RC	Reactor Coolant
RCDT	Reactor Coolant Drain Tank
RCP	Reactor Coolant Pump
RCS	Reactor Coolant System
RD	rupture disk
Recir	recirculation
Reg	regulating
Ret	return
RF	refueling
RHR	Residual Heat Removal
RMW	Reactor Makeup Water
RO	Refueling Outage
ROJ	Refueling Outage Justification
RPV	Reactor Pressure Vessel
RR	Relief Request
RV	relief valve
RWST	Refueling Water Storage Tank
Rx	reactor
SA	self activating
Sam	sample
Ser	service
SFP	Spent Fuel Pool
SFPCPS	Spent Fuel Pool Cooling and Purification System
SG	Steam Generator
SI	Safety Injection
SO	solenoid
SP	safety position
Suc	suction

Vogtle IST Program Abbreviations

Sup	supply
Sys	system
TC	temperture control
Tran	transfer
Vac	vacuum
VCT	Volume Control Tank
VEGP	Vogtle Electric Generating Plant
Vlv	valve

Inservice Valve Testing Program

Introduction

A. Purpose

This testing program provides a complete listing of all valves which are considered to be within the scope of inservice testing requirements as defined by the ASME OM Code

B. Scope

This testing program provides a description of each valve within the scope of inservice testing. The valve tables include information relative to the valve identification, Code class, function, Code category, applicable testing requirements, and any applicable relief requests or test frequency deferrals. This document should be used in conjunction with the applicable ASME OM Code version

C. Code Compliance

This testing program was developed to meet, to the extent practical, the requirements of the ASME OM Code, 1990 Edition for all valve testing with the exception of relief valves which will be tested to the requirements of Appendix I of the ASME OM Code, 1995 Edition. The guidance included in NRC Generic Letter 89-04 and NUREG 1482 (Supplement 1 to GL 89-04) has been incorporated in the development of this IST Program to the extent practical.

D. References

This document should be used in conjunction with the ASME OM Code - 1990 Edition and Appendix I of the 1995 Edition, NRC Generic Letter 89-04, and NRC NUREG 1482 to determine the applicable testing requirements and NRC positions relative to testing alternatives.

E. Testing Requirements

This section contains a description of the applicable testing requirements contained in the OM Code. The applicable Code paragraph number is listed in parenthesis adjacent to each item number. Not all Code requirements are described; therefore, the Code should be used as a reference document along with this program.

1. Preservice Testing (ISTC 3.1)

   Any valve that has undergone maintenance or modification that could affect its performance shall be tested in accordance with this test plan prior to returning the valve to service or immediately after completion of the work if the valve was not removed from service.

2. Inservice Testing (ISTC 3.2)

   Inservice testing in accordance with this test program is applicable whenever the valves are required to be operable.

3. Reference Values (ISTC 3.3)

   Reference values shall be determined from the results of preservice testing or from inservice testing. The tests shall be performed under conditions as near as possible to those expected during subsequent inservice testing.

Reference values shall be established only when the valve is known to be in good operating condition.

4. Effects of Valve Actuator Replacement, Repair, and Maintenance on Reference Values (ISTC 3.4)

Whenever a valve or its control system has been repaired, replaced or undergone maintenance that could affect its performance, a new set of reference values shall be determined or the previous set re-confirmed by an inservice test that is performed prior to the valve being returned to service or immediately if not removed from service.

5. Establishment of Additional Set of Reference Values (ISTC 3.5)

If it becomes necessary or desirable, for some reason other than stated in #4 above, to establish additional reference values, an inservice test shall first be run at the conditions of the existing reference values, or, if impractical, at the conditions for which the new reference values are required, and the results analyzed. If operation is acceptable, a second test shall be performed under the new conditions as soon as practical. The results of the second test then become the new reference values. The reason for establishing new reference values shall be documented in the record of test.

6. Inservice Test Requirements (ISTC 3.6)

Active and passive valves included in the below defined categories shall be tested in accordance with the below listed table.

Category A - valves for which seat leakage is limited to a specific amount in the closed position for performance of their safety function (containment isolation and pressure isolation valves).

Category B - valves for which seat leakage in the closed position is inconsequential for performance of their safety function.

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

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

Category	Function	Leakage Test	Exercise Test	Special Test(1)	Position Verification
A	Active	Item #17-19	Item #8	None	Item #7
A	Passive	Item #17-19	None	None	Item #7
B	Active	None	Item #8	None	Item #7
B	Passive	None	None	None	Item #7
C(2)	Active	None(3)	Item #20	None	Item #7
C(4)	Active	None(3)	Item #21-26	None	Item #7
D	Active	None	None	Item #28&28	None

(1) Note additional requirements for fail-safe valves per Item #13
(2) Safety and relief valves
(3) When more than one distinguishing category characteristic is applicable, all requirements of each of the individual categories are applicable, although duplication or repetition of common testing is not required.

(4) Check valves

7. Valve Position Verification (ISTC 4.1)

Valves which have remote position indicators shall be observed locally at least once every two years to verify that the valve operation is accurately indicated.

8. Exercising Test Frequency (ISTC 4.2.1)

Active Category A and B valves shall be tested nominally every 3 months, as provided in items 9, 12 and 14.

9. Exercising Requirements (ISTC 4.2.2)

(a) full-stroke exercised during plant operation to the position(s) required to fulfill its safety function(s);

(b) if full-stroke exercising during plant operation is not practicable, it may be limited to part-stroke during normal operation and full-stroke during cold shutdowns;

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

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

(e) if exercising is not practicable during plant operation or cold shutdowns, it may be limited to full-stroke during refueling outages;

(f) valves full-stroke exercised at cold shutdowns shall be exercised during each cold shutdown, except as defined in (g) below. Such exercising is not required if the time period since the previous full-stroke exercise is less than 3 months;

(g) valve exercising during cold shutdown shall commence within 48 hours of achieving cold shutdown and continue until all testing is complete or the plant is ready to return to power. If valve testing is incomplete, the remaining valves shall be tested at any subsequent cold shutdown. For extended outages, testing need not begin within 48 hours of reaching cold shutdown provided that all valves required to be tested during cold shutdown will be tested before plant startup;

(h) all valve testing required to be performed during a refueling outage shall be performed prior to returning the plant to operation.

10. Valve Obturator Movement (ISTC 4.2.3)

The necessary valve obturator movement shall be determined by exercising the valve while observing an appropriate indicator, such as indicating lights, or by observing other evidence, such as changes in system pressure, flow rate, level, or temperature, that reflects the change in obturator movement.

11. Power-Operated Valve Stroke Testing (ISTC 4.2.4)

(a) The limiting value(s) of full-stroke time for each power operated valve shall be determined by the owner.

(b) The stroke time for all power-operated valves shall be measured to the nearest second. The time measured shall be from switch initiation to light indication ("switch to light").

(c) Any abnormal or erratic action shall be recorded and an evaluation shall be made regarding the need for any corrective action.

12. Valves in Regular Use (ISTC 4.2.5)

Valves that operate during the course of normal plant operation at a frequency at least equivalent to the requirements of Item #8, need not be additionally exercised, provided that the observations required for testing are made, analyzed and recorded at intervals no greater than specified in Item #8.

13. Fail-Safe Valves (ISTC 4.2.6)

Valves with fail-safe actuators shall be tested by observing the operation of the actuator upon loss of valve actuating power in accordance with Item #8.

14. Valves in Systems Out of Service (ISTC 4.2.7)

Valves in a system declared inoperable or not required to be operable are not required to be tested. Within 3 months before placing the system in an operable status, the valves shall be exercised and the schedule followed in accordance with Items 8 or 9 as applicable.

15. Stroke Time Acceptance Criteria (ISTC 4.2.8)

Test results shall be compared to the applicable reference values established in accordance with Items 4 and 5.

(a) Electric motor-operated valves with reference stroke times of > 10 seconds shall exhibit no more than a ±15% change in stroke time when compared to the reference value.

(b) Other power-operated valves with reference stroke times of > 10 seconds shall exhibit no more than a ±25% change in stroke time when compared to the reference value.

(c) Electric motor-operated valves with reference stroke times of < 10 seconds shall exhibit no more than a ±25% or 1 second (whichever is greater) change in stroke time when compared to the reference value.

(d) Other power-operated valves with reference stroke times of < 10 seconds shall exhibit no more than a ±50% change in stroke time when compared to the reference value.

(e) Valves that stroke in < 2 seconds may be exempted from Items 15(c) and 15(d) provided that the maximum allowable stroke time is 2 seconds.

16. Corrective Action (ISTC 4.2.9)

(a) If a valve fails to exercise or exceeds the limiting value(s) of full-stroke time, the valve shall be immediately declared inoperable.

(b) If the measured stroke time(s) do not meet the acceptance criteria of Item 15, the valve shall be either immediately retested or declared inoperable. If the valve is retested and the second set of data also does not meet the acceptance criteria, the data shall be analyzed within 96 hours to verify that the new stroke time represents acceptable valve operation, or the valve shall be declared inoperable. If the second set of data meets the

acceptance criteria, the cause of the initial deviation shall be analyzed and the results documented in the record of test.

(c) Valves declared inoperable may be repaired, replaced, or the data may be analyzed to determine the cause of the deviation and the valve shown to be operating acceptably.

(d) When valve operability is based upon analysis, the results of such analysis shall be documented in the record of test.

(e) Before returning a repaired or replacement valve to service, a test demonstrating satisfactory operation shall be performed.

17. Scope of Seat Leakage Rate Test (ISTC 4.3.1)

Category A valves shall be leakage tested, except that valves which function in the course of plant operation in a manner that demonstrates functionally adequate seat leak tightness need not be additionally leakage tested. In such cases, the valve record shall provide the basis for the conclusion that operational observations constitute satisfactory demonstration.

18. Containment Isolation Valves (ISTC 4.3.2)

Category A valves, which are containment isolation valves, shall be tested in accordance with Federal Regulation, 10 CFR 50, Appendix J, Option B. Containment isolation valves that also provide a reactor coolant system pressure isolation function shall additionally be tested in accordance with Item #19.

19. Leakage Rate for Other Than Containment Isolation Valves (ISTC 4.3.3)

Category A valves that are not containment isolation valves, shall be seat leakage tested to verify their seat leakage integrity. Valve closure before seat leakage testing shall be by using the valve operator with no additional closure force applied.

(a) Seat leakage tests shall be performed at least every two years.

(b) Seat leakage tests shall be made with the pressure differential in the same direction as when the valve is performing its function, with the following exceptions.

(1) Globe-type valves may be tested with the pressure under the seat.

(2) Butterfly valves may be tested in either direction, provided their seat construction is designed for seating against pressure on either side.

(3) Double-disk gate valves may be tested by pressurizing between the disks.

(4) Leakage testing at pressure differentiais lower than function differential pressure are permitted for those types of valves in which pressure will tend to diminish the overall leakage channel opening, as by pressing the disk into or onto the seat with greater force. Gate valves, check valves, and globe-type valves with the pressure differential applied over the seat, are examples of valve applications satisfying this requirement. When leakage tests are performed using lower pressure than functional differential pressure. the observed leakage shall be adjusted to the functional maximum pressure differential value. This adjustment shall be made by calculation appropriate to the test media and the ratio between test and functional pressure differential, assuming leakage to be directly proportional to the pressure differential to the one-half power.

(5) Valves not qualifying for reduced pressure testing as defined above shall be tested at full maximum functional differential pressure.

(c) Valve seat leakage shall be determined by one of the following methods:

(1) measuring the leakage through a downstream telltale connection while maintaining test pressure on one side of the valve; or

(2) measuring the feed rate required to maintain test pressure in the test volume or between two seats of a gate valve, provided the total apparent leakage is charged to the valve or valve combination or gate valve seat being tested and the conditions of Item #19(b) are satisfied; or

(3) determining leakage by measuring pressure decay in the test volume, provided the total apparent leakage is charged to the valve or valve combination or gate valve seat being tested and the conditions of Item 19(b) are satisfied.

(d) The Owner shall specify the test medium to be utilized.

(e) Leakage rate measurements shall be compared with the permissible leakage rates specified by the plant Owner for a specific valve or valve combination. If leakage rates are not specified by the Owner, the following rates shall be permissible:

(1) for water, 0.5D gal/min or 5 gal/min, whichever is less, at functional pressure differential;

(2) for air, at functional pressure differential, 7.5D standard ft^3/day where D equals nominal valve size in inches.

(f) If the leakage rate exceeds the values specified by the Owner, the valve or valve combination shall be declared inoperable and either repaired or replaced. A retest demonstrating acceptable leak tightness shall be performed following any required corrective actions before returning the valve(s) to service.

20. Inservice Tests for Category C Safety Valves and Relief Valves (ISTC 4.4)

Safety and relief valves shall meet the inservice test requirements of Appendix I of the OM Code 1995 Edition.

21. Inservice Exercising Tests for Category C Check Valves (ISTC 4.5)

Category C check valves shall be exercised nominally every 3 months, except as provided in Items #22 thru #26.

22. Exercising Requirements (ISTC 4.5.2)

(a) During normal operation, each check valve shall be exercised or examined in a manner that verifies disk travel to the closed, full-open, or partially open position required to fulfill its safety function.

(b) if full-stroke exercising during plant operation is not practicable, it may be limited to part-stroke during normal operation and full-stroke during cold shutdowns;

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

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

(e) if exercising is not practicable during plant operation or cold shutdowns, it may be limited to full-stroke during refueling outages;

(f) valves full-stroke exercised at cold shutdowns shall be exercised during each cold shutdown, except as defined in (g) below. Such exercising is not required if the time period since the previous full-stroke exercise is less than 3 months;

(g) valve exercising during cold shutdown shall commence within 48 hours of achieving cold shutdown and continue until all testing is complete or the plant is ready to return to power. For extended outages, testing need not begin within 48 hours of reaching cold shutdown provided that all valves required to be tested during cold shutdown will be tested before plant startup;

(h) all valve testing required to be performed during a refueling outage shall be performed prior to returning the plant to operation.

23. Valves in Regular Use (ISTC 4.5.3)

Check valves that operate during the course of normal plant operation at a frequency at least equivalent to the requirements of Item #8, need not be additionally exercised, provided that the observations required for testing are made, analyzed and recorded at intervals no greater than specified in Item #21.

24. Valve Obturator Movement (ISTC 4.5.4)

(a) The necessary valve obturator movement shall be demonstrated by exercising the valve and observing that either the disk travels to the seat on cessation of flow or opens to the position required to fulfill its safety function. Observations may be made by observing a direct indicator such a position-indicating device or by other indicator(s) such as changes in system pressure, flow rate, level, or temperature, seat leakage testing or other positive means.

(b) If a check valve is exercised using a mechanical exerciser to move the disk, the force or torque required to initiate movement (breakaway) shall be measured and recorded. This force or torque shall not vary by more than 50% from the reference value. The reference value shall be the value obtained when the valve is known to be operating properly and shall be taken under conditions as close as practicable to the conditions for subsequent testing.

(c) As an alternative to the testing of Items 24(a) and 24(b), disassembly and inspection every refueling outage to verify check valve operability may be used. This disassembly shall be in accordance with NRC Generic Letter 89-04, Position 2.

25. Valves in Systems Out of Service (ISTC 4.5.5)

Valves in a system declared inoperable, or not required to be operable are not required to be tested. If the test schedule is not followed, the valves shall be exercised and the schedule followed in accordance with Items #20 - #24 within 3 months of placing the system in an operable status.

26. Corrective Action (ISTC 4.5.6)

If a check valve fails to exhibit the required change of disk position, it shall be declared inoperable. A retest showing acceptable performance shall be performed following any required corrective action before the valve is returned to service.

27. Inservice Testing for Category D Explosive Actuated Valves (ISTC 4.6)

(a) A record shall be maintained of the service life of each charge in each valve. This record shall include the date of manufacture, batch number, installation date, and the date when service life expires based on manufacturer's recommendations. The service life shall not exceed 10 years.

(b) Concurrent with the first test and at least every two years, the service life records of each valve shall be reviewed to verify that the service lives of the charges have not been exceeded and will not be exceeded before the next refueling outage. The Owner shall ensure that service lives are not exceeded.

(c) At least 20% of the charges in explosively actuated valves shall be fired and replaced at least once every 2 years. If a charge fails to fire, all charges with the same batch number shall be removed, discarded, and replaced with charges from a different batch.

(d) Replacement charges shall come from batches that have had charges successfully tested and with service lives which satisfy Item #27(b) above.

28. Inservice Tests for Category D Rupture Disks (ISTC 4.7)

Rupture disks shall meet the requirements of non-reclosing pressure devices of Appendix I of the 1995 Edition of the ASME OM.

29. Acceptance Criteria and Corrective Action (ISTC 5)

Acceptance criteria and corrective action requirements for Category A, B, C and D valves are contained in Items #15, #16, #19, #24, #26, and #27.

30. Valve Records (ISTC 6.1)

The Owner shall maintain a record that includes the following for each valve covered by this IST Program.

(a) the manufacturer and manufacturer's model and serial number or other unique identification number;

(b) a copy or summary of the manufacturer's acceptance test report if available;

(c) preservice test results; and

(d) limiting value of full-stroke time specified in Item # 11.

31. Test Plans (ISTC 6.2)

The Owner shall maintain a record of test plans that shall include the following:

(a) identification of valves subject to test;

(b) category of each valve;

(c) tests to be performed; and

(d) justification for deferral of stroke testing in accordance with Item #9 and #22.

This IST Program in conjunction with the applicable surveillance procedures are the documents which satisfy this requirement.

32. Record of Tests (ISTC 6.3)

The Owner shall maintain a record of each test that shall include the following:

(a) valve identification;

(b) date of test;

(c) reason for the test (e.g. post-maintenance, routine inservice test, establishing reference values, etc.);

(d) values of measured parameters;

(e) identification of instruments used;

(f) comparisons with allowable ranges of test values and analysis of deviations;

(g) requirements for corrective action; and

(h) signature of the person or persons responsible for conducting and analyzing the test.

The VEGP surveillance procedures are the documents which satisfy this requirement.

33. Record of Corrective Action (ISTC 6.4)

The Owner shall maintain records of corrective action that shall include a summary of the corrections made, the subsequent inservice tests, confirmation of operational adequacy, and the signature of the individual responsible for corrective action and verification of results.

The above requirement is satisfied by a combination of the surveillance procedure data packages and the maintenance work order packages which implement corrective actions.

Valve Testing Table Introduction

The following Valve Test Tables describe the inservice testing of valves subject to the requirements of Subsection ISTC of the ASME OM Code, 1990 Edition and relief valves which are subject to the requirements of Appendix I of the ASME OM Code, 1995 Edition. The Valve Test Tables provide the identification of the valves to be tested, ISI class/project class, OM valve category, type, function, actuator, P&ID and coordinates, normal position, safe position, active or passive, position indication, test frequency, exercise test frequency, fail-safe test frequency, leakage test frequency, notes, relief requests, cold shutdown justifications and refueling outage justifications. The legends before the Valve Test Tables describe the alpha coding used in the tables.

Relief from the testing requirements of ASME OM CODE is requested where full compliance with the requirements of the Code is not practical and no guidance is provided by NRC Generic Letter 89-04 or NRC NUREG 1482. In such cases the Valve Test Tables refer to a specific valve relief request (RR) number for the appropriate valves. The relief request provides specific information which identifies the applicable code requirements, justification for the relief request, and testing to be used as an alternate.

Valves are full-stroke exercised quarterly, during cold shutdown, or during refueling. Valves are full-stroke exercised except when valve design or system conditions do not permit it during quarterly or cold shutdown testing. When full-stroke exercising is not performed quarterly a basis is provided in the applicable "Relief Request", "Refueling Outage Justification" or "Cold Shutdown Justification". Partial-stroke exercising is performed when practical on valves where full-stroke exercising is not performed. Valves which receive partial-stroke exercising are addressed in the applicable "Relief Request", "Refueling Outage Justification" or "Cold Shutdown Justification". Each valve, following installation or maintenance which could effect the performance of the valve, and prior to service, will receive a baseline test. These tests will be conducted under conditions similar to those to be experienced during subsequent inservice tests. Safety and relief valves which will be removed and bench tested during subsequent inservice tests need not be installed prior to the baseline testing.

LEGEND FOR HEADINGS

VLV ID.	- Unique valve identification number.
CC/PC	- The classification as determined for OM Code and Project Class (classification as determined by the Vogtle Project).
CAT	- Category of valve as defined in the OM Code.
TYPE	- Nominal pipe size diameter and type of valve (i.e., check, globe, gate).
FUNCTION	- Brief description of valve function or location. This column extensively makes use of abbreviations which may be found behind the "Abbreviations" tab.
AT	- Type of valve actuator (i.e., motor, air)
P&ID/COORD	- Piping and Instrumentation Diagram on which valve is located. Location on P&ID where valve is shown is indicated as the coordinates (Coord.).
NP	- The normal position of the valve.
SP	- The position of the valve when it performs its safety related function.
FP	- The position to which the valve travels upon a loss of actuator power or air.
A/P	- Valve function categorized as active or passive as defined in OM ISTC 1.3. Active valves are indicated with an "A". Passive valves are indicated with a "P".
PI	- Position indication test frequency
ET	- Exercise test frequency. Active category A and B valves require stroke time testing at the frequency specified in this column. Check valve's obturators are exercised tested to the position required to perform their safety function at the frequency specified in this column.
FST	- Fail-safe test frequency
LT	- Leakage test frequency
NOTES/CSJ/ROJ/RR	- Notes are located behind the "Valve Notes" tab. Applicable relief request numbers are indicated with a "RR" prefix and are located behind the "Valve Relief Request" tab. Applicable refueling outage justification numbers are indicated with a "ROJ" prefix and are located behind the "Valve Refueling

Outage Justifications" tab. Applicable cold shutdown justification numbers are indicated with a "CSJ" prefix and are located behind the "Valve Cold Shutdown Justifications" tab.

LEGEND FOR VALVE CATEGORIES

A - Valves for which seat leakage is limited to a specific maximum amount in the closed position for fulfillment of their function.

B - Valves for which seat leakage in the closed position is inconsequential for fulfillment of their function.

C - Valves which are self-actuating in response to some system characteristic.

D - Valves which are actuated by an energy source capable of only one operation, such as rupture discs on explosive-actuated valves. Note: VEGP's design does not include such valves.

AC - Valves which are both Category A and C.

LEGEND OF VALVE TYPE

CH - Check Valve
GL - Globe Valve
GA - Gate Valve
RV - Safety or Pressure Relief Valve
BU - Butterfly Valve
DI - Diaphragm Valve
AN - Angle Valve

LEGEND OF VALVE ACTUATOR TYPE

SA - Self Actuating
AO - Air Operated
MO - Motor Operated
SO - Solenoid
EH - Electro-hydraulic
MA - Manual

LEGEND OF VALVE POSITIONS: NORMAL, FAIL, OR SAFETY

AI - As Is
C - Close
O - Open
~ - Not Applicable

LEGEND FOR POSITION INDICATION TEST FREQUENCY

RO - Refueling Outage
~ - Not Applicable

LEGEND FOR EXERCISE TEST FREQUENCY

Q - Quarterly
RO - Refueling Outage
CS - Cold shutdown
PQ - Partial stroke test exercised quarterly
PCS - Partial stroke test exercised during cold shutdown.
~ - Not Applicable

LEGEND FOR FAIL-SAFE TEST FREQUENCY

Q - Quarterly
RO - Refueling
CS - Cold shutdown
~ - Not Applicable

LEGEND FOR LEAKAGE TEST FREQUENCY

AJ - The frequency of leakage rate testing for these containment isolation valves is governed by 10 CFR 50 Appendix J Option B.
RO - A pressure isolation valve leakage rate test will be performed on a refueling outage frequency.
~ - Not Applicable

VEGP-1 IST PROGRAM
VALVE TABLE

SYSTEM: 1201 - RCS

VLV ID	CC/PC	CAT	TYPE	FUNCTION	AT	P&ID/COORD	NP	SP	FP	A/P	PI	ET	FST	LT	NOTES/CSJ/ROJ/RR
1-1201-U4-251	2/212	AC	3/4" CH	RHR Pmp Sup Inbrd Iso Vlv Bypass Vlv	SA	1X4DB122 F-2	C	O	~	A	~	RO	~	~	ROJ-1
1-1201-U4-252	2/212	AC	3/4" CH	RHR Pmp Sup Inbrd Iso Vlv Bypass Vlv	SA	1X4DB122 C-2	C	O	~	A	~	RO	~	~	ROJ-1
1-1201-U6-112	2/212	AC	3" CH	Primary Grade Water Sup to Ctmt CH	SA	1X4DB112 F-2	C	C	~	A	~	RO	~	AJ	ROJ-2
1-HV-0442A	2/212	B	1" GL	RPV Head Vent to PRT Iso Vlv	SO	1X4DB112 H-4	C	O/C	C	A	RO	CS	CS	~	CSJ-1
1-HV-0442B	2/212	B	1" GL	RPV Head Vent to PRT Iso Vlv	SO	1X4DB112 G-4	C	O/C	C	A	RO	CS	CS	~	CSJ-1
1-HV-8000A	1/111	B	3" GA	PORV Block Vlv	MO	1X4DB112 E-7	O	O/C	AI	A	RO	Q	~	~	~
1-HV-8000B	1/111	B	3" GA	PORV Block Vlv	MO	1X4DB112 F-7	O	O/C	AI	A	RO	Q	~	~	~
1-HV-8028	2/212	A	3" DI	Primary Grade Water Sup to Ctmt Iso Vlv	AO	1X4DB112 F-2	O	C	C	A	RO	Q	Q	AJ	~
1-HV-8033	2/212	A	1" DI	PRT Vent Vlv	AO	1X4DB112 G-2	C	C	C	A	RO	Q	Q	AJ	~
1-HV-8047	2/212	A	1" DI	PRT Vent Vlv	AO	1X4DB112 G-3	C	C	C	A	RO	Q	Q	AJ	~
1-HV-8095A	1/111	B	1" GL	RPV Head Vent Vlv	SO	1X4DB114 E-5	C	O/C	C	A	RO	CS	CS	~	CSJ-1
1-HV-8095B	1/111	B	1" GL	RPV Head Vent Vlv	SO	1X4DB114 E-5	C	O/C	C	A	RO	CS	CS	~	CSJ-1
1-HV-8096A	1/111	B	1" GL	RPV Head Vent Vlv	SO	1X4DB114 E-5	C	O/C	C	A	RO	CS	CS	~	CSJ-1
1-HV-8096B	1/111	B	1" GL	RPV Head Vent Vlv	SO	1X4DB114 E-5	C	O/C	C	A	RO	CS	CS	~	CSJ-1

VEGP-1 IST PROGRAM
VALVE TABLE

SYSTEM: 1201 - RCS

VLV ID	CC/PC	CAT	TYPE	FUNCTION	AT	P&ID/COORD	NP	SP	FP	A/P	PI	ET	FST	LT	NOTES/CSJ/ROJ/RR
1-HV-8701A	1/111	A	12" GA	RHR Pmp Sup Iso From RCS Loops	MO	1X4DB122 G-2	C	O/C	AI	A	RO	CS	-	RO	CSJ-2
1-HV-8701B	1/111	A	12" GA	RHR Pmp Sup Iso From RCS Loops	MO	1X4DB122 G-1	C	O/C	AI	A	RO	CS	-	RO	CSJ-2
1-HV-8702A	1/111	A	12" GA	RHR Pmp Sup Iso From RCS Loops	MO	1X4DB122 D-2	C	O/C	AI	A	RO	CS	-	RO	CSJ-2
1-HV-8702B	1/111	A	12" GA	RHR Pmp Sup Iso From RCS Loops	MO	1X4DB122 D-2	C	O/C	AI	A	RO	CS	-	RO	CSJ-2
1-PSV-8010A	1/111	C	6" RV	PRZR Safety Vlv	SA	1X4DB112 G-7	C	O/C	-	A	-	-	-	-	Note 6
1-PSV-8010B	1/111	C	6" RV	PRZR Safety Vlv	SA	1X4DB112 G-6	C	O/C	-	A	-	-	-	-	Note 6
1-PSV-8010C	1/111	C	6" RV	PRZR Safety Vlv	SA	1X4DB112 G-6	C	O/C	-	A	-	-	-	-	Note 6
1-PV-0455A	1/111	B	3" GL	PORV	SO	1X4DB112 E-8	C	O/C	C	A	RO	CS	CS	-	CSJ-3
1-PV-0456A	1/111	B	3" GL	PORV	SO	1X4DB112 F-8	C	O/C	C	A	RO	CS	CS	-	CSJ-3

VEGP-1 IST PROGRAM
VALVE TABLE

SYSTEM: 1202 - NSCW

VLV ID	CC/PC	CAT	TYPE	FUNCTION	AT	P&ID/COORD	NP	SP	FP	A/P	PI	ET	FST	LT	NOTES/CSJ/ROJ/RR
1-1202-U4-025	3/313	C	18" CH	NSCW Pmp Disch CH	SA	1X4DB133-1 C-8	O/C	O/C	-	A	-	Q	-	-	Notes 1,2
1-1202-U4-027	3/313	C	18" CH	NSCW Pmp Disch CH	SA	1X4DB133-2 C-8	O/C	O/C	-	A	-	Q	-	-	Notes 1,2
1-1202-U4-031	3/313	C	18" CH	NSCW Pmp Disch CH	SA	1X4DB133-1 E-6	O/C	O/C	-	A	-	Q	-	-	Notes 1,2
1-1202-U4-033	3/313	C	18" CH	NSCW Pmp Disch CH	SA	1X4DB133-2 E-6	O/C	C/C	-	A	-	Q	-	-	Notes 1,2
1-1202-U4-035	3/313	C	18" CH	NSCW Pmp Disch CH	SA	1X4DB133-1 C-4	O/C	O/C	-	A	-	Q	-	-	Notes 1,2
1-1202-U4-037	3/313	C	18" CH	NSCW Pmp Disch CH	SA	1X4DB133-2 C-5	O/C	O/C	-	A	-	Q	-	-	Notes 1,2
1-1202-U4-463	3/313	C	8" CH	NSCW Sup to CB Ess Chiller CH	SA	1X4DB134 E-2	O	O	-	A	-	Q	-	-	
1-1202-U4-464	3/313	C	4" CH	NSCW Sup to Piping Pen Area CH	SA	1X4DB133-2 D-3	O	O	-	A	-	Q	-	-	-
1-1202-U4-465	3/313	C	16" CH	NSCW Sup to CCW Hx	SA	1X4DB133-2 D-1	O	O	-	A	-	Q	-	-	-
1-1202-U4-466	2/212	C	8" CH	NSCW to Ctmt Cooler CH	SA	1X4DB135-1 H-4	O	O	-	A	-	Q	-	-	-
1-1202-U4-467	2/212	C	8" CH	NSCW to Ctmt Cooler CH	SA	1X4DB135-1 F-5	O	O	-	A	-	Q	-	-	-
1-1202-U4-469	3/313	C	16" CH	NSCW Sup to CCW Hx	SA	1X4DB135-1 D-7	O	O	-	A	-	Q	-	-	-
1-1202-U4-470	3/313	C	4" CH	NSCW Sup to Piping Pen Area CH	SA	1X4DB135-1 B-7	O	O	-	A	-	Q	-	-	-
1-1202-U4-471	2/212	C	8" CH	NSCW to Ctmt Cooler CH	SA	1X4DB135-2 H-6	O	O	-	A	-	Q	-	-	-

VEGP-1 IST PROGRAM
VALVE TABLE

SYSTEM: 1202 - NSCW

VLV ID	CC/PC	CAT	TYPE	FUNCTION	AT	P&ID/COORD	NP	SP	FP	A/P	PI	ET	FST	LT	NOTES/CSJ/ROJ/RR
1-1202-U4-472	2/212	C	8" CH	NSCW to Ctmt Cooler CH	SA	1X4DB135-2 H-6	O	O	~	A	~	Q	~	~	~
1-1202-U4-474	3/313	C	8" CH	NSCW Sup to CB Ess Chiller CH	SA	1X4DB135-2 C-8	O	O	~	A	~	Q	~	~	~
1-1202-U4-492	3/313	B	2" GA	NSCW Hdr/Train Inter-Tie Man. Iso. Vlv.	MA	1X4DB133-1 G-1	O	C	~	A	~	Q	~	~	~
1-1202-U4-497	3/313	B	2" GA	NSCW Hdr/Train Inter-Tie Man. Iso. Vlv.	MA	1X4DB134 E-5	O	C	~	A	~	Q	~	~	~
1-1202-U4-A07	3/313	C	4" CH	NSCW Slow-Fill Line CH	SA	1X4DB133-1 B-8	O/C	O	~	A	~	Q	~	~	~
1-1202-U4-A08	3/313	C	4" CH	NSCW Slow-Fill Line CH	SA	1X4DB133-1 A-8	O/C	O	~	A	~	Q	~	~	~
1-1202-U4-A09	3/313	C	4" CH	NSCW Slow-Fill Line CH	SA	1X4DB133-1 B-7	O/C	O	~	A	~	Q	~	~	~
1-1202-U4-A13	3/313	C	4" CH	NSCW Slow-Fill Line CH	SA	1X4DB133-2 B-8	O/C	O	~	A	~	Q	~	~	~
1-1202-U4-A14	3/313	C	4" CH	NSCW Slow-Fill Line CH	SA	1X4DB133-2 A-8	O/C	O	~	A	~	Q	~	~	~
1-1202-U4-A15	3/313	C	4" CH	NSCW Slow-Fill Line CH	SA	1X4DB133-2 B-7	O/C	O	~	A	~	Q	~	~	~
1-CV-9446	3/313	B	2" GL	NSCW Blowdown Ctrl Vlv	AO	1X4DB133-1 B-5	O	C	C	A	RO	Q	Q	~	~
1-CV-9447	3/313	B	2" GL	NSCW Blowdown Ctrl Vlv	AO	1X4DB133-2 B-5	O	C	C	A	RO	Q	Q	~	~
1-HV-11600	3/313	B	18" BU	NSCW Pmp Disch Vlv	MO	1X4DB133-1 D-8	O/C	O	AI	A	Q	Q	~	~	Note 5

VEGP-1 IST PROGRAM
VALVE TABLE

SYSTEM: 1202 - NSCW

VLV ID	CC/PC	CAT	TYPE	FUNCTION	AT	P&ID/COORD	NP	SP	FP	A/P	PI	ET	FST	LT	NOTES/CSJ/ROJ/RR
1-HV-11605	3/313	B	18" BU	NSCW Pmp Disch Vlv	MO	1X4DB133-1 E-6	O/C	O	AI	A	Q	Q	-	-	Note 5
1-HV-11606	3/313	B	18" BU	NSCW Pmp Disch Vlv	MO	1X4DB133-1 C-4	O/C	O	AI	A	Q	Q	-	-	Note 5
1-HV-11607	3/313	B	18" BU	NSCW Pmp Disch Vlv	MO	1X4DB133-2 C-8	O/C	O	AI	A	Q	Q	-	-	Note 5
1-HV-11612	3/313	B	18" BU	NSCW Pmp Disch Vlv	MO	1X4DB133-2 E-6	O/C	O	AI	A	Q	Q	-	-	Note 5
1-HV-11613	3/313	B	18" BU	NSCW Pmp Disch Vlv	MO	1X4DB133-2 C-5	O/C	O	AI	A	Q	Q	-	-	Note 5
1-HV-1668A	3/313	B	24" BU	NSCW Tower Ret Hdr Stop Vlv	MO	1X4DB133-1 G-5	O/C	O	AI	A	RO	Q	-	-	-
1-HV-1668B	3/313	B	18" BU	NSCW Tower Bypass to Basin Vlv	MO	1X4DB133-1 F-5	O/C	C	AI	A	RO	Q	-	-	-
1-HV-1669A	3/313	B	24" BU	NSCW Tower Ret Hdr Stop Vlv	MO	1X4DB133-2 G-5	O/C	O	AI	A	RO	Q	-	-	-
1-HV-1669B	3/313	B	18" BU	NSCW Tower Bypass to Basin Vlv	MO	1X4DB133-2 F-5	O/C	C	AI	A	RO	Q	-	-	-
1-HV-2134	2/212	B	8" BU	NSCW to CTB Aux and Rx Cav Cooling Iso Vlv	MO	1X4DB135-1 C-5	O	C	AI	A	RO	Q	-	-	-
1-HV-2135	2/212	B	8" BU	NSCW to CTB Aux and Rx Cav Cooling Iso Vlv	MO	1X4DB135-2 D-7	O	C	AI	A	RO	Q	-	-	-
1-HV-2138	2/212	B	8" BU	NSCW Ret From CTB Aux and Rx Cav Cooling Iso Vlv	MO	1X4DB135-1 B-2	O	C	AI	A	RO	Q	-	-	-

VEGP-1 IST PROGRAM
VALVE TABLE

SYSTEM: 1202 - NSCW

VLV ID	CC/PC	CAT	TYPE	FUNCTION	AT	P&ID/COORD	NP	SP	FP	A/P	PI	ET	FST	LT	NOTES/CSJ/ROJ/RR
1-HV-2139	2/212	B	8" BU	NSCW Ret From CTB Aux and Rx Cav Cooling Iso Vlv	MO	1X4DB135-2 D-5	O	C	AI	A	RO	Q	~	~	~
1-PSV-11673	2/212	C	3/4" RV	Rx Cav Cooler RV	SA	1X4DB135-1 C-4	C	O/C	~	A	~	~	~	~	Note 6
1-PSV-11759	3/313	C	8" RV	NSCW Ret Hdr RV	SA	1X4DB133-1 G-5	C	O/C	~	A	~	~	~	~	Note 6
1-PSV-11766	3/313	C	8" RV	NSCW Ret Hdr RV	SA	1X4DB133-2 G-5	C	O/C	~	A	~	~	~	~	Note 6
1-PSV-11772	2/212	C	3/4" RV	CTB Aux Air Cooler RV	SA	1X4DB135-2 E-6	C	O/C	~	A	~	~	~	~	Note 6
1-PSV-2136	2/212	C	3/4" RV	CTB Aux Air Cooler RV	SA	1X4DB135-1 D-3	C	O/C	~	A	~	~	~	~	Note 6
1-PSV-2137	2/212	C	3/4" RV	Rx Cav Cooler RV	SA	1X4DB135-2 G-5	C	O/C	~	A	~	~	~	~	Note 6

VEGP-1 IST PROGRAM
VALVE TABLE

SYSTEM: 1203 - CCW

VLV ID	CC/PC	CAT	TYPE	FUNCTION	AT	P&ID/COORD	NP	SP	FP	A/P	PI	ET	FST	LT	NOTES/CSJ/ROJ/RR
1-1203-U4-030	3/313	C	14" CH	CCW Pmp Disch CH	SA	1X4DB136 H-4	O/C	O/C	~	A	~	Q	~	~	~
1-1203-U4-032	3/313	C	14" CH	CCW Pmp Disch CH	SA	1X4DB136 G-4	O/C	O/C	~	A	~	Q	~	~	~
1-1203-U4-034	3/313	C	14" CH	CCW Pmp Disch CH	SA	1X4DB136 F-4	O/C	O/C	~	A	~	Q	~	~	~
1-1203-U4-055	3/313	C	14" CH	CCW Pmp Disch CH	SA	1X4DB136 D-4	O/C	O/C	~	A	~	Q	~	~	~
1-1203-U4-057	3/313	C	14" CH	CCW Pmp Disch CH	SA	1X4DB136 C-4	O/C	O/C	~	A	~	Q	~	~	~
1-1203-U4-059	3/313	C	14" CH	CCW Pmp Disch CH	SA	1X4DB136 B-4	O/C	O/C	~	A	~	Q	~	~	~

VEGP-1 IST PROGRAM
VALVE TABLE

SYSTEM: 1204 - SAFETY INJECTION

VLV ID	CC/PC CAT	TYPE	FUNCTION	AT	P&ID/COORD	NP	SP	FP	A/P	PI	ET	FST	LT	NOTES/CSJ/ROJ/RR
1-1204-U4-026	1/111 C	1.50" CH	RCS Cold Leg SI Admis CH	SA	1X4DB111 D-5	C	O	-	A	-	RO	-	-	ROJ-3
1-1204-U4-027	1/111 C	1.50" CH	RCS Cold Leg SI Admis CH	SA	1X4DB111 G-5	C	O	-	A	-	RO	-	-	ROJ-3
1-1204-U4-028	1/111 C	1.50" CH	RCS Cold Leg SI Admis CH	SA	1X4DB111 G-4	C	O	-	A	-	RO	-	-	ROJ-3
1-1204-U4-029	1/111 C	1.50" CH	RCS Cold Leg SI Admis CH	SA	1X4DB111 D-4	C	O	-	A	-	RO	-	-	ROJ-3
1-1204-U4-093	2/212 C	1.50" CH	SI Pmp Min Flow Disch CH	SA	1X4DB121 E-3	C	O/C	-	A	-	Q	-	-	-
1-1204-U4-094	2/212 C	1.50" CH	SI Pmp Min Flow Disch CH	SA	1X4DB121 D-3	C	O/C	-	A	-	Q	-	-	-
1-1204-U4-120	1/111 AC	2" CH	SI to RCS Hot Leg Iso CH	SA	1X4DB121 F-6	C	O/C	-	A	-	RO	-	RO	ROJ-4
1-1204-U4-121	1/111 AC	2" CH	SI to RCS Hot Leg Iso CH	SA	1X4DB121 F-6	C	O/C	-	A	-	RO	-	RO	ROJ-4
1-1204-U4-122	1/111 AC	2" CH	SI to RCS Hot Leg Iso CH	SA	1X4DB121 F-7	C	O/C	-	A	-	RO	-	RO	ROJ-4
1-1204-U4-123	1/111 AC	2" CH	SI to RCS Hot Leg Iso CH	SA	1X4DB121 F-7	C	O/C	-	A	-	RO	-	RO	ROJ-4
1-1204-U4-143	1/111 AC	2" CH	SI To RCS Cold Leg Iso CH	SA	1X4DB121 B-6	C	O/C	-	A	-	RO	-	RO	ROJ-4
1-1204-U4-144	1/111 AC	2" CH	SI To RCS Cold Leg Iso CH	SA	1X4DB121 B-7	C	O/C	-	A	-	RO	-	RO	ROJ-4
1-1204-U4-145	1/111 AC	2" CH	SI To RCS Cold Leg Iso CH	SA	1X4DB121 B-7	C	O/C	-	A	-	RO	-	RO	ROJ-4
1-1204-U4-146	1/111 AC	2" CH	SI To RCS Cold Leg Iso CH	SA	1X4DB121 B-8	C	O/C	-	A	-	RO	-	RO	ROJ-4

VEGP-1 IST PROGRAM
VALVE TABLE

SYSTEM: 1204 - SAFETY INJECTION

VLV ID	CC/PC CAT	TYPE	FUNCTION	AT	P&ID/COORD	NP	SP	FP	A/P	PI	ET	FST	LT	NOTES/CSJ/ROJ/RR
1-1204-U4-159	2/212 A	3/4" GL	SI Accum Sam Man Iso Vlv	MA	1X4DB120 G-2	C	C	-	P	-	-	-	AJ	-
1-1204-U4-160	2/212 A	3/4" GL	SI Accum Sam Man Iso Vlv	MA	1X4DB120 E-2	C	C	-	P	-	-	-	AJ	-
1-1204-U4-161	2/212 A	3/4" GL	SI Accum Sam Man Iso Vlv	MA	1X4DB120 C-2	C	C	-	P	-	-	-	AJ	-
1-1204-U4-162	2/212 A	3/4" GL	SI Accum Sam Man Iso Vlv	MA	1X4DB120 A-2	C	C	-	P	-	-	-	AJ	-
1-1204-U4-262	2/212 C	3" CH	RWST Sludge Mixing Pmp Disch CH	SA	1X4DB121 G-3	O/C	C	-	A	-	RO	-	-	ROJ-5
1-1204-U4-263	2/212 C	3" CH	RWST Sludge Mixing Pmp Disch CH	SA	1X4DB121 G-3	O/C	C	-	A	-	RO	-	-	ROJ-5
1-1204-U6-013	1/111 C	3" CH	SI From BIT To RCS Cold Legs CH	SA	1X4DB119 E-6	C	O/C	-	A	-	RO	-	-	ROJ-6
1-1204-U6-079	1/111 AC	10" CH	SI Accum Disch CH	SA	1X4DB120 G-8	C	O/C	-	A	-	RO	-	RO	ROJ-7
1-1204-U6-080	1/111 AC	10" CH	SI Accum Disch CH	SA	1X4DB120 E-8	C	O/C	-	A	-	RO	-	RO	ROJ-7
1-1204-U6-081	1/111 AC	10" CH	SI Accum Disch CH	SA	1X4DB120 C-8	C	O/C	-	A	-	RO	-	RO	ROJ-7
1-1204-U6-082	1/111 AC	10" CH	SI Accum Disch CH	SA	1X4DB120 A-8	C	O/C	-	A	-	RO	-	RO	ROJ-7
1-1204-U6-083	1/111 AC	10" CH	SI/RHR Cold Leg Admis CH	SA	1X4DB111 B-5	C	O/C	-	A	-	RO PCS	-	RO	ROJ-8
1-1204-U6-084	1/111 AC	10" CH	SI/RHR Cold Leg Admis CH	SA	1X4DB111 H-5	C	O/C	-	A	-	RO PCS	-	RO	ROJ-8
1-1204-U6-085	1/111 AC	10" CH	SI/RHR Cold Leg Admis CH	SA	1X4DB111 H-4	C	O/C	-	A	-	RO PCS	-	RO	ROJ-8

VEGP-1 IST PROGRAM
VALVE TABLE

SYSTEM: 1204 - SAFETY INJECTION

VLV ID	CC/PC CAT	TYPE	FUNCTION	AT	P&ID/COORD	NP	SP	FP	A/P	PI	ET	FST	LT	NOTES/CSJ/ROJ/RR
1-1204-U6-086	1/111 AC	10" CH	SI/RHR Cold Leg Admis CH	SA	1X4DB111 B-4	C	O/C	-	A	-	RO PCS	-	RO	ROJ-8
1-1204-U6-090	2/212 C	8" CH	SI Suc Line CH	SA	1X4DB121 E-1	C	O	-	A	-	RO PQ	-	-	ROJ-9
1-1204-U6-098	2/212 C	4" CH	SI Pmp Disch CH	SA	1X4DB121 E-4	C	O/C	-	A	-	RO PQ	-	-	ROJ-10
1-1204-U6-099	2/212 C	4" CH	SI Pmp Disch CH	SA	1X4DB121 D-3	C	O/C	-	A	-	RO PQ	-	-	ROJ-10
1-1204-U6-124	1/111 AC	6" CH	RCS Hot Leg SI Admis CH	SA	1X4DB111 F-5	C	O/C	-	A	-	RO	-	RO	ROJ-4
1-1204-U6-125	1/111 AC	6" CH	RCS Hot Leg SI Admis CH	SA	1X4DB111 D-3	C	O/C	-	A	-	CS RO	-	RO	CSJ-4 ROJ-11
1-1204-U6-126	1/111 AC	6" CH	RCS Hot Leg SI Admis CH	SA	1X4DB111 D-6	C	O/C	-	A	-	CS RO	-	RO	CSJ-4 ROJ-11
1-1204-U6-127	1/111 AC	6" CH	RCS Hot Leg SI Admis CH	SA	1X4DB111 F-4	C	O/C	-	A	-	RO	-	RO	ROJ-4
1-1204-U6-128	1/111 AC	8" CH	RHR To RCS Hot Leg Iso CH	SA	1X4DB121 F-6	C	O/C	-	A	-	CS RO	-	RO	CSJ-4 ROJ-11
1-1204-U6-129	1/111 AC	8" CH	RHR To RCS Hot Leg Iso CH	SA	1X4DB121 F-6	C	O/C	-	A	-	CS RO	-	RO	CSJ-4 ROJ-11
1-1204-U6-147	1/111 AC	6" CH	RHR To RCS Cold Leg Iso CH	SA	1X4DB121 B-6	C	O/C	-	A	-	CS RO	-	RO	CSJ-5 ROJ-12
1-1204-U6-148	1/111 AC	6" CH	RHR To RCS Cold Leg Iso CH	SA	1X4DB121 A-6	C	O/C	-	A	-	CS RO	-	RO	CSJ-5 ROJ-12
1-1204-U6-149	1/111 AC	6" CH	RHR To RCS Cold Leg Iso CH	SA	1X4DB121 A-7	C	O/C	-	A	-	CS RO	-	RO	CSJ-5 ROJ-12
1-1204-U6-150	1/111 AC	6" CH	RHR To RCS Cold Leg Iso CH	SA	1X4DB121 A-7	C	O/C	-	A	-	CS RO	-	RO	CSJ-5 ROJ-12

VEGP-1 IST PROGRAM
VALVE TABLE

SYSTEM: 1204 - SAFETY INJECTION

VLV ID	CC/PC	CAT	TYPE	FUNCTION	AT	P&ID/COORD	NP	SP	FP	A/P	PI	ET	FST	LT	NOTES/CSJ/ROJ/RR
1-1204-U6-163	2/212	C	8" CH	RHR Pmp to SI Pmps Suc Iso	SA	1X4DB122 B-8	C	O	-	A	-	RO	-	-	ROJ-13
1-HV-0943A	3/313	B	1" GL	SI Accum Nitrogen Vent Vlv	SO	1X4DB120 E-1	C	O/C	C	A	RO	Q	Q	-	-
1-HV-0943B	3/313	B	1" GL	SI Accum Nitrogen Vent Vlv	SO	1X4DB120 D-1	C	O/C	C	A	RO	Q	Q	-	-
1-HV-10950	2/212	A	3/4" GL	SI Accum Sam Iso Vlv	SO	1X4DB120 G-3	O/C	C	C	A	RO	Q	Q	AJ	-
1-HV-10951	2/212	A	3/4" GL	SI Accum Sam Iso Vlv	SO	1X4DB120 E-3	O/C	C	C	A	RO	Q	Q	AJ	-
1-HV-10952	2/212	A	3/4" GL	SI Accum Sam Iso Vlv	SO	1X4DB120 C-3	O/C	C	C	A	RO	Q	Q	AJ	-
1-HV-10953	2/212	A	3/4" GL	SI Accum Sam Iso Vlv	SO	1X4DB120 A-3	O/C	C	C	A	RO	Q	Q	AJ	-
1-HV-10957	2/212	B	3" GA	RWST Sludge Mixing Pmp Suc Vlv	AO	1X4DB121 G-3	O/C	C	C	A	RO	Q	Q	-	-
1-HV-10958	2/212	B	3" GA	RWST Sludge Mixing Pmp Suc Vlv	AO	1X4DB121 G-3	O/C	C	C	A	RO	Q	Q	-	-
1-HV-8801A	2/212	B	4" GA	BIT Outlet to RCS Cold Legs, Obrd Ctmt Iso Vlv	MO	1X4DB119 F-5	C	O	AI	A	RO	Q	-	-	-
1-HV-8801B	2/212	B	4" GA	BIT Outlet to RCS Cold Legs, Obrd Ctmt Iso Vlv	MO	1X4DB119 E-5	C	O	AI	A	RO	Q	-	-	-
1-HV-8802A	2/212	B	4" GA	SI to RCS Hot Legs, Obrd Ctmt Iso Vlv	MO	1X4DB121 E-5	C	O/C	AI	A	RO	CS	-	-	CSJ-6
1-HV-8802B	2/212	B	4" GA	SI to RCS Hot Legs, Obrd Ctmt Iso Vlv	MO	1X4DB121 D-5	C	O/C	AI	A	RO	CS	-	-	CSJ-6

VEGP-1 IST PROGRAM
VALVE TABLE

SYSTEM: 1204 - SAFETY INJECTION

VLV ID	CC/PC CAT	TYPE	FUNCTION	AT	P&ID/COORD	NP	SP	FP	A/P	PI	ET	FST	LT	NOTES/CSJ/ROJ/RR
1-HV-8806	2/212 B	6" GA	SI Pmp Suc From RWST	MO	1X4DB121 E-1	O	O/C	AI	A	RO	CS	~	~	CSJ-7
1-HV-8807A	2/212 B	6" GA	SI Pmp Suc from Char Pmp Suc Hdr	MO	1X4DB121 D-2	C	O	AI	A	RO	Q	~	~	~
1-HV-8807B	2/212 B	6" GA	SI Pmp Suc from Char Pmp Suc Hdr	MO	1X4DB121 D-2	C	O	AI	A	RO	Q	~	~	~
1-HV-8809A	2/212 B	8" GA	RHR Disch To Cold Legs From RHR Hx	MO	1X4DB121 B-5	O	O/C	AI	A	RO	CS	~	~	CSJ-8
1-HV-8809B	2/212 B	8" GA	RHR Disch To Cold Legs From RHR Hx	MO	1X4DB121 A-5	O	O/C	AI	A	RO	CS	~	~	CSJ-8
1-HV-8813	2/212 B	2" GL	SI Min Flow Hdr Iso Vlv	MO	1X4DB121 F-5	O	O/C	AI	A	RO	CS	~	~	CSJ-9
1-HV-8814	2/212 B	1.50" GL	SI Pmp Min Flow Line Iso Vlv	MO	1X4DB121 E-3	O	O/C	AI	A	RO	Q	~	~	~
1-HV-8821A	2/212 B	4" GA	SI Pmp Cold Leg Disch Stop Vlv	MO	1X4DB121 E-4	O	O/C	AI	A	RO	Q	~	~	~
1-HV-8821B	2/212 B	4" GA	SI Pmp Cold Leg Disch Stop Vlv	MO	1X4DB121 D-4	O	O/C	AI	A	RO	Q	~	~	~
1-HV-8823	2/212 B	3/4" GL	SI Cold Leg Inj Test Line Vlv	AO	1X4DB121 C-8	O/C	C	C	A	RO	Q	Q	~	~
1-HV-8824	2/212 B	3/4" GL	SI CH Hot Leg 2 and 3 Test Vlv	AO	1X4DB121 E-8	O/C	C	C	A	RO	Q	Q	~	~
1-HV-8825	2/212 B	3/4" GL	RHR To Hot Leg Test Line Vlv	AO	1X4DB121 D-8	O/C	C	C	A	RO	Q	Q	~	~
1-HV-8835	2/212 B	4" GA	SI Hdr Cold Leg Disch Stop Vlv	MO	1X4DB121 C-5	O	O/C	AI	A	RO	CS	~	~	CSJ-10
1-HV-8840	2/212 B	12" GA	Hot Leg Crossover Iso Vlv	MO	1X4DB121 B-4	O	O/C	AI	A	RO	CS	~	~	CSJ-11

VEGP-1 IST PROGRAM
VALVE TABLE

SYSTEM: 1204 - SAFETY INJECTION

VLV ID	CC/PC	CAT	TYPE	FUNCTION	AT	P&ID/COORD	NP	SP	FP	A/P	PI	ET	FST	LT	NOTES/CSJ/ROJ/RR
1-HV-8843	2/212	B	3/4" GL	BIT Test/Recir Vlv	AO	1X4DB119 D-6	O/C	C	C	A	RO	Q	Q	-	-
1-HV-8871	2/212	A	3/4" GL	Accum Test Line Inbrd Ctmt Iso Vlv	AO	1X4DB121 H-6	O/C	C	C	A	RO	Q	Q	AJ	-
1-HV-8875A	2/212	B	1" GL	SI Accum Nitrogen Sup/Vent Vlv	SO	1X4DB120 H-3	C	O/C	C	A	RO	Q	Q	-	-
1-HV-8875B	2/212	B	1" GL	SI Accum Nitrogen Sup/Vent Vlv	SO	1X4DB120 F-3	C	O/C	C	A	RO	Q	Q	-	-
1-HV-8875C	2/212	B	1" GL	SI Accum Nitrogen Sup/Vent Vlv	SO	1X4DB120 D-3	C	O/C	C	A	RO	Q	Q	-	-
1-HV-8875D	2/212	B	1" GL	SI Accum Nitrogen Sup/Vent Vlv	SO	1X4DB120 B-3	C	O/C	C	A	RO	Q	Q	-	-
1-HV-8875E	2/212	B	1" GL	SI Accum Nitrogen Sup/Vent Vlv	SO	1X4DB120 G-3	C	O/C	C	A	RO	Q	Q	-	-
1-HV-8875F	2/212	B	1" GL	SI Accum Nitrogen Sup/Vent Vlv	SO	1X4DB120 E-3	C	O/C	C	A	RO	Q	Q	-	-
1-HV-8875G	2/212	B	1" GL	SI Accum Nitrogen Sup/Vent Vlv	SO	1X4DB120 D-3	C	O/C	C	A	RO	Q	Q	-	-
1-HV-8875H	2/212	B	1" GL	SI Accum Nitrogen Sup/Vent Vlv	SO	1X4DB120 B-3	C	O/C	C	A	RO	Q	Q	-	-
1-HV-8881	2/212	B	3/4" GL	SI CH Hot Leg 1 and 4 Test Vlv	AO	1X4DB121 G-6	O/C	C	C	A	RO	Q	Q	-	-
1-HV-8888	2/212	A	3/4" GL	Accum Fill Iso Vlv	AO	1X4DB121 F-5	O/C	C	C	A	RO	Q	Q	AJ	-
1-HV-8890A	2/212	B	3/4" GL	SI RHR Pmp CH Test Vlv	AO	1X4DB121 G-8	O/C	C	C	A	RO	Q	Q	-	-
1-HV-8890B	2/212	B	3/4" GL	SI RHR Pmp CH Test Vlv	AO	1X4DB121 E-8	O/C	C	C	A	RO	Q	Q	-	-

VEGP-1 IST PROGRAM
VALVE TABLE

SYSTEM: 1204 - SAFETY INJECTION

VLV ID	CC/PC CAT	TYPE	FUNCTION	AT	P&ID/COORD	NP	SP	FP	A/P	PI	ET	FST	LT	NOTES/CSJ/ROJ/RR
1-HV-8920	2/212 B	1.50" GL	SI Pmp Min Flow Line Iso Vlv	MO	1X4DB121 D-3	O	O/C	AI	A	RO	Q	~	~	~
1-HV-8924	2/212 B	6" GA	CVCS/SI Suc Hdr Intertie Iso Vlv	MO	1X4DB116-2 A-7	O	C	AI	A	RO	Q	~	~	~
1-HV-8964	2/212 A	3/4" GL	Accum Test Line Obrd Ctmt Iso Vlv	AO	1X4DB121 H-5	O/C	C	C	A	RO	Q	Q	AJ	~
1-HV-9017A	2/212 B	10" GA	RWST to Ctmt Spray Pmp Iso Vlv	MO	1X4DB131 F-3	O	O/C	AI	A	RO	Q	~	~	~
1-HV-9017B	2/212 B	10" GA	RWST to Ctmt Spray Pmp Iso Vlv	MO	1X4DB131 E-3	O	O/C	AI	A	RO	Q	~	~	~
1-PSV-8851	2/212 C	3/4" RV	SI Cold Leg Inj Hdr RV	SA	1X4DB121 C-5	C	O/C	~	A	~	~	~	~	Note 6
1-PSV-8853A	2/212 C	3/4" RV	SI Pmp Disch RV	SA	1X4DB121 E-4	C	O/C	~	A	~	~	~	~	Note 6
1-PSV-8853B	2/212 C	3/4" RV	SI Pmp Disch RV	SA	1X4DB121 D-4	C	O/C	~	A	~	~	~	~	Note 6
1-PSV-8858	2/212 C	3/4" RV	SI Pmp Suc Hdr RV	SA	1X4DB121 E-1	C	O/C	~	A	~	~	~	~	Note 6
1-PSV-8916A	2/212 C	3/4" RV	SI Pmp Suc RV	SA	1X4DB121 E-3	C	O/C	~	A	~	~	~	~	Note 6
1-PSV-8916B	2/212 C	3/4" RV	SI Pmp Suc RV	SA	1X4DB121 D-2	C	O/C	~	A	~	~	~	~	Note 6

VEGP-1 IST PROGRAM
VALVE TABLE

SYSTEM: 1205 - RHR

VLV ID	CC/PC CAT	TYPE	FUNCTION	AT	P&ID/COORD	NP	SP	FP	A/P	PI	ET	FST	LT	NOTES/CSJ/RO//RR
1-1205-U4-122	2/212 C	14" CH	RHR Pmp Suc CH from Ctmt Sump	SA	1X4DB122 C-3	C	O/C	-	A	-	RO	-	-	ROJ-14
1-1205-U4-123	2/212 C	14" CH	RHR Pmp Suc CH from Ctmt Sump	SA	1X4DB122 B-3	C	O/C	-	A	-	RO	-	-	ROJ-14
1-1205-U6-001	2/212 C	12" CH	RHR Pmp Sup Iso From RWST CH	SA	1X4DB122 F-4	C	O/C	-	A	-	CS PQ Q	-	-	CSJ-12
1-1205-U6-002	2/212 C	12" CH	RHR Pmp Sup Iso From RWST CH	SA	1X4DB122 C-4	C	O/C	-	A	-	CS PQ Q	-	-	CSJ-12
1-1205-U6-009	2/212 C	8" CH	RHR Pmp Disch CH	SA	1X4DB122 G-5	C	O	-	A	-	CS PQ	-	-	CSJ-13
1-1205-U6-010	2/212 C	8" CH	RHR Pmp Disch CH	SA	1X4DB122 D-5	C	O	-	A	-	CS PQ	-	-	CSJ-13
1-FV-0610	2/212 B	3" GA	RHR Pmp Min Flow Ctrl Vlv	MO	1X4DB122 H-5	O	O/C	AI	A	RO	Q	-	-	-
1-FV-0611	2/212 B	3" GA	RHR Pmp Min Flow Ctrl Vlv	MO	1X4DB122 E-5	O	O/C	AI	A	RO	Q	-	-	-
1-HV-8716A	2/212 B	8" GA	RHR Train A to Hot Leg Cross-over Iso Vlv	MO	1X4DB122 F-7	O	O/C	AI	A	RO	Q	-	-	-
1-HV-8716B	2/212 B	8" GA	RHR Train B to Hot Leg Cross-over Iso Vlv	MO	1X4DB122 D-7	O	O/C	AI	A	RO	Q	-	-	-
1-HV-8804A	2/212 B	8" GA	RHR Pmp "A" Disch to Char Pmp Suc Hdrs	MO	1X4DB122 F-8	C	O/C	AI	A	RO	CS	-	-	CSJ-14
1-HV-8804B	2/212 B	8" GA	RHR Pmp "B" To SI Pmp "B" Iso Vlv	MO	1X4DB122 B-8	C	O/C	AI	A	RO	CS	-	-	CSJ-15

VEGP-1 IST PROGRAM
VALVE TABLE

SYSTEM: 1205 - RHR

VLV ID	CC/PC	CAT	TYPE	FUNCTION	AT	P&ID/COORD	NP	SP	FP	A/P	PI	ET	FST	LT	NOTES/CSJ/ROJ/RR
1-HV-8811A	2/212	B	14" GA	RHR Pmp Suc Iso From Ctmt Sump	MO	1X4DB122 B-3	C	O/C	AI	A	RO	Q	-	-	-
1-HV-8811B	2/212	B	14" GA	RHR Pmp Suc Iso From Ctmt Sump	MO	1X4DB122 B-3	C	O/C	AI	A	RO	Q	-	-	-
1-HV-8812A	2/212	B	12" GA	RHR Pmp Sup Iso From RWST	MO	1X4DB122 F-4	O	O/C	AI	A	RO	Q	-	-	-
1-HV-8812B	2/212	B	12" GA	RHR Pmp Sup Iso From RWST	MO	1X4DB122 C-4	O	O/C	AI	A	RO	Q	-	-	-
1-PSV-8708A	2/212	C	3" RV	RHR Pmp Suc RV	SA	1X4DB122 H-3	C	O/C	-	A	-	-	-	-	Note 6
1-PSV-8708B	2/212	C	3" RV	RHR Pmp Suc RV	SA	1X4DB122 E-3	C	O/C	-	A	-	-	-	-	Note 6
1-PSV-8842	2/212	C	3/4" RV	RHR Hot Leg Cross-over Line RV	SA	1X4DB121 C-3	C	O/C	-	A	-	-	-	-	Note 6
1-PSV-8856A	2/212	C	3/4" RV	RHR Hx Disch Hdr to Cold Leg RV	SA	1X4DB121 B-4	C	O/C	-	A	-	-	-	-	Note 6
1-PSV-8856B	2/212	C	3/4" RV	RHR Hx Disch Hdr to Cold Leg RV	SA	1X4DB121 A-4	C	O/C	-	A	-	-	-	-	Note 6

VEGP-1 IST PROGRAM
VALVE TABLE

SYSTEM: 1206 - CTMT SPRAY

VLV ID	CC/PC	CAT	TYPE	FUNCTION	AT	P&ID/COORD	NP	SP	FP	A/P	PI	ET	FST	LT	NOTES/CSJ/ROJ/RR
1-1206-U6-001	2/212	C	10" CH	Ctmt Spray Pmp Suc From RWST CH	SA	1X4DB131 G-3	C	O/C	-	A	-	RO PQ	-	-	ROJ-15
1-1206-U6-008	2/212	C	10" CH	Ctmt Spray Pmp Suc From RWST CH	SA	1X4DB131 D-3	C	O/C	-	A	-	RO PQ	-	-	ROJ-15
1-1206-U6-015	2/212	AC	8" CH	Ctmt Spray Inbrd Ctmt Iso CH	SA	1X4DB131 H-7	C	O/C	-	A	-	RO	-	AJ	ROJ-16
1-1206-U6-016	2/212	AC	8" CH	Ctmt Spray Inbrd Ctmt Iso CH	SA	1X4DB131 C-7	C	O/C	-	A	-	RO	-	AJ	ROJ-16
1-HV-9001A	2/212	A	8" GA	Ctmt Spray Pmp Suc From Ctmt Sump Inbrd Iso Vlv	MO	1X4DB131 G-6	C	O/C	AI	A	RO	Q	-	AJ	-
1-HV-9001B	2/212	A	8" GA	Ctmt Spray Pmp Suc From Ctmt Sump Inbrd Iso Vlv	MO	1X4DB131 C-6	C	O/C	AI	A	RO	Q	-	AJ	-
1-HV-9002A	2/212	B	10" GA	Ctmt Spray Pmp Suc From Ctmt Sump Inbrd Iso Vlv	MO	1X4DB131 B-6	C	O/C	AI	A	RO	Q	-	-	-
1-HV-9002B	2/212	B	10" GA	Ctmt Spray Pmp Suc From Ctmt Sump Inbrd Iso Vlv	MO	1X4DB131 C-6	C	O/C	AI	A	RO	Q	-	-	-
1-HV-9003A	2/212	B	10" GA	Ctmt Spray Pmp Suc From Ctmt Sump Obrd Iso Vlv	MO	1X4DB131 B-5	C	O	AI	A	RO	Q	-	-	-
1-HV-9003B	2/212	B	10" GA	Ctmt Spray Pmp Suc From Ctmt Sump Obrd Iso Vlv	MO	1X4DB131 C-5	C	O	AI	A	RO	Q	-	-	-

VEGP-1 IST PROGRAM
VALVE TABLE

SYSTEM: 1208 - CVCS

VLV ID	CC/PC	CAT	TYPE	FUNCTION	AT	P&ID/COORD	NP	SP	FP	A/P	PI	ET	FST	LT	NOTES/CSJ/ROJ/RR
1-1208-U4-004	2/212	C	1.5" CH	RCP Seal Inj Inbrd CH	SA	1X4DB114 B-7	O	C	~	A	~	RO	~	~	ROJ-17
1-1208-U4-021	2/212	AC	3/4" CH	RCS Seal Water Ret Line Pressure Equalizing CH	SA	1X4DB114 D-4	C	O/C	~	A	~	RO	~	AJ	ROJ-18
1-1208-U4-140	2/212	C	2" CH	Cent Char Pmp Disch Recir Line CH	SA	1X4DB116-2 G-6	C	O	~	A	~	Q	~	~	~
1-1208-U4-147	2/212	C	2" CH	Cent Char Pmp Disch Recir Line CH	SA	1X4DB116-2 C-6	C	O/C	~	A	~	Q	~	~	~
1-1208-U4-165	2/212	C	2" CH	Emergency Boration to Char Pmp Suc CH	SA	1X4DB116-1 D-1	C	O	~	A	~	CS	~	~	CSJ-16
1-1208-U4-284	3/313	C	2" CH	Boric Acid Tran Pmp Disch CH	SA	1X4DB118 D-5	C	O/C	~	A	~	Q	~	~	~
1-1208-U4-299	3/313	C	2" CH	Boric Acid Tran Pmp Disch CH	SA	1X4DB118 B-5	C	O/C	~	A	~	Q	~	~	~
1-1208-U4-353	2/212	C	1.5" CH	RCP Seal Inj Inbrd CH	SA	1X4DB114 B-7	O	C	~	A	~	RO	~	~	ROJ-17
1-1208-U4-354	2/212	C	1.5" CH	RCP Seal Inj Inbrd CH	SA	1X4DB114 B-7	O	C	~	A	~	RO	~	~	ROJ-17
1-1208-U4-355	2/212	C	1.5" CH	RCP Seal Inj Inbrd CH	SA	1X4DB114 B-7	O	C	~	A	~	RO	~	~	ROJ-17
1-1208-U6-032	2/212	AC	3" CH	Main Char Hdr CH	SA	1X4DB114 G-3	O	O/C	~	A	~	Q RO	~	AJ	ROJ-19
1-1208-U6-124	2/212	C	4" CH	Char Pmp Sup From VCT CH	SA	1X4DB116-1 E-4	O	C	~	A	~	RC	~	~	ROJ-20
1-1208-U6-142	2/212	C	4" CH	Cent Char Pmp Disch CH	SA	1X4DB116-2 G-6	C	O/C	~	A	~	RO PQ	~	~	ROJ-21

VEGP-1 IST PROGRAM
VALVE TABLE

SYSTEM: 1208 - CVCS

VLV ID	CC/PC	CAT	TYPE	FUNCTION	AT	P&ID/COORD	NP	SP	FP	A/P	PI	ET	FST	LT	NOTES/CSJ/ROJ/RR
1-1208-U6-149	2/212	C	4" CH	Cent Char Pmp Disch CH	SA	1X4DB116-2 C-6	C	O/C	~	A	~	RO PQ	~	~	ROJ-21
1-1208-U6-189	2/212	C	8" CH	Cent Char Pmp Suc From RWST CH	SA	1X4DB116-2 E-2	C	O/C	~	A	~	RO PCS	~	~	ROJ-22
1-1208-U6-436	2/212	C	8" CH	RHR Pmp "A" Disch to Char Pmp Suc Hdrs CH	SA	1X4DB122 F-8	C	O	~	A	~	RO PCS	~	~	ROJ-23
1-FV-0111A	3/313	B	2" GL	Dilution Ctrl Vlv	AO	1X4DB116-1 F-1	O/C	C	C	A	RO	Q	Q	~	~
1-HV-0190A	2/212	B	1" GL	Char Throttle Vlv	SO	1X4DB116-2 G-7	C	O	C	A	RO	Q	~	~	~
1-HV-0190B	2/212	B	1" GL	Char Throttle Vlv	SO	1X4DB116-2 B-7	C	O	C	A	RO	Q	~	~	~
1-HV-8100	2/212	A	2" GL	RCP Seal Water Leakoff Ctmt Iso Vlv	MO	1X4DB114 D-3	O	C	AI	A	RO	CS	CS	AJ	CSJ-17
1-HV-8103A	2/212	B	1.5" GL	RCP Seal Inj Iso Vlv	MO	1X4DB114 B-6	O	C	AI	A	RO	RO	~	~	ROJ-24
1-HV-8103B	2/212	B	1.5" GL	RCP Seal Inj Iso Vlv	MO	1X4DB114 B-6	O	C	AI	A	RO	RO	~	~	ROJ-24
1-HV-8103C	2/212	B	1.5" GL	RCP Seal Inj Iso Vlv	MO	1X4DB114 B-6	O	C	AI	A	RO	RO	~	~	ROJ-24
1-HV-8103D	2/212	B	1.5" GL	RCP Seal Inj Iso Vlv	MO	1X4DB114 B-6	O	C	AI	A	RO	RO	~	~	ROJ-24
1-HV-8104	2/212	B	2" GL	Emergency Borate Iso Vlv	MO	1X4DB116-1 D-1	C	O/C	AI	A	RO	Q	~	~	~
1-HV-8105	2/212	A	3" GA	Char Pmp to RCS Ctmt Iso Vlv	MO	1X4DB116-1 C-8	O	O/C	AI	A	RO	CS	~	AJ	CSJ-18
1-HV-8106	2/212	B	3" GA	Char Pmp to RCS Iso Vlv	MO	1X4DB116-1 C-7	O	C	AI	A	RO	CS	~	~	CSJ-19

VEGP-1 IST PROGRAM
VALVE TABLE

SYSTEM: 1208 - CVCS

VLV ID	CC/PC	CAT	TYPE	FUNCTION	AT	P&ID/COORD	NP	SP	FP	A/P	PI	ET	FST	LT	NOTES/CSJ/ROJ/RR
1-HV-8110	2/212	B	2" GL	Cent Char Pmp Common Recir to RCS Seal Water Iso Vlv	MO	1X4DB116-2 E-7	O	C	AI	A	RO	Q	-	-	-
1-HV-8111A	2/212	B	2" GL	Cent Char Pmp Recir to RCS Seal Water Iso Vlv	MO	1X4DB116-2 F-6	O	C	AI	A	RO	Q	-	-	-
1-HV-8111B	2/212	B	2" GL	Cent Char Pmp Recir to RCS Seal Water Iso Vlv	MO	1X4DB116-2 D-6	O	C	AI	A	RO	Q	-	-	-
1-HV-8112	2/212	A	2" GL	RCPS Seal Water Leakoff Ctmt Iso Vlv	MO	1X4DB114 D-3	O	C	AI	A	RO	CS	-	AJ	CSJ-17
1-HV-8116	2/212	B	1" GL	Char Iso Vlv	MO	1X4DB116-2 G-8	C	O	AI	A	RO	Q	-	-	-
1-HV-8152	2/212	A	3" GL	RCS Ltdwn Line Iso Vlv	AO	1X4DB114 G-3	O	C	C	A	RO	CS	CS	AJ	CSJ-20
1-HV-8160	2/212	A	3" GL	RCS Ltdwn Line Iso Vlv	AO	1X4DB114 G-3	O	C	C	A	RO	CS	CS	AJ	CSJ-20
1-HV-8471A	2/212	B	6" GA	Cent Char Pmp Suc Iso Vlv	MO	1X4DB116-2 G-3	O	O/C	AI	A	RO	Q	-	-	-
1-HV-8471B	2/212	B	6" GA	Cent Char Pmp Suc Iso Vlv	MO	1X4DB116-2 C-3	O	O/C	AI	A	RO	Q	-	-	-
1-HV-8508A	2/212	B	2" GL	Cent Char Pmp Alt Mini-Flow to RWST Iso Vlv	MO	1X4DB116-2 G-5	C	O/C	AI	A	RO	CS	-	-	CSJ-21
1-HV-8508B	2/212	B	2" GL	Cent Char Pmp Alt Mini-Flow to RWST Iso Vlv	MO	1X4DB116-2 D-5	C	O/C	AI	A	RO	CS	-	-	CSJ-21
1-HV-8509A	2/212	B	2" GL	Cent Char Pmp Alt Mini-Flow to RWST Iso	MO	1X4DB116-2 D-5	O	C	AI	A	RO	Q	-	-	-

VEGP-1 IST PROGRAM
VALVE TABLE

SYSTEM: 1208 - CVCS

VLV ID	CC/PC	CAT	TYPE	FUNCTION	AT	P&ID/COORD	NP	SP	FP	A/P	PI	ET	FST	LT	NOTES/CSJ/ROJ/RR
				Vlv											
1-HV-8509B	2/212	B	2" GL	Cent Char Pmp Alt Mini-Flow to RWST Iso Vlv	MO	1X4DB116-2 G-5	O	C	AI	A	RO	Q	~	~	~
1-LV-0112B	2/212	B	4" GA	VCT Outlet Iso Vlv	MO	1X4DB116-1 F-4	O	C	AI	A	RO	CS	~	~	CSJ-22
1-LV-0112C	2/212	B	4" GA	VCT Outlet Iso Vlv	MO	1X4DB116-1 E-4	O	C	AI	A	RO	CS	~	~	CSJ-22
1-LV-0112D	2/212	B	8" GA	RWST To Char Pmp Suc Iso Vlv	MO	1X4DB116-2 E-2	C	O/C	AI	A	RO	CS	~	~	CSJ-23
1-LV-0112E	2/212	B	8" GA	RWST To Char Pmp Suc Iso Vlv	MO	1X4DB116-2 D-2	C	O/C	AI	A	RO	CS	~	~	CSJ-23
1-PSV-8121	2/212	B	2" RV	RCP Seal Water Ret Hdr RV	SA	1X4DB114 D-4	C	O/C	~	A	~	~	~	~	Note 6
1-PSV-8124	2/212	C	3/4" RV	Char Pmp Suc Hdr RV	SA	1X4DB116-1 C-3	C	O/C	C	A	~	~	~	~	Note 6

VEGP-1 IST PROGRAM
VALVE TABLE

SYSTEM: 1212 - NUCLEAR SAM.

VLV ID	CC/PC	CAT	TYPE	FUNCTION	AT	P&ID/COORD	NP	SP	FP	A/P	PI	ET	FST	LT	NOTES/CSJ/ROJ/RR
1-HV-3502	2/212	A	1/2" GL	RC Hot Legs Sam Hdr Ctmt Iso Vlv	AO	1X4DB140 E-7	O	C	C	A	RO	Q	Q	AJ	-
1-HV-3507	2/212	A	1/2" GL	PRZR Liquid Space Sam Line Ctmt Iso Vlv	AO	1X4DB140 G-7	C	C	C	A	RO	Q	Q	AJ	-
1-HV-3508	2/212	A	1/2" GL	PRZR Liquid Space Sam Line Ctmt Iso Vlv	AO	1X4DB140 G-7	C	C	C	A	RO	Q	Q	AJ	-
1-HV-3513	2/212	A	1/2" GL	PRZR Steam Space Sam Line Ctmt Iso Vlv	AO	1X4DB140 F-8	C	C	C	A	RO	Q	Q	AJ	-
1-HV-3514	2/212	A	1/2" GL	PRZR Steam Space Sam Line Ctmt Iso Vlv	AO	1X4DB140 F-7	C	C	C	A	RO	Q	Q	AJ	-
1-HV-3548	2/212	A	1/2" GL	RC Hot Legs Sam Hdr Ctmt Iso Vlv	MO	1X4DB140 D-8	O	C	AI	A	RO	Q	-	AJ	-
1-HV-8220	2/212	A	1/2" GL	RC Hot Legs Sam Hdr Ctmt Iso Vlv	SO	1X4DB140 D-7	C	C	C	A	RO	Q	Q	AJ	-

VEGP-1 IST PROGRAM
VALVE TABLE

SYSTEM: 1213 - SPENT FUEL COOLING

VLV ID	CC/PC	CAT	TYPE	FUNCTION	AT	P&ID/COORD	NP	SP	FP	A/P	PI	ET	FST	LT	NOTES/CSJ/ROJ/RR
1-1213-U6-050	2/212	A	3" DI	RF Pur from SFP Pmp to Rx Cav CIV	MA	1X4DB130 G-8	C	C	-	P	-	-	-	AJ	-
1-1213-U6-051	2/212	A	3" DI	RF Pur from SFP Pmp to Rx Cav CIV	MA	1X4DB130 G-8	C	C	-	P	-	-	-	AJ	-

VEGP-1 IST PROGRAM
VALVE TABLE

SYSTEM: 1214 - CNMT & AUX. BLDG DRN

VLV ID	CC/PC	CAT	TYPE	FUNCTION	AT	P&ID/COORD	NP	SP	FP	A/P	PI	ET	FST	LT	NOTES/CSJ/ROJ/RR
1-HV-0780	2/212	A	3" GA	Ctmt/Rx Cav Sump Pmp Disch Ctmt Iso Vlv	AO	1X4DB143 G-6	O	C	C	A	RO	Q	Q	AJ	~
1-HV-0781	2/212	A	3" GA	Ctmt/Rx Cav Sump Pmp Disch Ctmt Iso Vlv	AO	1X4DB143 G-6	O	C	C	A	RO	Q	Q	AJ	~

VEGP-1 IST PROGRAM
VALVE TABLE

SYSTEM: 1217 - ACCW

VLV ID	CC/PC CAT	TYPE	FUNCTION	AT	P&ID/COORD	NP	SP	FP	A/P	PI	ET	FST	LT	NOTES/CSJ/ROJ/RR
1-1217-U4-084	3/313 C	2.50" CH	ACCW To RCP Thermal Barrier Iso CH	SA	1X4DB138-2 E-6	O	C	-	A	-	RO	-	-	ROJ-25
1-1217-U4-085	3/313 C	2.50" CH	ACCW To RCP Thermal Barrier Iso CH	SA	1X4DB138-2 C-6	O	C	-	A	-	RO	-	-	ROJ-25
1-1217-U4-086	3/313 C	2.50" CH	ACCW To RCP Thermal Barrier Iso CH	SA	1X4DB138-2 B-3	O	C	-	A	-	RO	-	-	ROJ-25
1-1217-U4-087	3/313 C	2.50" CH	ACCW To RCP Thermal Barrier Iso CH	SA	1X4DB138-2 F-3	O	C	-	A	-	RO	-	-	ROJ-25
1-1217-U4-113	. 212 AC	3/4" CH	ACCW Sup to Ctmt Iso Vlv Bypass Vlv	SA	1X4DB138-2 G-7	C	O/C	-	A	-	RO	-	AJ	ROJ-26
1-HV-19051	3/313 B	2.50" GA	Individual RCP Thermal Barrier ACCW Ret Trip Vlv	MO	1X4DB138-2 E-7	O	C	AI	A	RO	CS	-	-	CSJ-24
1-HV-19053	3/313 B	2.50" GA	Individual RCP Thermal Barrier ACCW Ret Trip Vlv	MO	1X4DB138-2 C-7	O	C	AI	A	RO	CS	-	-	CSJ-24
1-HV-19055	3/313 B	2.50" GA	Individual RCP Thermal Barrier ACCW Ret Trip Vlv	MO	1X4DB138-2 B-2	O	C	AI	A	RO	CS	-	-	CSJ-24
1-HV-19057	3/313 B	2.50" GA	Individual RCP Thermal Barrier ACCW Ret Trip Vlv	MO	1X4DB138-2 F-1	O	C	AI	A	RO	CS	-	-	CSJ-24
1-HV-1974	2/212 A	10" BU	ACCW Ret From Ctmt Iso Vlv	MO	1X4DB138-2 G-7	O	C	AI	A	RO	CS	-	AJ	CSJ-25
1-HV-1975	2/212 A	10" BU	ACCW Ret From Ctmt Iso Vlv	MO	1X4DB138-1 B-2	O	C	AI	A	RO	CS	-	AJ	CSJ-25
1-HV-1978	2/212 A	10" BU	ACCW Sup to Ctmt Iso Vlv	MO	1X4DB138-2 H-7	O	C	AI	A	RO	CS	-	AJ	CSJ-25

VEGP-1 IST PROGRAM
VALVE TABLE

SYSTEM: 1217 - ACCW

VLV ID	CC/PC CAT	TYPE	FUNCTION	AT	P&ID/COORD	NP	SP	FP	A/P	PI	ET	FST	LT	NOTES/CSJ/ROJ/RR
1-HV-1979	2/212 A	10" BU	ACCW Sup to Cmt Iso Vlv	MO	1X4DB138-1 D-3	O	C	AI	A	RO	CS	-	AJ	CSJ-25
1-HV-2041	3/313 B	3" GA	Common RCP Thermal Barrier ACCW Ret Trip Vlv	MO	1X4DB138-2 F-7	O	C	AI	A	RO	CS	-	-	CSJ-24

VEGP-1 IST PROGRAM
VALVE TABLE

SYSTEM: 1301 - MAIN STEAM

VLV ID	CC/PC	CAT	TYPE	FUNCTION	AT	P&ID/COORD	NP	SP	FP	A/P	PI	ET	FST	LT	NOTES/CSJ/ROJ/RR
1-1301-U4-008	3/313	C	4" CH	MS Hdr Sup CH to AFW Pmp	SA	1X4DB159-2 E-4	O	O/C	-	A	-	CS PQ RO	-	-	ROJ-27 CSJ-26
1-1301-U4-404	3/313	C	4" CH	MS Hdr Sup CH to AFW Pmp	SA	1X4DB159-2 E-4	O	O/C	-	A	-	CS PQ RO	-	-	ROJ-27 CSJ-26
1-HV-13005A	2/212	B	4" GL	MSIV Bypass/Steam Drain Iso Vlv	AO	1X4DB159-2 G-6	O	C	C	A	RO	Q	Q	-	-
1-HV-13005B	2/212	B	4" GL	MSIV Bypass/Steam Drain Iso Vlv	AO	1X4DB159-2 G-6	O	C	C	A	RO	Q	Q	-	-
1-HV-13006A	2/212	B	4" GL	MSIV Bypass/Steam Drain Iso Vlv	AO	1X4DB159-2 A-6	O	C	C	A	RO	Q	Q	-	-
1-HV-13006B	2/212	B	4" GL	MSIV Bypass/Steam Drain Iso Vlv	AO	1X4DB159-2 A-6	O	C	C	A	RO	Q	Q	-	-
1-HV-13007A	2/212	B	4" GL	MSIV Bypass/Steam Drain Iso Vlv	AO	1X4DB159-2 E-6	O	C	C	A	RO	Q	Q	-	-
1-HV-13007B	2/212	B	4" GL	MSIV Bypass/Steam Drain Iso Vlv	AO	1X4DB159-2 E-6	O	C	C	A	RO	Q	Q	-	-
1-HV-13008A	2/212	B	4" GL	MSIV Bypass/Steam Drain Iso Vlv	AO	1X4DB159-2 C-6	O	C	C	A	RO	Q	Q	-	-
1-HV-13008B	2/212	B	4" GL	MSIV Bypass/Steam Drain Iso Vlv	AO	1X4DB159-2 C-6	O	C	C	A	RO	Q	Q	-	-
1-HV-15212A	2/212	B	3" GL	SG Blowdown Inbrd Iso Vlv	AO	1X4DB159-3 F-4	O	C	C	A	RO	Q	Q	-	-
1-HV-15212B	2/212	B	3" GL	SG Blowdown Inbrd Iso Vlv	AO	1X4DB159-3 B-4	O	C	C	A	RO	Q	Q	-	-
1-HV-15212C	2/212	B	3" GL	SG Blowdown Inbrd Iso Vlv	AO	1X4DB159-1 F-3	O	C	C	A	RO	Q	Q	-	-

VEGP-1 IST PROGRAM
VALVE TABLE

SYSTEM: 1301 - MAIN STEAM

VLV ID	CC/PC	CAT	TYPE	FUNCTION	AT	P&ID/COORD	NP	SP	FP	A/P	PI	ET	FST	LT	NOTES/CSJ/ROJ/RR
1-HV-15212D	2/212	B	3" GL	SG Blowdown Inbrd Iso Vlv	AO	1X4DB159-1 B-3	O	C	C	A	RO	Q	Q	-	-
1-HV-15216A	2/212	B	3" GL	SG Blowdown Inbrd Iso Vlv	AO	1X4DB159-3 F-3	O	C	C	A	RO	Q	Q	-	-
1-HV-15216B	2/212	B	3" GL	SG Blowdown Inbrd Iso Vlv	AO	1X4DB159-3 B-3	O	C	C	A	RO	Q	Q	-	-
1-HV-15216C	2/212	B	3" GL	SG Blowdown Inbrd Iso Vlv	AO	1X4DB159-1 F-3	O	C	C	A	RO	Q	Q	-	-
1-HV-15216D	2/212	B	3" GL	SG Blowdown Inbrd Iso Vlv	AO	1X4DB159-1 B-3	O	C	C	A	RO	Q	Q	-	-
1-HV-3006A	2/212	B	29.50" GA	MSIV	EH	1X4DB159-2 H-6	O	C	C	A	RO	CS	CS	-	CSJ-27
1-HV-3006B	2/212	B	28" GA	MSIV	EH	1X4DB159-2 H-7	O	C	C	A	RO	CS	CS	-	CSJ-27
1-HV-3009	2/212	B	4" GA	MS Line to AFW Pmp Iso Vlv	MO	1X4DB159-2 G-3	O	O/C	AI	A	RO	Q	-	-	-
1-HV-3016A	2/212	B	29.50" GA	MSIV	EH	1X4DB159-2 F-6	O	C	C	A	RO	CS	CS	-	CSJ-27
1-HV-3016B	2/212	B	28" GA	MSIV	EH	1X4DB159-2 F-7	O	C	C	A	RO	CS	CS	-	CSJ-27
1-HV-3019	2/212	B	4" GA	MS Line to AFW Pmp Iso Vlv	MO	1X4DB159-2 E-2	O	O/C	AI	A	RO	Q	-	-	-
1-HV-3026A	2/212	B	29.50" GA	MSIV	EH	1X4DB159-2 D-6	O	C	C	A	RO	CS	CS	-	CSJ-27
1-HV-3026B	2/212	B	28" GA	MSIV	EH	1X4DB159-2 D-7	O	C	C	A	RO	CS	CS	-	CSJ-27
1-HV-3036A	2/212	B	29.50" GA	MSIV	EH	1X4DB159-2 B-6	O	C	C	A	RO	CS	CS	-	CSJ-27

VEGP-1 IST PROGRAM
VALVE TABLE

SYSTEM: 1301 - MAIN STEAM

VLV ID	CC/PC	CAT	TYPE	FUNCTION	AT	P&ID/COORD	NP	SP	FP	A/P	PI	ET	FST	LT	NOTES/CSJ/ROJ/RR
1-HV-3036B	2/212	B	28" GA	MSIV	EH	1X4DB159-2 B-7	O	C	C	A	RO	CS	CS	~	CSJ-27
1-HV-7603A	2/212	B	3" GL	SG Blowdown Iso Vlv	AO	1X4DB159-3 F-2	O	C	C	A	RO	Q	Q	~	~
1-HV-7603B	2/212	B	3" GL	SG Blowdown Iso Vlv	AO	1X4DB159-3 B-2	O	C	C	A	RO	Q	Q	~	~
1-HV-7603C	2/212	B	3" GL	SG Blowdown Iso Vlv	AO	1X4DB159-1 F-2	O	C	C	A	RO	Q	Q	~	~
1-HV-7603D	2/212	B	3" GL	SG Blowdown Iso Vlv	AO	1X4DB159-1 B-2	O	C	C	A	RO	Q	Q	~	~
1-HV-9451	2/212	B	1/2" GL	SG Sam Iso Vlv	SO	1X4DB159-3 E-3	O	C	C	A	RO	Q	Q	~	~
1-HV-9452	2/212	B	1/2" GL	SG Sam Iso Vlv	SO	1X4DB159-3 B-3	O	C	C	A	RO	Q	Q	~	~
1-HV-9453	2/212	B	1/2" GL	SG Sam Iso Vlv	SO	1X4DB159-1 E-2	O	C	C	A	RO	Q	Q	~	~
1-HV-9454	2/212	B	1/2" GL	SG Sam Iso Vlv	SO	1X4DB159-1 B-3	O	C	C	A	RO	Q	Q	~	~
1-PSV-3001	2/212	C	6" RV	MS Safety Vlv	SA	1X4DB159-2 H-3	C	O/C	~	A	~	~	~	~	Note 6
1-PSV-3002	2/212	C	6" RV	MS Safety Vlv	SA	1X4DB159-2 H-4	C	O/C	~	A	~	~	~	~	Note 6
1-PSV-3003	2/212	C	6" RV	MS Safety Vlv	SA	1X4DB159-2 H-4	C	O/C	~	A	~	~	~	~	Note 6
1-PSV-3004	2/212	C	6" RV	MS Safety Vlv	SA	1X4DB159-2 H-5	C	O C	~	A	~	~	~	~	Note 6
1-PSV-3005	2/212	C	6" RV	MS Safety Vlv	SA	1X4DB159-2 H-5	C	O/C	~	A	~	~	~	~	Note 6

VEGP-1 IST PROGRAM
VALVE TABLE

SYSTEM: 1301 - MAIN STEAM

VLV ID	CC/PC	CAT	TYPE	FUNCTION	AT	P&ID/COORD	NP	SP	FP	A/P	PI	ET	FST	LT	NOTES/CSJ/ROJ/RR
1-PSV-3011	2/212	C	6" RV	MS Safety Vlv	SA	1X4DB159-2 F-3	C	O/C	-	A	-	-	-	-	Note 6
1-PSV-3012	2/212	C	6" RV	MS Safety Vlv	SA	1X4DB159-2 F-4	C	O/C	-	A	-	-	-	-	Note 6
1-PSV-3013	2/212	C	6" RV	MS Safety Vlv	SA	1X4DB159-2 F-4	C	O/C	-	A	-	-	-	-	Note 6
1-PSV-3014	2/212	C	6" RV	MS Safety Vlv	SA	1X4DB159-2 F-5	C	O/C	-	A	-	-	-	-	Note 6
1-PSV-3015	2/212	C	6" RV	MS Safety Vlv	SA	1X4DB159-2 F-5	C	O/C	-	A	-	-	-	-	Note 6
1-PSV-3021	2/212	C	6" RV	MS Safety Vlv	SA	1X4DB159-2 D-3	C	O/C	-	A	-	-	-	-	Note 6
1-PSV-3022	2/212	C	6" RV	MS Safety Vlv	SA	1X4DB159-2 D-4	C	O/C	-	A	-	-	-	-	Note 6
1-PSV-3023	2/212	C	6" RV	MS Safety Vlv	SA	1X4DB159-2 D-4	C	O/C	-	A	-	-	-	-	Note 6
1-PSV-3024	2/212	C	6" RV	MS Safety Vlv	SA	1X4DB159-2 D-5	C	O/C	-	A	-	-	-	-	Note 6
1-PSV-3025	2/212	C	6" RV	MS Safety Vlv	SA	1X4DB159-2 D-5	C	O/C	-	A	-	-	-	-	Note 6
1-PSV-3031	2/212	C	6" RV	MS Safety Vlv	SA	1X4DB159-2 B-3	C	O/C	-	A	-	-	-	-	Note 6
1-PSV-3032	2/212	C	6" RV	MS Safety Vlv	SA	1X4DB159-2 B-4	C	O/C	-	A	-	-	-	-	Note 6
1-PSV-3033	2/212	C	6" RV	MS Safety Vlv	SA	1X4DB159-2 B-4	C	O/C	-	A	-	-	-	-	Note 6
1-PSV-3034	2/212	C	6" RV	MS Safety Vlv	SA	1X4DB159-2 B-5	C	O/C	-	A	-	-	-	-	Note 6

VEGP-1 IST PROGRAM
VALVE TABLE

SYSTEM: 1301 - MAIN STEAM

VLV ID	CC/PC	CAT	TYPE	FUNCTION	AT	P&ID/COORD	NP	SP	FP	A/P	PI	ET	FST	LT	NOTES/CSJ/ROJ/RR
1-PSV-3035	2/212	C	6" RV	MS Safety Vlv	SA	1X4DB159-2 B-5	C	O/C	-	A	-	-	-	-	Note 6
1-PV-3000	2/212	B	10" GL	ARV	EH	1X4DB159-2 H-2	C	O/C	C	A	RO	Q	Q	-	-
1-PV-3010	2/212	B	10" GL	ARV	EH	1X4DB159-2 F-2	C	O/C	C	A	RO	Q	Q	-	-
1-PV-3020	2/212	B	10" GL	ARV	EH	1X4DB159-2 D-2	C	O/C	C	A	RO	Q	Q	-	-
1-PV-3030	2/212	B	10" GL	ARV	EH	1X4DB159-2 C-2	C	O/C	C	A	RO	Q	Q	-	-

VEGP-1 IST PROGRAM
VALVE TABLE

SYSTEM: 1302 - AFW

VLV ID	CC/PC	CAT	TYPE	FUNCTION	AT	P&ID/COORD	NP	SP	FP	A/P	PI	ET	FST	LT	NOTES/CSJ/ROJ/RR
1-1302-U4-001	3/313	C	4" CH	AFW Pmp Disch CH	SA	1X4DB161-2 B-5	C	O	-	A	-	CS	-	-	CSJ-28
1-1302-U4-002	3/313	C	4" CH	AFW Pmp Disch CH	SA	1X4DB161-2 D-5	C	O	-	A	-	CS	-	-	CSJ-28
1-1302-U4-013	3/313	C	10" CH	AFW Pmp Suc CH	SA	1X4DB161-2 F-7	C	O	-	A	-	CS PQ	-	-	CSJ-29
1-1302-U4-014	3/313	C	6" CH	AFW Pmp Disch CH	SA	1X4DB161-2 F-5	C	O	-	A	-	CS	-	-	CSJ-28
1-1302-U4-017	2/212	C	4" CH	AFW Hdr Stop/CH	SA	1X4DB161-2 H-3	C	O	-	A	-	CS	-	-	CSJ-28
1-1302-U4-020	2/212	C	4" CH	AFW Hdr Stop/CH	SA	1X4DB161-2 G-3	C	O	-	A	-	CS	-	-	CSJ-28
1-1302-U4-023	2/212	C	4" CH	AFW Hdr Stop/CH	SA	1X4DB161-2 F-3	C	O	-	A	-	CS	-	-	CSJ-28
1-1302-U4-026	2/212	C	4" CH	AFW Hdr Stop/CH	SA	1X4DB161-2 E-3	C	O	-	A	-	CS	-	-	CSJ-28
1-1302-U4-033	3/313	C	8" CH	AFW Pmp Suc CH	SA	1X4DB161-2 B-7	C	O	-	A	-	CS PQ	-	-	CSJ-29
1-1302-U4-037	2/212	C	4" CH	AFW Hdr Stop/CH	SA	1X4DB161-2 D-3	C	O	-	A	-	CS	-	-	CSJ-28
1-1302-U4-040	2/212	C	4" CH	AFW Hdr Stop/CH	SA	1X4DB161-2 C-3	C	O	-	A	-	CS	-	-	CSJ-28
1-1302-U4-043	2/212	C	4" CH	AFW Hdr Stop/CH	SA	1X4DB161-2 B-3	C	O	-	A	-	CS	-	-	CSJ-28
1-1302-U4-046	2/212	C	4" CH	AFW Hdr Stop/CH	SA	1X4DB161-2 A-3	C	O	-	A	-	CS	-	-	CSJ-28
1-1302-U4-051	3/313	C	10" CH	AFW Pmp Suc CH	SA	1X4DB161-2 E-7	C	O	-	A	-	CS PQ	-	-	CSJ-29

VEGP-1 IST PROGRAM
VALVE TABLE

SYSTEM: 1302 - AFW

VLV ID	CC/PC	CAT	TYPE	FUNCTION	AT	P&ID/COORD	NP	SP	FP	A/P	PI	ET	FST	LT	NOTES/CSJ/ROJ/RR
1-1302-U4-052	3/313	C	8" CH	AFW Pmp Suc CH	SA	1X4DB161-2 A-7	C	O	-	A	-	CS PQ	-	-	CSJ-29
1-1302-U4-058	3/313	C	8" CH	AFW Pmp Suc CH	SA	1X4DB161-2 D-7	C	O	-	A	-	CS PQ	-	-	CSJ-29
1-1302-U4-061	3/313	C	8" CH	AFW Pmp Suc CH	SA	1X4DB161-2 C-7	C	O	-	A	-	CS PQ	-	-	CSJ-29
1-1302-U4-085	3/313	C	2.50" CH	AFW Pmp Recir Line CH	SA	1X4DB161-1 G-6	C	O	-	A	-	Q	-	-	-
1-1302-U4-086	3/313	C	2.50" CH	AFW Pmp Recir Line CH	SA	1X4DB161-1 B-6	C	O	-	A	-	Q	-	-	-
1-1302-U4-087	3/313	C	2.50" CH	AFW Pmp Recir Line CH	SA	1X4DB161-1 B-6	C	O	-	A	-	Q	-	-	-
1-1302-U4-113	2/212	C	4" CH	AFW Hdr CH at FW Bypass Hdrs	SA	1X4DB168-3 F-2	C	O/C	-	A	-	CS Q	-	-	CSJ-30
1-1302-U4-114	2/212	C	4" CH	AFW Hdr CH at FW Bypass Hdrs	SA	1X4DB168-3 F-4	C	O/C	-	A	-	CS Q	-	-	CSJ-30
1-1302-U4-115	2/212	C	4" CH	AFW Hdr CH at FW Bypass Hdrs	SA	1X4DB168-3 F-8	C	O/C	-	A	-	CS Q	-	-	CSJ-30
1-1302-U4-116	2/212	C	4" CH	AFW Hdr CH at FW Bypass Hdrs	SA	1X4DB168-3 F-6	C	O/C	-	A	-	CS Q	-	-	CSJ-30
1-1302-U4-117	2/212	C	6" CH	Main FW Bypass Hdr CH (Obrd Ctmt)	SA	1X4DB168-3 F-2	O	C	-	A	-	RO	-	-	ROJ-28
1-1302-U4-118	2/212	C	6" CH	Main FW Bypass Hdr CH (Obrd Ctmt)	SA	1X4DB168-3 F-4	O	C	-	A	-	RO	-	-	ROJ-28
1-1302-U4-119	2/212	C	6" CH	Main FW Bypass Hdr CH (Obrd Ctmt)	SA	1X4DB168-3 F-6	O	C	-	A	-	RO	-	-	ROJ-28
1-1302-U4-120	2/212	C	6" CH	Main FW Bypass Hdr CH (Obrd Ctmt)	SA	1X4DB168-3 F-8	O	C	-	A	-	RO	-	-	ROJ-28

VEGP-1 IST PROGRAM
VALVE TABLE

SYSTEM: 1302 - AFW

VLV ID	CC/PC	CAT	TYPE	FUNCTION	AT	P&ID/COORD	NP	SP	FP	A/P	PI	ET	FST	LT	NOTES/CSJ/ROJ/RR
1-1302-U4-125	2/212	C	6" CH	Main FW Bypass Hdr Ctmt Iso CH	SA	1X4DB168-3 G-2	O	O	-	A	-	CS PQ RO	-	-	CSJ-31
1-1302-U4-126	2/212	C	6" CH	Main FW Bypass Hdr Ctmt Iso CH	SA	1X4DB168-3 G-4	O	O	-	A	-	CS PQ RO	-	-	CSJ-31
1-1302-U4-127	2/212	C	6" CH	Main FW Bypass Hdr Ctmt Iso CH	SA	1X4DB168-3 G-6	O	O	-	A	-	CS PQ RO	-	-	CSJ-31
1-1302-U4-128	2/212	C	6" CH	Main FW Bypass Hdr Ctmt Iso CH	SA	1X4DB168-3 G-8	O	O	-	A	-	CS PQ RO	-	-	CSJ-31
1-FV-5154	3/313	B	2" GL	Mot-Driven AFW Pmp Recir Line Stop Vlv	MO	1X4DB161-2 C-6	O	O/C	AI	A	RO	Q	-	-	-
1-FV-5155	3/313	B	2" GL	Mot-Driven AFW Pmp Recir Line Stop Vlv	MO	1X4DB161-2 B-5	O	O/C	AI	A	RO	Q	-	-	-
1-HV-15196	2/212	B	6" GA	Main FW Bypass Iso Vlv	AO	1X4DB168-3 E-2	O	C	C	A	RO	CS	CS	-	CSJ-32
1-HV-15197	2/212	B	6" GA	Main FW Bypass Iso Vlv	AO	1X4DB168-3 E-4	O	C	C	A	RO	CS	CS	-	CSJ-32
1-HV-15198	2/212	B	6" GA	Main FW Bypass Iso Vlv	AO	1X4DB168-3 E-8	O	C	C	A	RO	CS	CS	-	CSJ-32
1-HV-15199	2/212	B	6" GA	Main FW Bypass Iso Vlv	AO	1X4DB168-3 E-6	O	C	C	A	RO	CS	CS	-	CSJ-32
1-HV-5106	3/313	B	4" GA	AFW Steam Sup Stop Vlv	MO	1X4DB161-3 G-5	C	O	AI	A	RO	Q	-	-	-
1-HV-5113	3/313	B	10" BU	AFW Pmp Suc From CST Iso Vlv	MO	1X4DB161-2 E-8	C	O	AI	A	RO	Q	-	-	-

VEGP-1 IST PROGRAM
VALVE TABLE

SYSTEM: 1302 - AFW

VLV ID	CC/PC	CAT	TYPE	FUNCTION	AT	P&ID/COORD	NP	SP	FP	A/P	PI	ET	FST	LT	NOTES/CSJ/ROJ/RR
1-HV-5118	3/313	B	8" BU	AFW Pmp Suc From CST Iso Vlv	MO	1X4DB161-2 C-8	C	O	AI	A	RO	Q	-	-	-
1-HV-5119	3/313	B	8" BU	AFW Pmp Suc From CST Iso Vlv	MO	1X4DB161-2 A-8	C	O	AI	A	RO	Q	-	-	-
1-HV-5120	2/212	B	4" GL	AFW Pmp Disch Hdr Iso Vlv	MO	1X4DB161-2 H-3	O	O/C	AI	A	RO	Q	-	-	-
1-HV-5122	2/212	B	4" GL	AFW Pmp Disch Hdr Iso Vlv	MO	1X4DB161-2 G-3	O	O/C	AI	A	RO	Q	-	-	-
1-HV-5125	2/212	B	4" GL	AFW Pmp Disch Hdr Iso Vlv	MO	1X4DB161-2 F-3	O	O/C	AI	A	RO	Q	-	-	-
1-HV-5127	2/212	B	4" GL	AFW Pmp Disch Hdr Iso Vlv	MO	1X4DB161-2 E-3	O	O/C	AI	A	RO	Q	-	-	-
1-HV-5132	2/212	B	4" GL	AFW Pmp Disch Hdr Iso Vlv	MO	1X4DB161-2 D-3	O	O/C	AI	A	RO	Q	-	-	-
1-HV-5134	2/212	B	4" GL	AFW Pmp Disch Hdr Iso Vlv	MO	1X4DB161-2 C-3	O	O/C	AI	A	RO	Q	-	-	-
1-HV-5137	2/212	B	4" GL	AFW Pmp Disch Hdr Iso Vlv	MO	1X4DB161-2 B-3	O	O/C	AI	A	RO	Q	-	-	-
1-HV-5139	2/212	B	4" GL	AFW Pmp Disch Hdr Iso Vlv	MO	1X4DB161-2 A-3	O	O/C	AI	A	RO	Q	-	-	-
1-PSV-5110	3/313	C	3/4" RV	AFW Pmp Suc RV	SA	1X4DB161-2 G-7	C	O/C	-	A	-	-	-	-	Note 6
1-PSV-5128	3/313	C	3/4" RV	AFW Pmp Suc RV	SA	1X4DB161-2 D-7	C	O/C	-	A	-	-	-	-	Note 6
1-PSV-5129	3/313	C	3/4" RV	AFW Pmp Suc RV	SA	1X4DB161-2 B-7	C	O/C	-	A	-	-	-	-	Note 6

VEGP-1 IST PROGRAM
VALVE TABLE

SYSTEM: 1305 - COND. & FW

VLV ID	CC/PC	CAT	TYPE	FUNCTION	AT	P&ID/COORD	NP	SP	FP	A/P	PI	ET	FST	LT	NOTES/CSJ/ROJ/RR
1-FV-0510	3/313	B	16" AN	Main FW Reg Vlv	AO	1X4DB168-3 D-2	O	C	C	A	RO	CS	CS	-	CSJ-33
1-FV-0520	3/313	B	16" AN	Main FW Reg Vlv	AO	1X4DB168-3 D-3	O	C	C	A	RO	CS	CS	-	CSJ-33
1-FV-0530	3/313	B	16" AN	Main FW Reg Vlv	AO	1X4DB168-3 D-7	O	C	C	A	RO	CS	CS	-	CSJ-33
1-FV-0540	3/313	B	16" AN	Main FW Reg Vlv	AO	1X4DB168-3 D-5	O	C	C	A	RO	CS	CS	-	CSJ-33
1-HV-5227	2/212	B	16" GA	Main FW Iso Vlv	EH	1X4DB168-3 F-1	O	C	C	A	RO	CS	CS	-	CSJ-34
1-HV-5228	2/212	B	16" GA	Main FW Iso Vlv	EH	1X4DB168-3 F-3	O	C	C	A	RO	CS	CS	-	CSJ-34
1-HV-5229	2/212	B	16" GA	Main FW Iso Vlv	EH	1X4DB168-3 F-7	O	C	C	A	RO	CS	CS	-	CSJ-34
1-HV-5230	2/212	B	16" GA	Main FW Iso Vlv	EH	1X4DB168-3 F-5	O	C	C	A	RO	CS	CS	-	CSJ-34
1-LV-5242	3/313	B	4" GL	Main FW Bypass Reg Vlv	AO	1X4DB168-3 D-5	O/C	C	C	A	RO	Q	Q	-	-
1-LV-5243	3/313	B	4" GL	Main FW Bypass Reg Vlv	AO	1X4DB168-3 D-2	O/C	C	C	A	RO	Q	Q	-	-
1-LV-5244	3/313	B	4" GL	Main FW Bypass Reg Vlv	AO	1X4DB168-3 D-3	O/C	C	C	A	RO	Q	Q	-	-
1-LV-5245	3/313	B	4" GL	Main FW Bypass Reg Vlv	AO	1X4DB168-3 D-7	O/C	C	C	A	RO	Q	Q	-	-

VEGP-1 IST PROGRAM
VALVE TABLE

SYSTEM: 1411 - COND. CHEM. INJ.

VLV ID	CC/PC	CAT	TYPE	FUNCTION	AT	P&ID/COORD	NP	SP	FP	A/P	PI	ET	FST	LT	NOTES/CSJ/ROJ/RR
1-1411-U4-676	2/212	A	1/2" GL	Chem Sup to SG Ctmt Iso Vlv	MA	1X4DB159-1 G-2	C	C	-	P	-	-	-	AJ	-
1-1411-U4-677	2/212	A	1/2" GL	Chem Sup to SG Ctmt Iso Vlv	MA	1X4DB159-1 C-2	C	C	-	P	-	-	-	AJ	-
1-1411-U4-678	2/212	A	1/2" GL	Chem Sup to SG Ctmt Iso Vlv	MA	1X4DB159-3 G-2	C	C	-	P	-	-	-	AJ	-
1-1411-U4-679	2/212	A	1/2" GL	Chem Sup to SG Ctmt Iso Vlv	MA	1X4DB159-3 C-3	C	C	-	P	-	-	-	AJ	-
1-HV-5278	2/212	A	1/2" GL	Chem Sup to SG Ctmt Iso Vlv	AO	1X4DB159-3 G-2	C	C	-	P	RO	-	-	AJ	-
1-HV-5279	2/212	A	1/2" GL	Chem Sup to SG Ctmt Iso Vlv	AO	1X4DB159-3 C-2	C	C	-	P	RO	-	-	AJ	-
1-HV-5280	2/212	A	1/2" GL	Chem Sup to SG Ctmt Iso Vlv	AO	1X4DB159-1 G-2	C	C	-	P	RO	-	-	AJ	-
1-HV-5281	2/212	A	1/2" GL	Chem Sup to SG Ctmt Iso Vlv	AO	1X4DB159-1 C-2	C	C	-	P	RO	-	-	AJ	-

VEGP-1 IST PROGRAM
VALVE TABLE

SYSTEM: 1418 - DEMIN. WATER

VLV ID	CC/PC	CAT	TYPE	FUNCTION	AT	P&ID/COORD	NP	SP	FP	A/P	PI	ET	FST	LT	NOTES/CSJ/ROJ/RR
1-1418-U4-005	2/212	A	2" GL	Demin Water Sup to Ctmt Iso Vlv	MA	AX4DB190-2 E-4	C	C	-	P	-	-	-	AJ	-
1-1418-U4-038	2/212	AC	2" CH	Demin Water Sup to Ctmt Iso CH	SA	AX4DB190-2 E-3	C	C	-	P	-	-	-	AJ	-
1-PSV-17589	2/212	AC	1.5" RV	Demin Water Sup to Ctmt RV	SA	AX4DB190-2 E-3	C	C	-	P	-	-	-	AJ	-

VEGP-1 IST PROGRAM
VALVE TABLE

SYSTEM: 1505 - CTMT AIR PURIF.

VLV ID	CC/PC	CAT	TYPE	FUNCTION	AT	P&ID/COORD	NP	SP	FP	A/P	PI	ET	FST	LT	NOTES/CSJ/ROJ/RR
1-HV-2626A	2/212	A	24" BU	Ctmt Purge Sup Ctmt Iso Vlv	MO	1X4DB213-1 E-7	O/C	C	AI	A	RO	CS	~	AJ	CSJ-35
1-HV-2626B	2/212	A	14" BU	Ctmt Mini-Purge Sup Ctmt Iso Vlv	AO	1X4DB213-1 D-7	O/C	C	C	A	RO	Q	Q	AJ	~
1-HV-2627A	2/212	A	24" BU	Ctmt Purge Sup Ctmt Iso Vlv	MO	1X4DB213-1 E-6	O/C	C	AI	A	RO	CS	~	AJ	CSJ-35
1-HV-2627B	2/212	A	14" BU	Ctmt Mini-Purge Sup Ctmt Iso Vlv	AO	1X4DB213-1 D-6	O/C	C	C	A	RO	Q	Q	AJ	~

VEGP-1 IST PROGRAM
VALVE TABLE

SYSTEM: 1506 - CTMT AIR PURIF.

VLV ID	CC/PC	CAT	TYPE	FUNCTION	AT	P&ID/COORD	NP	SP	FP	A/P	PI	ET	FST	LT	NOTES/CSJ/ROJ/RR
1-HV-2628A	2/212	A	24" BU	Ctmt Purge Sup Ctmt Iso Vlv	MO	1X4DB213-1 C-7	O/C	C	AI	A	RO	CS	-	AJ	CSJ-36
1-HV-2628B	2/212	A	14" BU	Ctmt Mini-Purge Sup Ctmt Iso Vlv	AO	1X4DB213-1 B-7	O/C	C	C	A	RO	Q	Q	AJ	-
1-HV-2629A	2/212	A	24" BU	Ctmt Purge Sup Ctmt Iso Vlv	MO	1X4DB213-1 C-6	O/C	C	AI	A	RO	CS	-	AJ	CSJ-36
1-HV-2629B	2/212	A	14" BU	Ctmt Mini-Purge Sup Ctmt Iso Vlv	AO	1X4DB213-1 B-6	O/C	C	C	A	RO	Q	Q	AJ	-

VEGP-1 IST PROGRAM
VALVE TABLE

SYSTEM: 1508 - CTMT AIR PURIF.

VLV ID	CC/PC	CAT	TYPE	FUNCTION	AT	P&ID/COORD	NP	SP	FP	A/P	PI	ET	FST	LT	NOTES/CSJ/ROJ/RR
1-1508-U4-012	2/212	A	4" GA	Ctmt Post Accident Purge Exh Ctmt Man Iso Vlv	MA	1X4DB213-1 G-6	C	C	-	P	-	-	-	AJ	-
1-HV-2624A	2/212	A	4" BU	Ctmt Post Accident Purge Exh Ctmt Iso Vlv	MO	1X4DB213-1 G-7	C	C	-	P	RO	-	-	AJ	-
1-HV-2624B	2/212	A	4" BU	Ctmt Post Accident Purge Exh Ctmt Iso Vlv	MO	1X4DB213-1 F-7	C	C	-	P	RO	-	-	AJ	-

VEGP-1 IST PROGRAM
VALVE TABLE

SYSTEM: 1513 - CTMT AIR PURIF.

VLV ID	CC/PC	CAT	TYPE	FUNCTION	AT	P&ID/COORD	NP	SP	FP	A/P	PI	ET	FST	LT	NOTES/CSJ/ROJ/RR
1-1513-U4-001	2/212	AC	3/4" CH	H2 Analyzer Ret to Ctmt Iso CH	SA	1X4DB213-2 B-7	C	O/C	-	A	-	Q RO	-	AJ	ROJ-29
1-1513-U4-002	2/212	AC	3/4" CH	H2 Analyzer Ret to Ctmt Iso CH	SA	1X4DB213-2 B-7	C	O/C	-	A	-	Q RO	-	AJ	ROJ-29
1-HV-2790A	2/212	A	3/4" GL	H2 Analyzer Sup From Ctmt Iso Vlv	SO	1X4DB213-2 E-7	C	O/C	C	A	RO	Q	Q	AJ	-
1-HV-2790B	2/212	A	3/4" GL	H2 Analyzer Sup From Ctmt Iso Vlv	SO	1X4DB213-2 D-7	C	O/C	C	A	RO	Q	Q	AJ	-
1-HV-2791A	2/212	A	3/4" GL	H2 Analyzer Sup From Ctmt Iso Vlv	SO	1X4DB213-2 E-6	C	O/C	C	A	RO	Q	Q	AJ	-
1-HV-2791B	2/212	A	3/4" GL	H2 Analyzer Sup From Ctmt Iso Vlv	SO	1X4DB213-2 C-6	C	O/C	C	A	RO	Q	Q	AJ	-
1-HV-2792A	2/212	A	3/4" GL	H2 Analyzer Sup From Ctmt Iso Vlv	SO	1X4DB213-2 C-7	C	O/C	C	A	RO	Q	Q	AJ	-
1-HV-2792B	2/212	A	3/4" GL	H2 Analyzer Sup From Ctmt Iso Vlv	SO	1X4DB213-2 C-7	C	O/C	C	A	RO	Q	Q	AJ	-
1-HV-2793A	2/212	A	3/4" GL	H2 Analyzer Ret to Ctmt Iso Vlv	SO	1X4DB213-2 B-6	C	O/C	C	A	RO	Q	Q	AJ	-
1-HV-2793B	2/212	A	3/4" GL	H2 Analyzer Ret to Ctmt Iso Vlv	SO	1X4DB213-2 B-6	C	O/C	C	A	RO	Q	Q	AJ	-

VEGP-1 IST PROGRAM
VALVE TABLE

SYSTEM: 1592 - ESF CHILLERS

VLV ID	CC/PC	CAT	TYPE	FUNCTION	AT	P&ID/COORD	NP	SP	FP	A/P	PI	ET	FST	LT	NOTES/CSJ/ROJ/RR
1-1592-U4-188	3/313	C	1" CH	Chilled Water Makeup From Demin Water Sys CH	SA	1X4DB221 F-7	O/C	C	-	A	-	Q	-	-	-
1-1592-U4-192	3/313	C	1" CH	Chilled Water Makeup From Demin Water Sys CH	SA	1X4DB221 C-7	O/C	C	-	A	-	Q	-	-	-
1-PSV-22404	3/313	C	3/4" RV	Demin Water to Exp Tank RV	SA	1X4DB221 G-7	C	O/C	-	A	-	-	-	-	Note 6
1-PSV-22405	3/313	C	3/4" RV	Demin Water to Exp Tank RV	SA	1X4DB221 D-7	C	O/C	-	A	-	-	-	-	Note 6

VEGP-1 IST PROGRAM
VALVE TABLE

SYSTEM: 1609 - RADIATION MONITOR

VLV ID	CC/PC	CAT	TYPE	FUNCTION	AT	P&ID/COORD	NP	SP	FP	A/P	PI	ET	FST	LT	NOTES/CSJ/ROJ/RR
1-HV-12975	2/212	A	1" GA	Sam Line To Air Sam Pan Ctmt Iso Vlv	SO	1X4DB213-2 E-3	O	C	C	A	RO	Q	Q	AJ	~
1-HV-12976	2/212	A	1" GA	Sam Line To Air Sam Pan Ctmt Iso Vlv	SO	1X4DB213-2 E-2	O	C	C	A	RO	Q	Q	AJ	~
1-HV-12977	2/212	A	1" GL	Sam Line Ret From Air Sam Pan Ctmt Iso Vlv	SO	1X4DB213-2 D-2	O	C	C	A	RO	Q	Q	AJ	~
1-HV-12978	2/212	A	1" GL	Sam Line Ret From Air Sam Pan Ctmt Iso Vlv	SO	1X4DB213-2 D-3	O	C	C	A	RO	Q	Q	AJ	~

VEGP-1 IST PROGRAM
VALVE TABLE

SYSTEM: 1901 - WASTE PROC.

VLV ID	CC/PC	CAT	TYPE	FUNCTION	AT	P&ID/COORD	NP	SP	FP	A/P	PI	ET	FST	LT	NOTES/CSJ/ROJ/RR
1-HV-7126	2/212	A	3/4" DI	RCDT Vent/H2 Sup Ctmt Iso Vlv	AO	1X4DB127 G-5	O	C	C	A	RO	Q	Q	AJ	-
1-HV-7136	2/212	A	3" DI	RCDT Pmp Disch Ctmt Iso Vlv	AO	1X4DB127 E-1	O	C	C	A	RO	Q	Q	AJ	-
1-HV-7150	2/212	A	3/4" DI	RCDT Vent/H2 Sup Ctmt Iso Vlv	AO	1X4DB127 G-4	O	C	C	A	RO	Q	Q	AJ	-
1-HV-7699	2/212	A	3" DI	RCDT Pmp Disch Ctmt Iso Vlv	AO	1X4DB127 D-2	O	C	C	A	RO	Q	Q	AJ	-

VEGP-1 IST PROGRAM
VALVE TABLE

SYSTEM: 2301 - FIRE PROT.

VLV ID	CC/PC	CAT	TYPE	FUNCTION	AT	P&ID/COORD	NP	SP	FP	A/P	PI	ET	FST	LT	NOTES/CSJ/ROJ/RR
1-2301-U4-036	2/212	AC	6" CH	Fire Prot Water Sup to Ctmt Iso CH	SA	1X4DB174-4 B-7	C	C	-	P	-	-	-	AJ	-
1-HV-27901	2/212	A	4" GA	Fire Prot Water Sup to Ctmt Iso Vlv	AO	1X4DB174-4 B-7	C	C	C	P	RO	CS	CS	AJ	CSJ-37

VEGP-1 IST PROGRAM
VALVE TABLE

SYSTEM: 2401 - SERVICE AIR

VLV ID	CC/PC	CAT	TYPE	FUNCTION	AT	P&ID/COORD	NP	SP	FP	A/P	PI	ET	FST	LT	NOTES/CSJ/ROJ/RR
1-2401-U4-034	2/212	AC	4" CH	Ser Air Sup Inbrd Ctmt Iso CH	SA	1X4DB186-1 D-2	C	C	-	P	-	-	-	AJ	-
1-2401-U4-184	2/212	AC	1.50" CH	Breathing Air Sup Ctmt Iso CH	SA	1X4DB186-1 C-3	C	C	-	P	-	-	-	AJ	-
1-2401-U4-211	2/212	A	1.50" GA	Breathing Air Sup Ctmt Iso Vlv	MA	1X4DB186-1 C-3	C	C	-	P	-	-	-	AJ	-
1-HV-9385	2/212	A	4" GA	Ser Air Sup Obrd Ctmt Iso Vlv	AO	1X4DB186-1 D-4	C	C	C	P	RO	Q	Q	AJ	-

VEGP-1 IST PROGRAM
VALVE TABLE

SYSTEM: 2402 - N2 TO ACCUM. & STEAM

VLV ID	CC/PC	CAT	TYPE	FUNCTION	AT	P&ID/COORD	NP	SP	FP	A/P	PI	ET	FST	LT	NOTES/CSJ/ROJ/RR
1-2402-U4-017	2/212	AC	1" CH	Nitrogen Sup to Accums, Inbrd Ctmt Iso CH	SA	1X4DB120 G-1	C	C	-	A	-	RO	-	AJ	ROJ-30
1-HV-8880	2/212	A	1" GL	Nitrogen Sup To Accums, Obrd Ctmt Iso Vlv	AO	1X4DB120 G-1	O/C	C	C	A	RO	Q	Q	AJ	-

VEGP-1 IST PROGRAM
VALVE TABLE

SYSTEM: 2420 - INSTRUMENT AIR

VLV ID	CC/PC	CAT	TYPE	FUNCTION	AT	P&ID/COORD	NP	SP	FP	A/P	PI	ET	FST	LT	NOTES/CSJ/ROJ/RR
1-2420-U4-049	2/212	AC	2" CH	Inst Air Sup Inbrd Ctmt Iso CH	SA	1X4DB186-4 A-7	O	C	-	A	-	RO	-	AJ	ROJ-31
1-HV-9378	2/212	A	2" GL	Inst Air Sup to Ctmt Obrd Ctmt Iso Vlv	AO	1X4DB186-4 A-7	O	C	C	A	RO	CS	CS	AJ	CSJ-38

VEGP-1 IST PROGRAM
VALVE TABLE

SYSTEM: 2702 - PASS

VLV ID	CC/PC	CAT	TYPE	FUNCTION	AT	P&ID/COORD	NP	SP	FP	A/P	PI	ET	FST	LT	NOTES/CSJ/ROJ/RR
1-HV-8208	2/212	A	1" GL	PASS Liquid Sam Ret Ctmt Iso Vlv	SO	1X4DB110 F-8	C	C	C	A	RO	Q	Q	AJ	~
1-HV-8209	2/212	A	1" GL	PASS Liquid Sam Ret Ctmt Iso Vlv	SO	1X4DB110 F-7	C	C	C	A	RO	Q	Q	AJ	~
1-HV-8211	2/212	A	1" GL	PASS Gaseous Sam Ret Ctmt Iso Vlv	SO	1X4DB110 C-8	C	C	C	A	RO	Q	Q	AJ	~
1-HV-8212	2/212	A	1" GL	PASS Gaseous Sam Ret Ctmt Iso Vlv	SO	1X4DB110 C-7	C	C	C	A	RO	Q	Q	AJ	~

VEGP-2 IST PROGRAM
VALVE TABLE

SYSTEM: 1201 - RCS

VLV ID	CC/PC	CAT	TYPE	FUNCTION	AT	P&ID/COORD	NP	SP	FP	A/P	PI	ET	FST	LT	NOTES/CSJ/ROJ/RR
2-1201-U4-251	2/212	AC	3/4" CH	RHR Pmp Sup Inbrd Iso Vlv Bypass Vlv	SA	2X4DB122 F-2	C	O	-	A	-	RO	-	-	ROJ-1
2-1201-U4-252	2/212	AC	3/4" CH	RHR Pmp Sup Inbrd Iso Vlv Bypass Vlv	SA	2X4DB122 C-2	C	O	-	A	-	RO	-	-	ROJ-1
2-1201-U6-112	2/212	AC	3" CH	Primary Grade Water Sup to Ctmt CH	SA	2X4DB112 F-2	C	C	-	A	-	RO	-	AJ	ROJ-2
2-HV-0442A	2/212	B	1" GL	RPV Head Vent to PRT Iso Vlv	SO	2X4DB112 H-4	C	O/C	C	A	RO	CS	CS	-	CSJ-1
2-HV-0442B	2/212	B	1" GL	RPV Head Vent to PRT Iso Vlv	SO	2X4DB112 G-4	C	O/C	C	A	RO	CS	CS	-	CSJ-1
2-HV-8000A	1/111	B	3" GA	PORV Block Vlv	MO	2X4DB112 E-7	O	O/C	AI	A	RO	Q	-	-	-
2-HV-8000B	1/111	B	3" GA	PORV Block Vlv	MO	2X4DB112 F-7	O	O/C	AI	A	RO	Q	-	-	-
2-HV-8028	2/212	A	3" DI	Primary Grade Water Sup to Ctmt Iso Vlv	AO	2X4DB112 F-2	O	C	C	A	RO	Q	Q	AJ	-
2-HV-8033	2/212	A	1" DI	PRT Vent Vlv	AO	2X4DB112 G-2	C	C	C	A	RO	Q	Q	AJ	-
2-HV-8047	2/212	A	1" DI	PRT Vent Vlv	AO	2X4DB112 G-3	C	C	C	A	RO	Q	Q	AJ	-
2-HV-8095A	1/111	B	1" GL	RPV Head Vent Vlv	SO	2X4DB114 E-5	C	O/C	C	A	RO	CS	CS	-	CSJ-1
2-HV-8095B	1/111	B	1" GL	RPV Head Vent Vlv	SO	2X4DB114 E-5	C	O/C	C	A	RO	CS	CS	-	CSJ-1
2-HV-8096A	1/111	B	1" GL	RPV Head Vent Vlv	SO	2X4DB114 E-5	C	O/C	C	A	RO	CS	CS	-	CSJ-1
2-HV-8096B	1/111	B	1" GL	RPV Head Vent Vlv	SO	2X4DB114 E-5	C	O/C	C	A	RO	CS	CS	-	CSJ-1

VEGP-2 IST PROGRAM
VALVE TABLE

SYSTEM: 1201 - RCS

VLV ID	CC/PC	CAT	TYPE	FUNCTION	AT	P&ID/COORD	NP	SP	FP	A/P	PI	ET	FST	LT	NOTES/CSJ/ROJ/RR
2-HV-8701A	1/111	A	12" GA	RHR Pmp Sup Iso From RCS Loops	MO	2X4DB122 G-2	C	O/C	AI	A	RO	CS	-	RO	CSJ-2
2-HV-8701B	1/111	A	12" GA	RHR Pmp Sup Iso From RCS Loops	MO	2X4DB122 G-1	C	O/C	AI	A	RO	CS	-	RO	CSJ-2
2-HV-8702A	1/111	A	12" GA	RHR Pmp Sup Iso From RCS Loops	MO	2X4DB122 D-2	C	O/C	AI	A	RO	CS	-	RO	CSJ-2
2-HV-8702B	1/111	A	12" GA	RHR Pmp Sup Iso From RCS Loops	MO	2X4DB122 D-1	C	O/C	AI	A	RO	CS	-	RO	CSJ-2
2-PSV-8010A	1/111	C	6" RV	PRZR Safety Vlv	SA	2X4DB112 G-7	C	O/C	-	A	-	-	-	-	Note 6
2-PSV-8010B	1/111	C	6" RV	PRZR Safety Vlv	SA	2X4DB112 G-6	C	O/C	-	A	-	-	-	-	Note 6
2-PSV-8010C	1/111	C	6" RV	PRZR Safety Vlv	SA	2X4DB112 G-6	C	O/C	-	A	-	-	-	-	Note 6
2-PV-0455A	1/111	B	3" GL	PORV	SO	2X4DB112 E-8	C	O/C	C	A	RO	CS	CS	-	CSJ-3
2-PV-0456A	1/111	B	3" GL	PORV	SO	2X4DB112 F-8	C	O/C	C	A	RO	CS	CS	-	CSJ-3

VEGP-2 IST PROGRAM
VALVE TABLE

SYSTEM: 1202 - NSCW

VLV ID	CC/PC	CAT	TYPE	FUNCTION	AT	P&ID/COORD	NP	SP	FP	A/P	PI	ET	FST	LT	NOTES/CSJ/ROJ/RR
2-1202-U4-025	3/313	C	18" CH	NSCW Pmp Disch CH	SA	2X4DB133-1 C-8	O/C	O/C	-	A	-	Q	-	-	Notes 1,2
2-1202-U4-027	3/313	C	18" CH	NSCW Pmp Disch CH	SA	2X4DB133-2 C-8	O/C	O/C	-	A	-	Q	-	-	Notes 1,2
2-1202-U4-031	3/313	C	18" CH	NSCW Pmp Disch CH	SA	2X4DB133-1 E-6	O/C	O/C	-	A	-	Q	-	-	Notes 1,2
2-1202-U4-033	3/313	C	18" CH	NSCW Pmp Disch CH	SA	2X4DB133-2 E-6	O/C	O/C	-	A	-	Q	-	-	Notes 1,2
2-1202-U4-035	3/313	C	18" CH	NSCW Pmp Disch CH	SA	2X4DB133-1 C-4	O/C	O/C	-	A	-	Q	-	-	Notes 1,2
2-1202-U4-037	3/313	C	18" CH	NSCW Pmp Disch CH	SA	2X4DB133-2 C-5	O/C	O/C	-	A	-	Q	-	-	Notes 1,2
2-1202-U4-463	3/313	C	8" CH	NSCW Sup to CB Ess Chiller CH	SA	2X4DB134 E-2	O	O	-	A	-	Q	-	-	-
2-1202-U4-464	3/313	C	4" CH	NSCW Sup to Piping Pen Area CH	SA	2X4DB133-2 D-3	O	O	-	A	-	Q	-	-	-
2-1202-U4-465	3/313	C	16" CH	NSCW Sup to CCW Hx	SA	2X4DB133-2 D-1	O	O	-	A	-	Q	-	-	-
2-1202-U4-466	2/212	C	8" CH	NSCW to Ctmt Cooler CH	SA	2X4DB135-1 H-5	O	O	-	A	-	Q	-	-	-
2-1202-U4-467	2/212	C	8" CH	NSCW to Ctmt Cooler CH	SA	2X4DB135-1 E-5	O	O	-	A	-	Q	-	-	-
2-1202-U4-469	3/313	C	16" CH	NSCW Sup to CCW Hx	SA	2X4DB135-1 D-7	O	O	-	A	-	Q	-	-	-
2-1202-U4-470	3/313	C	4" CH	NSCW Sup to Piping Pen Area CH	SA	2X4DB135-1 B-7	O	O	-	A	-	Q	-	-	-
2-1202-U4-471	2/212	C	8" CH	NSCW to Ctmt Cooler CH	SA	2X4DB135-2 H-6	O	O	-	A	-	Q	-	-	-

VEGP-2 IST PROGRAM
VALVE TABLE

SYSTEM: 1202 - NSCW

VLV ID	CC/PC CAT	TYPE	FUNCTION	AT	P&ID/COORD	NP	SP	FP	A/P	PI	ET	FST	LT	NOTES/CSJ/ROJ/RR
2-1202-U4-472	2/212 C	8" CH	NSCW to Ctmt Cooler CH	SA	2X4DB135-2 H-6	O	O	-	A	-	Q	-	-	-
2-1202-U4-474	3/313 C	8" CH	NSCW Sup to CB Ess Chiller CH	SA	2X4DB135-2 B-8	O	O	-	A	-	Q	-	-	-
2-1202-U4-492	3/313 B	2" GA	NSCW Hdr/Train Inter-Tie Man. Iso. Vlv.	MA	2X4DB133-1 G-1	O	C	-	A	-	Q	-	-	-
2-1202-U4-497	3/313 B	2" GA	NSCW Hdr/Train Inter-Tie Man. Iso. Vlv.	MA	2X4DB135-2 D-7	O	C	-	A	-	Q	-	-	-
2-1202-U4-A07	3/313 C	4" CH	NSCW Slow-Fill Line CH	SA	2X4DB133-1 B-8	O/C	O	-	A	-	Q	-	-	-
2-1202-U4-A08	3/313 C	4" CH	NSCW Slow-Fill Line CH	SA	2X4DB133-1 A-8	O/C	O	-	A	-	Q	-	-	-
2-1202-U4-A09	3/313 C	4" CH	NSCW Slow-Fill Line CH	SA	2X4DB133-1 B-7	O/C	O	-	A	-	Q	-	-	-
2-1202-U4-A13	3/313 C	4" CH	NSCW Slow-Fill Line CH	SA	2X4DB133-2 B-8	O/C	O	-	A	-	Q	-	-	-
2-1202-U4-A14	3/313 C	4" CH	NSCW Slow-Fill Line CH	SA	2X4DB133-2 A-8	O/C	O	-	A	-	Q	-	-	-
2-1202-U4-A15	3/313 C	4" CH	NSCW Slow-Fill Line CH	SA	2X4DB133-2 B-7	O/C	O	-	A	-	Q	-	-	-
2-CV-9446	3/313 B	2" GL	NSCW Blowdown Ctrl Vlv	AO	2X4DB133-1 B-5	O	C	C	A	RO	Q	Q	-	-
2-CV-9447	3/313 B	2" GL	NSCW Blowdown Ctrl Vlv	AO	2X4DB133-2 A-5	O	C	C	A	RO	Q	Q	-	-
2-HV-11600	3/313 B	18" BU	NSCW Pmp Disch Vlv	MO	2X4DB133-1 D-8	O/C	O	AI	A	Q	Q	-	-	Note 5

VEGP-2 IST PROGRAM
VALVE TABLE

SYSTEM: 1202 - NSCW

VLV ID	CC/PC	CAT	TYPE	FUNCTION	AT	P&ID/COORD	NP	SP	FP	A/P	PI	ET	FST	LT	NOTES/CSJ/ROJ/RR
2-HV-11605	3/313	B	18" BU	NSCW Pmp Disch Vlv	MO	2X4DB133-1 E-6	O/C	O	AI	A	Q	Q	~	~	Note 5
2-HV-11606	3/313	B	18" BU	NSCW Pmp Disch Vlv	MO	2X4DB133-1 C-4	O/C	O	AI	A	Q	Q	~	~	Note 5
2-HV-11607	3/313	B	18" BU	NSCW Pmp Disch Vlv	MO	2X4DB133-2 C-8	O/C	O	AI	A	Q	Q	~	~	Note 5
2-HV-11612	3/313	B	18" BU	NSCW Pmp Disch Vlv	MO	2X4DB133-2 E-6	O/C	O	AI	A	Q	Q	~	~	Note 5
2-HV-11613	3/313	B	18" BU	NSCW Pmp Disch Vlv	MO	2X4DB133-2 C-5	O/C	O	AI	A	Q	Q	~	~	Note 5
2-HV-1668A	3/313	B	24" BU	NSCW Tower Ret Hdr Stop Vlv	MO	2X4DB133-1 G-5	O/C	O	AI	A	RO	Q	~	~	~
2-HV-1668B	3/313	B	18" BU	NSCW Tower Bypass to Basin Vlv	MO	2X4DB133-1, F-5	O/C	C	AI	A	RO	Q	~	~	~
2-HV-1669A	3/313	B	24" BU	NSCW Tower Ret Hdr Stop Vlv	MO	2X4DB133-2 G-5	O/C	O	AI	A	RO	Q	~	~	~
2-HV-1669B	3/313	B	18" BU	NSCW Tower Bypass to Basin Vlv	MO	2X4DB133-2 F-5	O/C	C	AI	A	RO	Q	~	~	~
2-HV-2134	2/212	B	8" BU	NSCW to CTB Aux and Rx Cav Cooling Iso Vlv	MO	2X4DB135-1 C-5	O	C	AI	A	RO	Q	~	~	~
2-HV-2135	2/212	B	8" BU	NSCW to CTB Aux and Rx Cav Cooling Iso Vlv	MO	2X4DB135-2 D-7	O	C	AI	A	RO	Q	~	~	~
2-HV-2138	2/212	B	8" BU	NSCW Ret From CTB Aux and Rx Cav Cooling Iso Vlv	MO	2X4DB135-1 B-2	O	C	AI	A	RO	Q	~	~	~

VEGP-2 IST PROGRAM
VALVE TABLE

SYSTEM: 1202 - NSCW

VLV ID	CC/PC	CAT	TYPE	FUNCTION	AT	P&ID/COORD	NP	SP	FP	A/P	PI	ET	FST	LT	NOTES/CSJ/ROJ/RR
2-HV-2139	2/212	B	8" BU	NSCW Ret From CTB Aux and Rx Cav Cooling Iso Vlv	MO	2X4DB135-2 D-5	O	C	AI	A	RO	Q	-	-	-
2-PSV-11673	2/212	C	3/4" RV	Rx Cav Cooler RV	SA	2X4DB135-1 C-4	C	O/C	-	A	-	-	-	-	Note 6
2-PSV-11759	3/313	C	8" RV	NSCW Ret Hdr RV	SA	2X4DB133-1 G-5	C	O/C	-	A	-	-	-	-	Note 6
2-PSV-11766	3/313	C	8" RV	NSCW Ret Hdr RV	SA	2X4DB133-2 G-5	C	O/C	-	A	-	-	-	-	Note 6
2-PSV-11772	2/212	C	3/4" RV	CTB Aux Air Cooler RV	SA	2X4DB135-2 E-6	C	O/C	-	A	-	-	-	-	Note 6
2-PSV-2136	2/212	C	3/4" RV	CTB Aux Air Cooler RV	SA	2X4DB135-1 D-3	C	O/C	-	A	-	-	-	-	Note 6
2-PSV-2137	2/212	C	3/4" RV	Rx Cav Cooler RV	SA	2X4DB135-2 G-5	C	O/C	-	A	-	-	-	-	Note 6

VEGP-2 IST PROGRAM
VALVE TABLE

SYSTEM: 1203 - CCW

VLV ID	CC/PC	CAT	TYPE	FUNCTION	AT	P&ID/COORD	NP	SP	FP	A/P	PI	ET	FST	LT	NOTES/CSJ/ROJ/RR
2-1203-U4-030	3/313	C	14" CH	CCW Pmp Disch CH	SA	2X4DB136 G-4	O/C	O/C	~	A	~	Q	~	~	~
2-1203-U4-032	3/313	C	14" CH	CCW Pmp Disch CH	SA	2X4DB136 G-4	O/C	O/C	~	A	~	Q	~	~	~
2-1203-U4-034	3/313	C	14" CH	CCW Pmp Disch CH	SA	2X4DB136 F-4	O/C	O/C	~	A	~	Q	~	~	~
2-1203-U4-055	3/313	C	14" CH	CCW Pmp Disch CH	SA	2X4DB136 D-4	O/C	O/C	~	A	~	Q	~	~	~
2-1203-U4-057	3/313	C	14" CH	CCW Pmp Disch CH	SA	2X4DB136 C-4	O/C	O/C	~	A	~	Q	~	~	~
2-1203-U4-059	3/313	C	14" CH	CCW Pmp Disch CH	SA	2X4DB136 B-4	O/C	O/C	~	A	~	Q	~	~	~

VEGP-2 IST PROGRAM
VALVE TABLE

SYSTEM: 1204 - SAFETY INJECTION

VLV ID	CC/PC CAT	TYPE	FUNCTION	AT	P&ID/COORD	NP	SP	FP	A/P	PI	ET	FST	LT	NOTES/CSJ/ROJ/RR
2-1204-U4-026	1/111 C	1.50" CH	RCS Cold Leg SI Admis CH	SA	2X4DB111 D-5	C	O	~	A	~	RO	~	~	ROJ-3
2-1204-U4-027	1/111 C	1.50" CH	RCS Cold Leg SI Admis CH	SA	2X4DB111 G-5	C	O	~	A	~	RO	~	~	ROJ-3
2-1204-U4-028	1/111 C	1.50" CH	RCS Cold Leg SI Admis CH	SA	2X4DB111 G-4	C	O	~	A	~	RO	~	~	ROJ-3
2-1204-U4-029	1/111 C	1.50" CH	RCS Cold Leg SI Admis CH	SA	2X4DB111 D-4	C	O	~	A	~	RO	~	~	ROJ-3
2-1204-U4-093	2/212 C	1.50" CH	SI Pmp Min Flow Disch CH	SA	2X4DB121 E-3	C	O/C	~	A	~	Q	~	~	~
2-1204-U4-094	2/212 C	1.50" CH	SI Pmp Min Flow Disch CH	SA	2X4DB121 D-3	C	O/C	~	A	~	Q	~	~	~
2-1204-U4-120	1/111 AC	2" CH	SI to RCS Hot Leg Iso CH	SA	2X4DB121 F-6	C	O/C	~	A	~	RO	~	RO	ROJ-4
2-1204-U4-121	1/111 AC	2" CH	SI to RCS Hot Leg Iso CH	SA	2X4DB121 F-6	C	O/C	~	A	~	RO	~	RO	ROJ-4
2-1204-U4-122	1/111 AC	2" CH	SI to RCS Hot Leg Iso CH	SA	2X4DB121 E-7	C	O/C	~	A	~	RO	~	RO	ROJ-4
2-1204-U4-123	1/111 AC	2" CH	SI to RCS Hot Leg Iso CH	SA	2X4DB121 F-7	C	O/C	~	A	~	RO	~	RO	ROJ-4
2-1204-U4-143	1/111 AC	2" CH	SI To RCS Cold Leg Iso CH	SA	2X4DB121 B-6	C	O/C	~	A	~	RO	~	RO	ROJ-4
2-1204-U4-144	1/111 AC	2" CH	SI To RCS Cold Leg Iso CH	SA	2X4DB121 B-7	C	O/C	~	A	~	RO	~	RO	ROJ-4
2-1204-U4-145	1/111 AC	2" CH	SI To RCS Cold Leg Iso CH	SA	2X4DB121 B-7	C	O/C	~	A	~	RO	~	RO	ROJ-4
2-1204-U4-146	1/111 AC	2" CH	SI To RCS Cold Leg Iso CH	SA	2X4DB121 B-8	C	O/C	~	A	~	RO	~	RO	ROJ-4

VEGP-2 IST PROGRAM
VALVE TABLE

SYSTEM: 1204 - SAFETY INJECTION

VLV ID	CC/PC CAT	TYPE	FUNCTION	AT	P&ID/COORD	NP	SP	FP	A/P	PI	ET	FST	LT	NOTES/CSJ/ROJ/RR
2-1204-U4-159	2/212 A	3/4" GL	SI Accum Sam Man Iso Vlv	MA	2X4DB120 G-2	C	C	~	P	~	~	~	AJ	~
2-1204-U4-160	2/212 A	3/4" GL	SI Accum Sam Man Iso Vlv	MA	2X4DB120 E-2	C	C	~	P	~	~	~	AJ	~
2-1204-U4-161	2/212 A	3/4" GL	SI Accum Sam Man Iso Vlv	MA	2X4DB120 C-2	C	C	~	P	~	~	~	AJ	~
2-1204-U4-162	2/212 A	3/4" GL	SI Accum Sam Man Iso Vlv	MA	2X4DB120 A-2	C	C	~	P	~	~	~	AJ	~
2-1204-U4-262	2/212 C	3" CH	RWST Sludge Mixing Pmp Disch CH	SA	2X4DB121 G-3	O/C	C	~	A	~	RO	~	~	ROJ-5
2-1204-U4-263	2/212 C	3" CH	RWST Sludge Mixing Pmp Disch CH	SA	2X4DB121 G-3	O/C	C	~	A	~	RO	~	~	ROJ-5
2-1204-U6-013	1/111 C	3" CH	SI From BIT To RCS Cold Legs CH	SA	2X4DB119 E-6	C	O/C	~	A	~	RO	~	~	ROJ-6
2-1204-U6-079	1/111 AC	10" CH	SI Accum Disch CH	SA	2X4DB120 G-8	C	O/C	~	A	~	RO	~	RO	ROJ-7
2-1204-U6-080	1/111 AC	10" CH	SI Accum Disch CH	SA	2X4DB120 E-8	C	O/C	~	A	~	RO	~	RO	ROJ-7
2-1204-U6-081	1/111 AC	10" CH	SI Accum Disch CH	SA	2X4DB120 C-8	C	O/C	~	A	~	RO	~	RO	ROJ-7
2-1204-U6-082	1/111 AC	10" CH	SI Accum Disch CH	SA	2X4DB120 A-8	C	O/C	~	A	~	RO	~	RO	ROJ-7
2-1204-U6-083	1/111 AC	10" CH	SI/RHR Cold Leg Admis CH	SA	2X4DB111 B-5	C	O/C	~	A	~	RO PCS	~	RO	ROJ-8
2-1204-U6-084	1/111 AC	10" CH	SI/RHR Cold Leg Admis CH	SA	2X4DB111 H-5	C	O/C	~	A	~	RO PCS	~	RO	ROJ-8
2-1204-U6-085	1/111 AC	10" CH	SI/RHR Cold Leg Admis CH	SA	2X4DB111 H-4	C	O/C	~	A	~	RO PCS	~	RO	ROJ-8

VEGP-2 IST PROGRAM
VALVE TABLE

SYSTEM: 1204 - SAFETY INJECTION

VLV ID	CC/PC CAT	TYPE	FUNCTION	AT	P&ID/COORD	NP	SP	FP	A/P	PI	ET	FST	LT	NOTES/CSJ/ROJ/RR
2-1204-U6-086	1/111 AC	10" CH	SI/RHR Cold Leg Admis CH	SA	2X4DB111 B-4	C	O/C	-	A	-	RO PCS	-	RO	ROJ-8
2-1204-U6-090	2/212 C	8" CH	SI Suc Line CH	SA	2X4DB121 E-1	C	O	-	A	-	RO PQ	-	-	ROJ-9
2-1204-U6-098	2/212 C	4" CH	SI Pmp Disch CH	SA	2X4DB121 E-4	C	O/C	-	A	-	RO PQ	-	-	ROJ-10
2-1204-U6-099	2/212 C	4" CH	SI Pmp Disch CH	SA	2X4DB121 D-3	C	O/C	-	A	-	RO PQ	-	-	ROJ-10
2-1204-U6-124	1/111 AC	6" CH	RCS Hot Leg SI Admis CH	SA	2X4DB111 F-5	C	O/C	-	A	-	RO	-	RO	ROJ-4
2-1204-U6-125	1/111 AC	6" CH	RCS Hot Leg SI Admis CH	SA	2X4DB111 D-3	C	O/C	-	A	-	CS RO	-	RO	CSJ-4 ROJ-11
2-1204-U6-126	1/111 AC	6" CH	RCS Hot Leg SI Admis CH	SA	2X4DB111 D-6	C	O/C	-	A	-	CS RO	-	RO	CSJ-4 ROJ-11
2-1204-U6-127	1/111 AC	6" CH	RCS Hot Leg SI Admis CH	SA	2X4DB111 F-4	C	O/C	-	A	-	RO	-	RO	ROJ-4
2-1204-U6-128	1/111 AC	8" CH	RHR To RCS Hot Leg Iso CH	SA	2X4DB121 F-6	C	O/C	-	A	-	CS RO	-	RO	CSJ-4 ROJ-11
2-1204-U6-129	1/111 AC	8" CH	RHR To RCS Hot Leg Iso CH	SA	2X4DB121 F-6	C	O/C	-	A	-	CS RO	-	RO	CSJ-4 ROJ-11
2-1204-U6-147	1/111 AC	6" CH	RHR To RCS Cold Leg Iso CH	SA	2X4DB121 B-6	C	O/C	-	A	-	CS RO	-	RO	CSJ-5 ROJ-12
2-1204-U6-148	1/111 AC	6" CH	RHR To RCS Cold Leg Iso CH	SA	2X4DB121 A-6	C	O/C	-	A	-	CS RO	-	RO	CSJ-5 ROJ-12
2-1204-U6-149	1/111 AC	6" CH	RHR To RCS Cold Leg Iso CH	SA	2X4DB121 A-7	C	O/C	-	A	-	CS RO	-	RO	CSJ-5 ROJ-12
2-1204-U6-150	1/111 AC	6" CH	RHR To RCS Cold Leg Iso CH	SA	2X4DB121 A-7	C	O/C	-	A	-	CS RO	-	RO	CSJ-5 ROJ-12

VEGP-2 IST PROGRAM
VALVE TABLE

SYSTEM: 1204 - SAFETY INJECTION

VLV ID	CC/PC	CAT	TYPE	FUNCTION	AT	P&ID/COORD	NP	SP	FP	A/P	PI	ET	FST	LT	NOTES/CSJ/ROJ/RR
2-1204-U6-163	2/212	C	8" CH	RHR Pmp to SI Pmps Suc Iso	SA	2X4DB122 B-8	C	O	~	A	~	RO	~	~	ROJ-13
2-HV-0943A	3/313	B	1" GL	SI Accum Nitrogen Vent Vlv	SO	2X4DB120 E-1	C	O/C	C	A	RO	Q	Q	~	~
2-HV-0943B	3/313	B	1" GL	SI Accum Nitrogen Vent Vlv	SO	2X4DB120 D-1	C	O/C	C	A	RO	Q	Q	~	~
2-HV-10950	2/212	A	3/4" GL	SI Accum Sam Iso Vlv	SO	2X4DB120 G-3	O/C	C	C	A	RO	Q	Q	AJ	~
2-HV-10951	2/212	A	3/4" GL	SI Accum Sam Iso Vlv	SO	2X4DB120 E-3	O/C	C	C	A	RO	Q	Q	AJ	~
2-HV-10952	2/212	A	3/4" GL	SI Accum Sam Iso Vlv	SO	2X4DB120 C-3	O/C	C	C	A	RO	Q	Q	AJ	~
2-HV-10953	2/212	A	3/4" GL	SI Accum Sam Iso Vlv	SO	2X4DB120 A-3	O/C	C	C	A	RO	Q	Q	AJ	~
2-HV-10957	2/212	B	3" GA	RWST Sludge Mixing Pmp Suc Vlv	AO	2X4DB121 G-3	O/C	C	C	A	RO	Q	Q	~	~
2-HV-10958	2/212	B	3" GA	RWST Sludge Mixing Pmp Suc Vlv	AO	2X4DB121 G-3	O/C	C	C	A	RO	Q	Q	~	~
2-HV-8801A	2/212	B	4" GA	BIT Outlet to RCS Cold Legs, Obrd Ctmt Iso Vlv	MO	2X4DB119 F-5	C	O	AI	A	RO	Q	~	~	~
2-HV-8801B	2/212	B	4" GA	BIT Outlet to RCS Cold Legs, Obrd Ctmt Iso Vlv	MO	2X4DB119 E-5	C	O	AI	A	RO	Q	~	~	~
2-HV-8802A	2/212	B	4" GA	SI to RCS Hot Legs, Obrd Ctmt Iso Vlv	MO	2X4DB121 E-5	C	O/C	AI	A	RO	CS	~	~	CSJ-6
2-HV-8802B	2/212	B	4" GA	SI to RCS Hot Legs, Obrd Ctmt Iso Vlv	MO	2X4DB121 D-5	C	O/C	AI	A	RO	CS	~	~	CSJ-6

VEGP-2 IST PROGRAM
VALVE TABLE

SYSTEM: 1204 - SAFETY INJECTION

VLV ID	CC/PC	CAT	TYPE	FUNCTION	AT	P&ID/COORD	NP	SP	FP	A/P	PI	ET	FST	LT	NOTES/CSJ/ROJ/R
2-HV-8806	2/212	B	6" GA	SI Pmp Suc From RWST	MO	2X4DB121 E-1	O	O/C	AI	A	RO	CS	~	~	CSJ-7
2-HV-8807A	2/212	B	6" GA	SI Pmp Suc from Char Pmp Suc Hdr	MO	2X4DB121 D-2	C	O	AI	A	RO	Q	~	~	~
2-HV-8807B	2/212	B	6" GA	SI Pmp Suc from Char Pmp Suc Hdr	MO	2X4DB121 D-2	C	O	AI	A	RO	Q	~	~	~
2-HV-8809A	2/212	B	8" GA	RHR Disch To Cold Legs From RHR Hx	MO	2X4DB121 B-5	O	O/C	AI	A	RO	CS	~	~	CSJ-8
2-HV-8809B	2/212	B	8" GA	RHR Disch To Cold Legs From RHR Hx	MO	2X4DB121 A-5	O	O/C	AI	A	RO	CS	~	~	CSJ-8
2-HV-8813	2/212	B	2" GL	SI Min Flow Hdr Iso Vlv	MO	2X4DB121 F-5	O	O/C	AI	A	RO	CS	~	~	CSJ-9
2-HV-8814	2/212	B	1.50" GL	SI Pmp Min Flow Line Iso Vlv	MO	2X4DB121 E-3	O	O/C	AI	A	RO	Q	~	~	~
2-HV-8821A	2/212	B	4" GA	SI Pmp Cold Leg Disch Stop Vlv	MO	2X4DB121 D-4	O	O/C	AI	A	RO	Q	~	~	~
2-HV-8821B	2/212	B	4" GA	SI Pmp Cold Leg Disch Stop Vlv	MO	2X4DB121 D-4	O	O/C	AI	A	RO	Q	~	~	~
2-HV-8823	2/212	B	3/4" GL	SI Cold Leg Inj Test Line Vlv	AO	2X4DB121 C-8	O/C	C	C	A	RO	Q	Q	~	~
2-HV-8824	2/212	B	3/4" GL	SI CH Hot Leg 2 and 3 Test Vlv	AO	2X4DB121 E-8	O/C	C	C	A	RO	Q	Q	~	~
2-HV-8825	2/212	B	3/4" GL	RHR To Hot Leg Test Line Vlv	AO	2X4DB121 D-8	O/C	C	C	A	RO	Q	Q	~	~
2-HV-8835	2/212	B	4" GA	SI Hdr Cold Leg Disch Stop Vlv	MO	2X4DB121 C-5	O	O/C	AI	A	RO	CS	~	~	CSJ-10
2-HV-8840	2/212	B	12" GA	Hot Leg Crossover Iso Vlv	MO	2X4DB121 B-4	O	O/C	AI	A	RO	CS	~	~	CSJ-11

VEGP-2 IST PROGRAM
VALVE TABLE

SYSTEM: 1204 - SAFETY INJECTION

VLV ID	CC/PC CAT	TYPE	FUNCTION	AT	P&ID/COORD	NP	SP	FP	A/P	PI	ET	FST	LT	NOTES/CSJ/ROJ/RR
2-HV-8843	2/212 B	3/4" GL	PIT Test/Recir Vlv	AO	2X4DB119 D-6	O/C	C	C	A	RO	Q	Q	~	~
2-HV-8871	2/212 A	3/4" GL	Accum Test Line Inbrd Ctmt Iso Vlv	AO	2X4DB121 H-6	O/C	C	C	A	RO	Q	Q	AJ	~
2-HV-8875A	2/212 B	1" GL	SI Accum Nitrogen Sup/Vent Vlv	SO	2X4DB120 H-3	C	O/C	C	A	RO	Q	Q	~	~
2-HV-8875B	2/212 B	1" GL	SI Accum Nitrogen Sup/Vent Vlv	SO	2X4DB120 F-3	C	O/C	C	A	RO	Q	Q	~	~
2-HV-8875C	2/212 B	1" GL	SI Accum Nitrogen Sup/Vent Vlv	SO	2X4DB120 D-3	C	O/C	C	A	RO	Q	Q	~	~
2-HV-8875D	2/212 B	1" GL	SI Accum Nitrogen Sup/Vent Vlv	SO	2X4DB120 B-3	C	O/C	C	A	RO	Q	Q	~	~
2-HV-8875E	2/212 B	1" GL	SI Accum Nitrogen Sup/Vent Vlv	SO	2X4DB120 G-3	C	O/C	C	A	RO	Q	Q	~	~
2-HV-8875F	2/212 B	1" GL	SI Accum Nitrogen Sup/Vent Vlv	SO	2X4DB120 E-3	C	O/C	C	A	RO	Q	Q	~	~
2-HV-8875G	2/212 B	1" GL	SI Accum Nitrogen Sup/Vent Vlv	SO	2X4DB120 D-3	C	O/C	C	A	RO	Q	Q	~	~
2-HV-8875H	2/212 B	1" GL	SI Accum Nitrogen Sup/Vent Vlv	SO	2X4DB120 B-3	C	O/C	C	A	RO	Q	Q	~	~
2-HV-8881	2/212 B	3/4" GL	SI CH Hot Leg 1 and 4 Test Vlv	AO	2X4DB121 G-6	O/C	C	C	A	RO	Q	Q	~	~
2-HV-8888	2/212 A	3/4" GL	Accum Fill Iso Vlv	AO	2X4DB121 F-5	O/C	C	C	A	RO	Q	Q	AJ	~
2-HV-8890A	2/212 B	3/4" GL	SI RHR Pmp CH Test Vlv	AO	2X4DB121 G-8	O/C	C	C	A	RO	Q	Q	~	~
2-HV-8890B	2/212 B	3/4" GL	SI RHR Pmp CH Test Vlv	AO	2X4DB121 E-8	O/C	C	C	A	RO	Q	Q	~	~

VEGP-2 IST PROGRAM
VALVE TABLE

SYSTEM: 1204 - SAFETY INJECTION

VLV ID	CC/PC CAT	TYPE	FUNCTION	AT	P&ID/COORD	NP	SP	FP	A/P	PI	ET	FST	LT	NOTES/CSJ/ROJ/RR
2-HV-8920	2/212 B	1.50" GL	SI Pmp Min Flow Line Iso Vlv	MO	2X4DB121 D-3	O	O/C	AI	A	RO	Q	~	~	~
2-HV-8924	2/212 B	6" GA	CVCS, SI Suc Hdr Intertie Iso Vlv	MO	2X4DB116-2 A-7	O	C	AI	A	RO	Q	~	~	~
2-HV-8964	2/212 A	3/4" GL	Accum Test Line Obrd Ctmt Iso Vlv	AO	2X4DB121 H-5	O/C	C	C	A	RO	Q	Q	AJ	~
2-HV-9017A	2/212 B	10" GA	RWST to Ctmt Spray Pmp Iso Vlv	MO	2X4DB131 F-3	O	O/C	AI	A	RO	Q	~	~	~
2-HV-9017B	2/212 B	10" GA	RWST to Ctmt Spray Pmp Iso Vlv	MO	2X4DB131 E-3	O	O/C	AI	A	RO	Q	~	~	~
2-PSV-8851	2/212 C	3/4" RV	SI Cold Leg Inj Hdr RV	SA	2X4DB121 C-5	C	O/C	~	A	~	~	~	~	Note 6
2-PSV-8853A	2/212 C	3/4" RV	SI Pmp Disch RV	SA	2X4DB121 E-4	C	O/C	~	A	~	~	~	~	Note 6
2-PSV-8853B	2/212 C	3/4" RV	SI Pmp Disch RV	SA	2X4DB121 D-4	C	O/C	~	A	~	~	~	~	Note 6
2-PSV-8858	2/212 C	3/4" RV	SI Pmp Suc Hdr RV	SA	2X4DB121 E-1	C	O/C	~	A	~	~	~	~	Note 6
2-PSV-8916A	2/212 C	3/4" RV	SI Pmp Suc RV	SA	2X4DB121 E-3	C	O/C	~	A	~	~	~	~	Note 6
2-PSV-8916B	2/212 C	3/4" RV	SI Pmp Suc RV	SA	2X4DB121 D-2	C	O/C	~	A	~	~	~	~	Note 6

VEGP-2 IST PROGRAM
VALVE TABLE

SYSTEM: 1205 - RHR

VLV ID	CC/PC	CAT	TYPE	FUNCTION	AT	P&ID/COORD	NP	SP	FP	A/P	PI	ET	FST	LT	NOTES/CSJ/ROJ/RR
2-1205-U4-122	2/212	C	14" CH	RHR Pmp Suc CH from Ctmt Sump	SA	2X4DB122 C-3	C	O/C	-	A	-	RO	-	-	ROJ-14
2-1205-U4-123	2/212	C	14" CH	RHR Pmp Suc CH from Ctmt Sump	SA	2X4DB122 B-3	C	O/C	-	A	-	RO	-	-	ROJ-14
2-1205-U6-001	2/212	C	12" CH	RHR Pmp Sup Iso From RWST CH	SA	2X4DB122 E-4	C	O/C	-	A	-	CS PQ Q	-	-	CSJ-12
2-1205-U6-002	2/212	C	12" CH	RHR Pmp Sup Iso From RWST CH	SA	2X4DB122 C-4	C	O/C	-	A	-	CS PQ Q	-	-	CSJ-12
2-1205-U6-009	2/212	C	8" CH	RHR Pmp Disch CH	SA	2X4DB122 G-5	C	O	-	A	-	CS PQ	-	-	CSJ-13
2-1205-U6-010	2/212	C	8" CH	RHR Pmp Disch CH	SA	2X4DB122 D-5	C	O	-	A	-	CS PQ	-	-	CSJ-13
2-FV-0610	2/212	B	3" GA	RHR Pmp Min Flow Ctrl Vlv	MO	2X4DB122 H-5	O	O/C	AI	A	RO	Q	-	-	-
2-FV-0611	2/212	B	3" GA	RHR Pmp Min Flow Ctrl Vlv	MO	2X4DB122 E-5	O	O/C	AI	A	RO	Q	-	-	-
2-HV-8716A	2/212	B	8" GA	RHR Train A to Hot Leg Cross-over Iso Vlv	MO	2X4DB122 F-7	O	O/C	AI	A	RO	Q	-	-	-
2-HV-8716B	2/212	B	8" GA	RHR Train B to Hot Leg Cross-over Iso Vlv	MO	2X4DB122 D-7	C	O/C	AI	A	RO	Q	-	-	-
2-HV-8804A	2/212	B	8" GA	RHR Pmp "A" Disch to Char Pmp Suc Hdrs	MO	2X4DB122 F-8	C	O/C	AI	A	RO	CS	-	-	CSJ-14
2-HV-8804B	2/212	B	8" GA	RHR Pmp "B" To SI Pmp "B" Iso Vlv	MO	2X4DB122 B-8	C	O/C	AI	A	RO	CS	-	-	CSJ-15

VEGP-2 IST PROGRAM
VALVE TABLE

SYSTEM: 1205 - RHR

VLV ID	CC/PC	CAT	TYPE	FUNCTION	AT	P&ID/COORD	NP	SP	FP	A/P	PI	ET	FST	LT	NOTES/CSJ/ROJ/RR
2-HV-8811A	2/212	B	14" GA	RHR Pmp Suc Iso From Ctmt Sump	MO	2X4DB122 B-3	C	O/C	AI	A	RO	Q	-	-	-
2-HV-8811B	2/212	B	14" GA	RHR Pmp Suc Iso From Ctmt Sump	MO	2X4DB122 B-3	C	O/C	AI	A	RO	Q	-	-	-
2-HV-8812A	2/212	B	12" GA	RHR Pmp Sup Iso From RWST	MO	2X4DB122 E-4	O	O/C	AI	A	RO	Q	-	-	-
2-HV-8812B	2/212	B	12" GA	RHR Pmp Sup Iso From RWST	MO	2X4DB122 C-4	O	O/C	AI	A	RO	Q	-	-	-
2-PSV-8708A	2/212	C	3" RV	RHR Pmp Suc RV	SA	2X4DB122 H-3	C	O/C	-	A	-	-	-	-	Note 6
2-PSV-8708B	2/212	C	3" RV	RHR Pmp Suc RV	SA	2X4DB122 E-3	C	O/C	-	A	-	-	-	-	Note 6
2-PSV-8842	2/212	C	3/4" RV	RHR Hot Leg Cross-over Line RV	SA	2X4DB121 C-3	C	O/C	-	A	-	-	-	-	Note 6
2-PSV-8856A	2/212	C	3/4" RV	RHR Hx Disch Hdr to Cold Leg RV	SA	2X4DB121 B-4	C	O/C	-	A	-	-	-	-	Note 6
2-PSV-8856B	2/212	C	3/4" RV	RHR Hx Disch Hdr to Cold Leg RV	SA	2X4DB121 A-4	C	O/C	-	A	-	-	-	-	Note 6

VEGP-2 IST PROGRAM
VALVE TABLE

SYSTEM: 1206 - CTMT SPRAY

VLV ID	CC/PC	CAT	TYPE	FUNCTION	AT	P&ID/COORD	NP	SP	FP	A/P	PI	ET	FS	LT	NOTES/CSJ/ROJ/RR
2-1206-U6-001	2/212	C	10" CH	Ctmt Spray Pmp Suc From RWST CH	SA	2X4DB131 G-3	C	O/C	-	A	-	RO PQ	-	-	ROJ-15
2-1206-U6-008	2/212	C	10" CH	Ctmt Spray Pmp Suc From RWST CH	SA	2X4DB131 D-3	C	O/C	-	A	-	RO PQ	-	-	ROJ-15
2-1206-U6-015	2/212	AC	8" CH	Ctmt Spray Inbrd Ctmt Iso CH	SA	2X4DB131 G-7	C	O/C	-	A	-	RO	-	AJ	ROJ-16
2-1206-U6-016	2/212	AC	8" CH	Ctmt Spray Inbrd Ctmt Iso CH	SA	2X4DB131 C-7	C	O/C	-	A	-	RO	-	AJ	ROJ-16
2-HV-9001A	2/212	A	8" GA	Ctmt Spray Pmp Suc From Ctmt Sump Inbrd Iso Vlv	MO	2X4DB131 G-6	C	O/C	AI	A	RO	Q	-	AJ	-
2-HV-9001B	2/212	A	8" GA	Ctmt Spray Pmp Suc From Ctmt Sump Inbrd Iso Vlv	MO	2X4DB131 C-6	C	O/C	AI	A	RO	Q	-	AJ	-
2-HV-9002A	2/212	B	10" GA	Ctmt Spray Pmp Suc From Ctmt Sump Inbrd Iso Vlv	MO	2X4DB131 B-6	C	O/C	AI	A	RO	Q	-	-	-
2-HV-9002B	2/212	B	10" GA	Ctmt Spray Pmp Suc From Ctmt Sump Inbrd Iso Vlv	MO	2X4DB131 C-6	C	O/C	AI	A	RO	Q	-	-	-
2-HV-9003A	2/212	B	10" GA	Ctmt Spray Pmp Suc From Ctmt Sump Obrd Iso Vlv	MO	2X4DB131 B-5	C	O	AI	A	RO	Q	-	-	-
2-HV-9003B	2/212	B	10" GA	Ctmt Spray Pmp Suc From Ctmt Sump Obrd Iso Vlv	MO	2X4DB131 C-5	C	O	AI	A	RO	Q	-	-	-

VEGP-2 IST PROGRAM
VALVE TABLE

SYSTEM: 1208 - CVCS

VLV ID	CC/PC CAT	TYPE	FUNCTION	AT	P&ID/COORD	NP	SP	FP	A/P	PI	ET	FST	LT	NOTES/CSJ/ROJ/RR
2-1208-U4-004	2/212 C	1.5" CH	RCP Seal Inj Inbrd CH	SA	2X4DB114 B-7	O	C	-	A	-	RO	-	-	ROJ-17
2-1208-U4-021	2/212 AC	3/4" CH	RCS Seal Water Ret Line Pressure Equalizing CH	SA	2X4DB114 D-4	C	O/C	-	A	-	RO	-	AJ	ROJ-18
2-1208-U4-140	2/212 C	2" CH	Cent Char Pmp Disch Recir Line CH	SA	2X4DB116-2 G-6	C	O	-	A	-	Q	-	-	-
2-1208-U4-147	2/212 C	2" CH	Cent Char Pmp Disch Recir Line CH	SA	2X4DB116-2 C-6	C	O/C	-	A	-	Q	-	-	-
2-1208-U4-185	2/212 C	2" CH	Emergency Boration to Char Pmp Suc CH	SA	2X4DB116-1 D-1	C	O	-	A	-	CS	-	-	CSJ-16
2-1208-U4-284	3/313 C	2" CH	Boric Acid Tran Pmp Disch CH	SA	2X4DB118 D-5	C	O/C	-	A	-	Q	-	-	-
2-1208-U4-299	3/313 C	2" CH	Boric Acid Tran Pmp Disch CH	SA	2X4DB118 B-5	C	O/C	-	A	-	Q	-	-	-
2-1208-U4-353	2/212 C	1.5" CH	RCP Seal Inj Inbrd CH	SA	2X4DB114 B-7	O	C	-	A	-	RO	-	-	ROJ-17
2-1208-U4-354	2/212 C	1.5" CH	RCP Seal Inj Inbrd CH	SA	2X4DB114 B-7	O	C	-	A	-	RO	-	-	ROJ-17
2-1208-U4-355	2/212 C	1.5" CH	RCP Seal Inj Inbrd CH	SA	2X4DB114 B-7	O	C	-	A	-	RO	-	-	ROJ-17
2-1208-U6-032	2/212 AC	3" CH	Main Char Hdr CH	SA	2X4DB114 F-3	O	O/C	-	A	-	Q RO	-	AJ	ROJ-19
2-1208-U6-124	2/212 C	4" CH	Char Pmp Sup From VCT CH	SA	2X4DB116-1 E-4	O	C	-	A	-	RO	-	-	ROJ-20
2-1208-U6-142	2/212 C	4" CH	Cent Char Pmp Disch CH	SA	2X4DB116-2 G-6	C	O/C	-	A	-	RO PQ	-	-	ROJ-21

VEGP-2 IST PROGRAM
VALVE TABLE

SYSTEM: 1208 - CVCS

VLV ID	CC/PC	CAT	TYPE	FUNCTION	AT	P&ID/COORD	NP	SP	FP	A/P	PI	ET	FST	LT	NOTES/CSJ/ROJ/RR
2-1208-U6-149	2/212	C	4" CH	Cent Char Pmp Disch CH	SA	2X4DB116-2 C-6	C	O/C	~	A	~	RO PQ	~	~	ROJ-21
2-1208-U6-189	2/212	C	8" CH	Cent Char Pmp Suc From RWST CH	SA	2X4DB116-2 E-2	C	O/C	~	A	~	RO PCS	~	~	ROJ-22
2-1208-U6-436	2/212	C	8" CH	RHR Pmp "A" Disch to Char Pmp Suc Hdrs CH	SA	2X4DB122 F-8	C	O	~	A	~	RO PCS	~	~	ROJ-23
2-FV-0111A	3/313	B	2" GL	Dilution Ctrl Vlv	AO	2X4DB116-1 F-1	O/C	C	C	A	RO	Q	Q	~	~
2-HV-0190A	2/212	B	1" GL	Char Throttle Vlv	SO	2X4DB116-2 G-7	C	O	C	A	RO	Q	~	~	~
2-HV-0190B	2/212	B	1" GL	Char Throttle Vlv	SO	2X4DB116-2 B-7	C	O	C	A	RO	Q	~	~	~
2-HV-8100	2/212	A	2" GL	RCP Seal Water Leakoff Ctmt Iso Vlv	MO	2X4DB114 D-3	O	C	AI	A	RO	CS	CS	AJ	CSJ-17
2-HV-8103A	2/212	B	1.5" GL	RCP Seal Inj Iso Vlv	MO	2X4DB114 B-6	O	C	AI	A	RO	RO	~	~	ROJ-24
2-HV-8103B	2/212	B	1.5" GL	RCP Seal Inj Iso Vlv	MO	2X4DB114 B-6	O	C	AI	A	RO	RO	~	~	ROJ-24
2-HV-8103C	2/212	B	1.5" GL	RCP Seal Inj Iso Vlv	MO	2X4DB114 B-6	O	C	AI	A	RO	RO	~	~	ROJ-24
2-HV-8103D	2/212	B	1.5" GL	RCP Seal Inj Iso Vlv	MO	2X4DB114 B-6	O	C	AI	A	RO	RO	~	~	ROJ-24
2-HV-8104	2/212	B	2" GL	Emergency Borate Iso Vlv	MO	2X4DB116-1 D-1	C	O/C	AI	A	RO	Q	~	~	~
2-HV-8105	2/212	A	3" GA	Char Pmp to RCS Ctmt Iso Vlv	MO	2X4DB116-1 C-8	O	O/C	AI	A	RO	CS	~	AJ	CSJ-18
2-HV-8106	2/212	B	3" GA	Char Pmp to RCS Iso Vlv	MO	2X4DB116-1 C-7	O	C	AI	A	RO	CS	~	~	CSJ-19

VEGP-2 IST PROGRAM
VALVE TABLE

SYSTEM: 1208 - CVCS

VLV ID	CC/PC CAT	TYPE	FUNCTION	AT	P&ID/COORD	NP	SP	FP	A/P	PI	ET	FST	LT	NOTES/CSJ/ROJ/RR
2-HV-8110	2/212 B	2" GL	Cent Char Pmp Common Recir to RCS Seal Water Iso Vlv	MO	2X4DB116-2 E-7	O	C	AI	A	RO	Q	-	-	-
2-HV-8111A	2/212 B	2" GL	Cent Char Pmp Recir to RCS Seal Water Iso Vlv	MO	2X4DB116-2 F-6	O	C	AI	A	RO	Q	-	-	-
2-HV-8111B	2/212 B	2" GL	Cent Char Pmp Recir to RCS Seal Water Iso Vlv	MO	2X4DB116-2 D-6	O	C	AI	A	RO	Q	-	-	-
2-HV-8112	2/212 B	2" GL	RCPS Seal Water Leakoff Ctmt Iso Vlv	MO	2X4DB114 D-3	O	C	AI	A	RO	CS	-	AJ	CSJ-17
2-HV-8116	2/212 B	1" GL	Char Iso Vlv	MO	2X4DB116-2 G-8	C	O	AI	A	RO	Q	-	-	-
2-HV-8152	2/212 A	3" GL	RCS Ltdwn Line Iso Vlv	AO	2X4DB114 G-2	O	C	C	A	RO	CS	CS	AJ	CSJ-20
2-HV-8160	2/212 A	3" GL	RCS Ltdwn Line Iso Vlv	AO	2X4DB114 G-3	O	C	C	A	RO	CS	CS	AJ	CSJ-20
2-HV-8471A	2/212 B	6" GA	Cent Char Pmp Suc Iso Vlv	MO	2X4DB116-2 G-3	O	O/C	AI	A	RO	Q	-	-	-
2-HV-8471B	2/212 B	6" GA	Cent Char Pmp Suc Iso Vlv	MO	2X4DB116-2 C-3	O	O/C	AI	A	RO	Q	-	-	-
2-HV-8508A	2/212 B	2" GL	Cent Char Pmp Alt Mini-Flow to RWST Iso Vlv	MO	2X4DB116-2 G-5	C	O/C	AI	A	RO	CS	-	-	CSJ-21
2-HV-8508B	2/212 B	2" GL	Cent Char Pmp Alt Mini-Flow to RWST Iso Vlv	MO	2X4DB116-2 D-5	C	O/C	AI	A	RO	CS	-	-	CSJ-21
2-HV-8509A	2/212 B	2" GL	Cent Char Pmp Alt Mini-Flow to RWST Iso	MO	2X4DB116-2 D-5	O	C	AI	A	RO	Q	-	-	-

VEGP-2 IST PROGRAM
VALVE TABLE

SYSTEM: 1208 - CVCS

VLV ID	CC/PC CAT	TYPE	FUNCTION	AT	P&ID/COORD	NP	SP	FP	A/P	PI	ET	FST	LT	NOTES/CSJ/ROJ/RR
2-HV-8509B	2/212 B	2" GL	Cent Char Pmp Alt Mini-Flow to RWST Iso Vlv	MO	2X4DB116-2 G-5	O	C	AI	A	RO	Q	-	-	-
2-LV-0112B	2/212 B	4" GA	VCT Outlet Iso Vlv	MO	2X4DB116-1 F-4	O	C	AI	A	RO	CS	-	-	CSJ-22
2-LV-0112C	2/212 B	4" GA	VCT Outlet Iso Vlv	MO	2X4DB116-1 E-4	O	C	AI	A	RO	CS	-	-	CSJ-22
2-LV-0112D	2/212 B	8" GA	RWST To Char Pmp Suc Iso Vlv	MO	2X4DB116-2 E-2	C	O/C	AI	A	RO	CS	-	-	CSJ-23
2-LV-0112E	2/212 B	8" GA	RWST To Char Pmp Suc Iso Vlv	MO	2X4DB116-2 D-2	C	O/C	AI	A	RO	CS	-	-	CSJ-23
2-PSV-8121	2/212 B	2" RV	RCP Seal Water Ret Hdr RV	SA	2X4DB114 D-4	C	O/C	-	A	-	-	-	-	Note 6
2-PSV-8124	2/212 C	3/4" RV	Char Pmp Suc Hdr RV	SA	2X4DB116-1 C-3	C	O/C	C	A	-	-	-	-	Note 6

VEGP-2 IST PROGRAM
VALVE TABLE

SYSTEM: 1212 - NUCLEAR SAM.

VLV ID	CC/PC	CAT	TYPE	FUNCTION	AT	P&ID/COORD	NP	SP	FP	A/P	PI	ET	FST	LT	NOTES/CSJ/ROJ/RR
2-HV-3502	2/212	A	1/2" GL	RC Hot Legs Sam Hdr Ctmt Iso Vlv	AO	2X4DB140 E-7	O	C	C	A	RO	Q	Q	AJ	~
2-HV-3507	2/212	A	1/2" GL	PRZR Liquid Space Sam Line Ctmt Iso Vlv	AO	2X4DB140 G-8	C	C	C	A	RO	Q	Q	AJ	~
2-HV-3508	2/212	A	1/2" GL	PRZR Liquid Space Sam Line Ctmt Iso Vlv	AO	2X4DB140 G-7	C	C	C	A	RO	Q	Q	AJ	~
2-HV-3513	2/212	A	1/2" GL	PRZR Steam Space Sam Line Ctmt Iso Vlv	AO	2X4DB140 F-8	C	C	C	A	RO	Q	Q	AJ	~
2-HV-3514	2/212	A	1/2" GL	PRZR Steam Space Sam Line Ctmt Iso Vlv	AO	2X4DB140 F-7	C	C	C	A	RO	Q	Q	AJ	~
2-HV-3548	2/212	A	1/2" GL	RC Hot Legs Sam Hdr Ctmt Iso Vlv	MO	2X4DB140 D-8	O	C	AI	A	RO	Q	-	AJ	~
2-HV-8220	2/212	A	1/2" GA	RC Hot Legs Sam Hdr Ctmt Iso Vlv	SO	2X4DB140 D-7	C	C	C	A	RO	Q	Q	AJ	~

VEGP-2 IST PROGRAM
VALVE TABLE

SYSTEM: 1213 - SPENT FUEL COOLING

VLV ID	CC/PC	CAT	TYPE	FUNCTION	AT	P&ID/COORD	NP	SP	FP	A/P	PI	ET	FST	LT	NOTES/CSJ/ROJ/RR
2-1213-U6-050	2/212	A	3" DI	RF Pur from SFP Pmp to Rx Cav CIV	MA	2X4DB130 G-8	C	C	-	P	-	-	-	AJ	-
2-1213-U6-051	2/212	A	3" DI	RF Pur from SFP Pmp to Rx Cav CIV	MA	2X4DB130 G-8	C	C	-	P	-	-	-	AJ	-

VEGP-2 IST PROGRAM
VALVE TABLE

SYSTEM: 1214 - CNMT & AUX. BLDG DRN

VLV ID	CC/PC	CAT	TYPE	FUNCTION	AT	P&ID/COORD	NP	SP	FP	A/P	PI	ET	FST	LT	NOTES/CSJ/ROJ/RR
2-HV-0780	2/212	A	3" GA	Ctmt/Rx Cav Sump Pmp Disch Ctmt Iso Vlv	AO	2X4DB143 G-5	O	C	C	A	RO	Q	Q	AJ	-
2-HV-0781	2/212	A	3" GA	Ctmt/Rx Cav Sump Pmp Disch Ctmt Iso Vlv	AO	2X4DB143 G-6	O	C	C	A	RO	Q	Q	AJ	-

VEGP-2 IST PROGRAM
VALVE TABLE

SYSTEM: 1217 - ACCW

VLV ID	CC/PC CAT	TYPE	FUNCTION	AT	P&ID/COORD	NP	SP	FP	A/P	PI	ET	FST	LT	NOTES/CSJ/ROJ/RR
2-1217-U4-084	3/313 C	2.50" CH	ACCW To RCP Thermal Barrier Iso CH	SA	2X4DB138-2 E-6	O	C	-	A	-	RO	-	-	ROJ-25
2-1217-U4-085	3/313 C	2.50" CH	ACCW To RCP Thermal Barrier Iso CH	SA	2X4DB138-2 C-6	O	C	-	A	-	RO	-	-	ROJ-25
2-1217-U4-086	3/313 C	2.50" CH	ACCW To RCP Thermal Barrier Iso CH	SA	2X4DB138-2 B-3	O	C	-	A	-	RO	-	-	ROJ-25
2-1217-U4-087	3/313 C	2.50" CH	ACCW To RCP Thermal Barrier Iso CH	SA	2X4DB138-2 F-3	O	C	-	A	-	RO	-	-	ROJ-25
2-1217-U4-113	2/212 AC	3/4" CH	ACCW Sup to Ctmt Iso Vlv Bypass Vlv	SA	2X4DB138-2 G-7	C	O/C	-	A	-	RO	-	AJ	ROJ-26
2-HV-19051	3/313 B	2.50" GA	Individual RCP Thermal Barrier ACCW Ret Trip Vlv	MO	2X4DB138-2 E-7	O	C	AI	A	RO	CS	-	-	CSJ-24
2-HV-19053	3/313 B	2.50" GA	Individual RCP Thermal Barrier ACCW Ret Trip Vlv	MO	2X4DB138-2 C-7	O	C	AI	A	RO	CS	-	-	CSJ-24
2-HV-19055	3/313 B	2.50" GA	Individual RCP Thermal Barrier ACCW Ret Trip Vlv	MO	2X4DB138-2 B-2	O	C	AI	A	RO	CS	-	-	CSJ-24
2-HV-19057	3/313 B	2.50" GA	Individual RCP Thermal Barrier ACCW Ret Trip Vlv	MO	2X4DB138-2 F-2	O	C	AI	A	RO	CS	-	-	CSJ-24
2-HV-1974	2/212 A	10" BU	ACCW Ret From Ctmt Iso Vlv	MO	2X4DB138-2 G-7	O	C	AI	A	RO	CS	-	AJ	CSJ-25
2-HV-1975	2/212 A	10" BU	ACCW Ret From Ctmt Iso Vlv	MO	2X4DB138-1 B-2	O	C	AI	A	RO	CS	-	AJ	CSJ-25
2-HV-1978	2/212 A	10" BU	ACCW Sup to Ctmt Iso Vlv	MO	2X4DB138-2 H-7	O	C	AI	A	RO	CS	-	AJ	CSJ-25

VEGP-2 IST PROGRAM
VALVE TABLE

SYSTEM: 1217 - ACCW

VLV ID	CC/PC CAT	TYPE	FUNCTION	AT	P&ID/COORD	NP	SP	FP	A/P	PI	ET	FST	LT	NOTES/CSJ/ROJ/RR
2-HV-1979	2/212 A	10" BU	ACCW Sup to Ctmt Iso Vlv	MO	2X4DB138-1 D-3	O	C	AI	A	RO	CS	-	AJ	CSJ-25
2-HV-2041	3/313 B	3" GA	Common RCP Thermal Barrier ACCW Ret Trip Vlv	MO	2X4DB138-2 F-7	O	C	AI	A	RO	CS	-	-	CSJ-24

VEGP-2 IST PROGRAM
VALVE TABLE

SYSTEM: 1301 - MAIN STEAM

VLV ID	CC/PC	CAT	TYPE	FUNCTION	AT	P&ID/COORD	NP	SP	FP	A/P	PI	ET	FST	LT	NOTES/CSJ/ROJ/RR
2-1301-U4-008	3/313	C	4" CH	MS Hdr Sup CH to AFW Pmp	SA	2X4DB159-2 E-4	O	O/C	~	A	~	CS PQ RO	~	~	ROJ-27 CSJ-26
2-1301-U4-404	3/313	C	4" CH	MS Hdr Sup CH to AFW Pmp	SA	2X4DB159-2 E-4	O	O/C	~	A	~	CS PQ RO	~	~	ROJ-27 CSJ-26
2-HV-13005A	2/212	B	4" GL	MSIV Bypass/Steam Drain Iso Vlv	AO	2X4DB159-2 G-6	O	C	C	A	RO	Q	Q	~	~
2-HV-13005B	2/212	B	4" GL	MSIV Bypass/Steam Drain Iso Vlv	AO	2X4DB159-2 G-6	O	C	C	A	RO	Q	Q	~	~
2-HV-13006A	2/212	B	4" GL	MSIV Bypass/Steam Drain Iso Vlv	AO	2X4DB159-2 A-6	O	C	C	A	RO	Q	Q	~	~
2-HV-13006B	2/212	B	4" GL	MSIV Bypass/Steam Drain Iso Vlv	AO	2X4DB159-2 A-6	O	C	C	A	RO	Q	Q	~	~
2-HV-13007A	2/212	B	4" GL	MSIV Bypass/Steam Drain Iso Vlv	AO	2X4DB159-2 E-6	O	C	C	A	RO	Q	Q	~	~
2-HV-13007B	2/212	B	4" GL	MSIV Bypass/Steam Drain Iso Vlv	AO	2X4DB159-2 E-6	O	C	C	A	RO	Q	Q	~	~
2-HV-13008A	2/212	B	4" GL	MSIV Bypass/Steam Drain Iso Vlv	AO	2X4DB159-2 C-6	O	C	C	A	RO	Q	Q	~	~
2-HV-13008B	2/212	B	4" GL	MSIV Bypass/Steam Drain Iso Vlv	AO	2X4DB159-2 C-6	O	C	C	A	RO	Q	Q	~	~
2-HV-15212A	2/212	B	3" GL	SG Blowdown Inbrd Iso Vlv	AO	2X4DB159-3 F-4	O	C	C	A	RO	Q	Q	~	~
2-HV-15212B	2/212	B	3" GL	SG Blowdown Inbrd Iso Vlv	AO	2X4DB159-3 B-4	O	C	C	A	RO	Q	Q	~	~
2-HV-15212C	2/212	B	3" GL	SG Blowdown Inbrd Iso Vlv	AO	2X4DB159-1 F-3	O	C	C	A	RO	Q	Q	~	~

VEGP-2 IST PROGRAM
VALVE TABLE

SYSTEM: 1301 - MAIN STEAM

VLV ID	CS/PC	CAT	TYPE	FUNCTION	AT	P&ID/COORD	NP	SP	FP	A/P	PI	ET	FST	LT	NOTES/CSJ/ROJ/RR
2-HV-15212D	2/212	B	3" GL	SG Blowdown Inbrd Iso Vlv	AO	2X4DB159-1 B-3	O	C	C	A	RO	Q	Q	-	-
2-HV-15216A	2/212	B	3" GL	SG Blowdown Inbrd Iso Vlv	AO	2X4DB159-3 F-3	O	C	C	A	RO	Q	Q	-	-
2-HV-15216B	2/212	B	3" GL	SG Blowdown Inbrd Iso Vlv	AO	2X4DB159-3 B-3	O	C	C	A	RO	Q	Q	-	-
2-HV-15216C	2/212	B	3" GL	SG Blowdown Inbrd Iso Vlv	AO	2X4DB159-1 F-3	O	C	C	A	RO	Q	Q	-	-
2-HV-15216D	2/212	B	3" GL	SG Blowdown Inbrd Iso Vlv	AO	2X4DB159-1 B-3	O	C	C	A	RO	Q	Q	-	-
2-HV-3006A	2/212	B	29.50" GA	MSIV	EH	2X4DB159-2 H-6	O	C	C	A	RO	CS	CS	-	CSJ-27
2-HV-3006B	2/212	B	28" GA	MSIV	EH	2X4DB159-2 H-7	O	C	C	A	RO	CS	CS	-	CSJ-27
2-HV-3009	2/212	B	4" GA	MS Line to AFW Pmp Iso Vlv	MO	2X4DB159-2 G-3	O	O/C	AI	A	RO	Q	-	-	-
2-HV-3016A	2/212	B	29.50" GA	MSIV	EH	2X4DB159-2 F-6	O	C	C	A	RO	CS	CS	-	CSJ-27
2-HV-3016B	2/212	B	28" GA	MSIV	EH	2X4DB159-2 F-7	O	C	C	A	RO	CS	CS	-	CSJ-27
2-HV-3019	2/212	B	4" GA	MS Line to AFW Pmp Iso Vlv	MO	2X4DB159-2 E-2	O	O/C	AI	A	RO	Q	-	-	-
2-HV-3026A	2/212	B	29.50" GA	MSIV	EH	2X4DB159-2 D-6	O	C	C	A	RO	CS	CS	-	CSJ-27
2-HV-3026B	2/212	B	28" GA	MSIV	EH	2X4DB159-2 D-7	O	C	C	A	RO	CS	CS	-	CSJ-27
2-HV-3036A	2/212	B	29.50" GA	MSIV	EH	2X4DB159-2 B-6	O	C	C	A	RO	CS	CS	-	CSJ-27

VEGP-2 IST PROGRAM
VALVE TABLE

SYSTEM: 1301 - MAIN STEAM

VLV ID	CC/PC	CAT	TYPE	FUNCTION	AT	P&ID/COORD	NP	SP	FP	A/P	PI	ET	FST	LT	NOTES/CSJ/ROJ/RR
2-HV-3036B	2/212	B	28" GA	MSIV	EH	2X4DB159-2 B-7	O	C	C	A	RO	CS	CS	~	CSJ-27
2-HV-7603A	2/212	B	3" GL	SG Blowdown Iso Vlv	AO	2X4DB159-3 F-2	O	C	C	A	RO	Q	Q	~	~
2-HV-7603B	2/212	B	3" GL	SG Blowdown Iso Vlv	AO	2X4DB159-3 B-2	O	C	C	A	RO	Q	Q	~	~
2-HV-7603C	2/212	B	3" GL	SG Blowdown Iso Vlv	AO	2X4DB159-1 F-2	O	C	C	A	RO	Q	Q	~	~
2-HV-7603D	2/212	B	3" GL	SG Blowdown Iso Vlv	AO	2X4DB159-1 B-2	O	C	C	A	RO	Q	Q	~	~
2-HV-9451	2/212	B	1/2" GL	SG Sam Iso Vlv	SO	2X4DB159-3 E-3	O	C	C	A	RO	Q	Q	~	~
2-HV-9452	2/212	B	1/2" GL	SG Sam Iso Vlv	SO	2X4DB159-3 B-3	O	C	C	A	RO	Q	Q	~	~
2-HV-9453	2/212	B	1/2" GL	SG Sam Iso Vlv	SO	2X4DB159-1 E-2	O	C	C	A	RO	Q	Q	~	~
2-HV-9454	2/212	B	1/2" GL	SG Sam Iso Vlv	SO	2X4DB159-1 B-3	O	C	C	A	RO	Q	Q	~	~
2-PSV-3001	2/212	C	6" RV	MS Safety Vlv	SA	2X4DB159-2 H-3	C	O/C	~	A	~	~	~	~	Note 6
2-PSV-3002	2/212	C	6" RV	MS Safety Vlv	SA	2X4DB159-2 H-4	C	O/C	~	A	~	~	~	~	Note 6
2-PSV-3003	2/212	C	6" RV	MS Safety Vlv	SA	2X4DB159-2 H-4	C	O/C	~	A	~	~	~	~	Note 6
2-PSV-3004	2/212	C	6" RV	MS Safety Vlv	SA	2X4DB159-2 H-5	C	O/C	~	A	~	~	~	~	Note 6
2-PSV-3005	2/212	C	6" RV	MS Safety Vlv	SA	2X4DB159-2 H-5	C	O/C	~	A	~	~	~	~	Note 6

VEGP-2 IST PROGRAM
VALVE TABLE

SYSTEM: 1301 - MAIN STEAM

VLV ID	CC/PC	CAT	TYPE	FUNCTION	AT	P&ID/COORD	NP	SP	FP	A/P	PI	ET	FST	LT	NOTES/CSJ/ROJ/RR
2-PSV-3011	2/212	C	6" RV	MS Safety Vlv	SA	2X4DB159-2 F-3	C	O/C	-	A	-	-	-	-	Note 6
2-PSV-3012	2/212	C	6" RV	MS Safety Vlv	SA	2X4DB159-2 F-4	C	O/C	-	A	-	-	-	-	Note 6
2-PSV-3013	2/212	C	6" RV	MS Safety Vlv	SA	2X4DB159-2 F-4	C	O/C	-	A	-	-	-	-	Note 6
2-PSV-3014	2/212	C	6" RV	MS Safety Vlv	SA	2X4DB159-2 F-5	C	O/C	-	A	-	-	-	-	Note 6
2-PSV-3015	2/212	C	6" RV	MS Safety Vlv	SA	2X4DB159-2 F-5	C	O/C	-	A	-	-	-	-	Note 6
2-PSV-3021	2/212	C	6" RV	MS Safety Vlv	SA	2X4DB159-2 D-3	C	O/C	-	A	-	-	-	-	Note 6
2-PSV-3022	2/212	C	6" RV	MS Safety Vlv	SA	2X4DB159-2 D-4	C	O/C	-	A	-	-	-	-	Note 6
2-PSV-3023	2/212	C	6" RV	MS Safety Vlv	SA	2X4DB159-2 D-4	C	O/C	-	A	-	-	-	-	Note 6
2-PSV-3024	2/212	C	6" RV	MS Safety Vlv	SA	2X4DB159-2 D-5	C	O/C	-	A	-	-	-	-	Note 6
2-PSV-3025	2/212	C	6" RV	MS Safety Vlv	SA	2X4DB159-2 D-5	C	O/C	-	A	-	-	-	-	Note 6
2-PSV-3031	2/212	C	6" RV	MS Safety Vlv	SA	2X4DB159-2 B-3	C	O/C	-	A	-	-	-	-	Note 6
2-PSV-3032	2/212	C	6" RV	MS Safety Vlv	SA	2X4DB159-2 B-4	C	O/C	-	A	-	-	-	-	Note 6
2-PSV-3033	2/212	C	6" RV	MS Safety Vlv	SA	2X4DB159-2 B-4	C	O/C	-	A	-	-	-	-	Note 6
2-PSV-3034	2/212	C	6" RV	MS Safety Vlv	SA	2X4DB159-2 B-5	C	O/C	-	A	-	-	-	-	Note 6

VEGP-2 IST PROGRAM
VALVE TABLE

SYSTEM: 1301 - MAIN STEAM

VLV ID	CC/PC	CAT	TYPE	FUNCTION	AT	P&ID/COORD	NP	SP	FP	A/P	PI	ET	FST	LT	NOTES/CSJ/ROJ/RR
2-PSV-3035	2/212	C	6" RV	MS Safety Vlv	SA	2X4DB159-2 B-5	C	O/C	~	A	~	~	~	~	Note 6
2-PV-3000	2/212	B	10" GL	ARV	EH	2X4DB159-2 H-2	C	O/C	C	A	RO	Q	Q	~	~
2-PV-3010	2/212	B	10" GL	ARV	EH	2X4DB159-2 F-2	C	O/C	C	A	RO	Q	Q	~	~
2-PV-3020	2/212	B	10" GL	ARV	EH	2X4DB159-2 D-2	C	O/C	C	A	RO	Q	Q	~	~
2-PV-3030	2/212	B	10" GL	ARV	EH	2X4DB159-2 C-2	C	O/C	C	A	RO	Q	Q	~	~

VEGP-2 IST PROGRAM
VALVE TABLE

SYSTEM: 1302 - AFW

VLV ID	CC/PC	CAT	TYPE	FUNCTION	AT	P&ID/COORD	NP	SP	FP	A/P	PI	ET	FST	LT	NOTES/CSJ/ROJ/RR
2-1302-U4-001	3/313	C	4" CH	AFW Pmp Disch CH	SA	2X4DB161-2 B-5	C	O	~	A	~	CS	~	~	CSJ-28
2-1302-U4-002	3/313	C	4" CH	AFW Pmp Disch CH	SA	2X4DB161-2 D-5	C	O	~	A	~	CS	~	~	CSJ-28
2-1302-U4-013	3/313	C	10" CH	AFW Pmp Suc CH	SA	2X4DB161-2 F-7	C	O	~	A	~	CS PQ	~	~	CSJ-29
2-1302-U4-014	3/313	C	6" CH	AFW Pmp Disch CH	SA	2X4DB161-2 F-5	C	O	~	A	~	CS	~	~	CSJ-28
2-1302-U4-017	2/212	C	4" CH	AFW Hdr Stop/CH	SA	2X4DB161-2 H-3	C	O	~	A	~	CS	~	~	CSJ-28
2-1302-U4-020	2/212	C	4" CH	AFW Hdr Stop/CH	SA	2X4DB161-2 G-3	C	O	~	A	~	CS	~	~	CSJ-28
2-1302-U4-023	2/212	C	4" CH	AFW Hdr Stop/CH	SA	2X4DB161-2 F-3	C	O	~	A	~	CS	~	~	CSJ-28
2-1302-U4-026	2/212	C	4" CH	AFW Hdr Stop/CH	SA	2X4DB161-2 E-3	C	O	~	A	~	CS	~	~	CSJ-28
2-1302-U4-033	3/313	C	8" CH	AFW Pmp Suc CH	SA	2X4DB161-2 B-7	C	O	~	A	~	CS PQ	~	~	CSJ-29
2-1302-U4-037	2/212	C	4" CH	AFW Hdr Stop/CH	SA	2X4DB161-2 D-3	C	O	~	A	~	CS	~	~	CSJ-28
2-1302-U4-040	2/212	C	4" CH	AFW Hdr Stop/CH	SA	2X4DB161-2 C-3	C	O	~	A	~	CS	~	~	CSJ-28
2-1302-U4-043	2/212	C	4" CH	AFW Hdr Stop/CH	SA	2X4DB161-2 B-3	C	O	~	A	~	CS	~	~	CSJ-28
2-1302-U4-046	2/212	C	4" CH	AFW Hdr Stop/CH	SA	2X4DB161-2 B-3	C	O	~	A	~	CS	~	~	CSJ-28
2-1302-U4-051	3/313	C	10" CH	AFW Pmp Suc CH	SA	2X4DB161-2 E-7	C	O	~	A	~	CS PQ	~	~	CSJ-29

VEGP-2 IST PROGRAM
VALVE TABLE

SYSTEM: 1302 - AFW

VLV ID	CC/PC	CAT	TYPE	FUNCTION	AT	P&ID/COORD	NP	SP	FP	A/P	PI	ET	FST	LT	NOTES/CSJ/ROJ/RR
2-1302-U4-052	3/313	C	8" CH	AFW Pmp Suc CH	SA	2X4DB161-2 A-7	C	O	~	A	~	CS PQ	~	~	CSJ-29
2-1302-U4-058	3/313	C	8" CH	AFW Pmp Suc CH	SA	2X4DB161-2 D-7	C	O	~	A	~	CS PQ	~	~	CSJ-29
2-1302-U4-061	3/313	C	8" CH	AFW Pmp Suc CH	SA	2X4DB161-2 C-7	C	O	~	A	~	CS PQ	~	~	CSJ-29
2-1302-U4-085	3/313	C	2.50" CH	AFW Pmp Recir Line CH	SA	2X4DB161-1 G-6	C	O	~	A	~	Q	~	~	~
2-1302-U4-086	3/313	C	2.50" CH	AFW Pmp Recir Line CH	SA	2X4DB161-1 B-6	C	O	~	A	~	Q	~	~	~
2-1302-U4-087	3/313	C	2.50" CH	AFW Pmp Recir Line CH	SA	2X4DB161-1 B-6	C	O	~	A	~	Q	~	~	~
2-1302-U4-113	2/212	C	4" CH	AFW Hdr CH at FW Bypass Hdrs	SA	2X4DB168-3 F-2	C	O/C	~	A	~	CS Q	~	~	CSJ-30
2-1302-U4-114	2/212	C	4" CH	AFW Hdr CH at FW Bypass Hdrs	SA	2X4DB168-3 F-4	C	O/C	~	A	~	CS Q	~	~	CSJ-30
2-1302-U4-115	2/212	C	4" CH	AFW Hdr CH at FW Bypass Hdrs	SA	2X4DB168-3 F-8	C	O/C	~	A	~	CS Q	~	~	CSJ-30
2-1302-U4-116	2/212	C	4" CH	AFW Hdr CH at FW Bypass Hdrs	SA	2X4DB168-3 F-6	C	O/C	~	A	~	CS Q	~	~	CSJ-30
2-1302-U4-117	2/212	C	6" CH	Main FW Bypass Hdr CH (Obrd Ctmt)	SA	2X4DB168-3 F-2	O	C	~	A	~	RO	~	~	ROJ-28
2-1302-U4-118	2/212	C	6" CH	Main FW Bypass Hdr CH (Obrd Ctmt)	SA	2X4DB168-3 F-4	O	C	~	A	~	RO	~	~	ROJ-28
2-1302-U4-119	2/212	C	6" CH	Main FW Bypass Hdr CH (Obrd Ctmt)	SA	2X4DB168-3 F-6	O	C	~	A	~	RO	~	~	ROJ-28
2-1302-U4-120	2/212	C	6" CH	Main FW Bypass Hdr CH (Obrd Ctmt)	SA	2X4DB168-3 F-8	O	C	~	A	~	RO	~	~	ROJ-28

VEGP-2 IST PROGRAM
VALVE TABLE

SYSTEM: 1302 - AFW

VLV ID	CC/PC	CAT	TYPE	FUNCTION	AT	P&ID/COORD	NP	SP	FP	A/P	PI	ET	FST	LT	NOTES/CSJ/ROJ/RR
2-1302-U4-125	2/212	C	6" CH	Main FW Bypass Hdr Ctmt Iso CH	SA	2X4DB168-3 G-2	O	O	-	A	-	CS PQ RO	-	-	CSJ-31
2-1302-U4-126	2/212	C	6" CH	Main FW Bypass Hdr Ctmt Iso CH	SA	2X4DB168-3 G-4	O	O	-	A	-	CS PQ RO	-	-	CSJ-31
2-1302-U4-127	2/212	C	6" CH	Main FW Bypass Hdr Ctmt Iso CH	SA	2X4DB168-3 G-6	O	O	-	A	-	CS PQ RO	-	-	CSJ-31
2-1302-U4-128	2/212	C	6" CH	Main FW Bypass Hdr Ctmt Iso CH	SA	2X4DB168-3 G-8	O	O	-	A	-	CS PQ RO	-	-	CSJ-31
2-FV-5154	3/313	B	2" GL	Mot-Driven AFW Pmp Recir Line Stop Vlv	MO	2X4DB161-2 C-5	O	O/C	AI	A	RO	Q	-	-	-
2-FV-5155	3/313	B	2" GL	Mot-Driven AFW Pmp Recir Line Stop Vlv	MO	2X4DB161-2 B-5	O	O/C	AI	A	RO	Q	-	-	-
2-HV-15196	2/212	B	6" GA	Main FW Bypass Iso Vlv	AO	2X4DB168-3 E-2	O	C	C	A	RO	CS	CS	-	CSJ-32
2-HV-15197	2/212	B	6" GA	Main FW Bypass Iso Vlv	AO	2X4DB168-3 E-4	O	C	C	A	RO	CS	CS	-	CSJ-32
2-HV-15198	2/212	B	6" GA	Main FW Bypass Iso Vlv	AO	2X4DB168-3 E-8	O	C	C	A	RO	CS	CS	-	CSJ-32
2-HV-15199	2/212	B	6" GA	Main FW Bypass Iso Vlv	AO	2X4DB168-3 E-6	O	C	C	A	RO	CS	CS	-	CSJ-32
2-HV-5106	3/313	B	4" GA	AFW Steam Sup Stop Vlv	MO	2X4DB161-3 G-5	C	O	AI	A	RO	Q	-	-	-
2-HV-5113	3/313	B	10" BU	AFW Pmp Suc From CST Iso Vlv	MO	2X4DB161-2 E-8	C	O	AI	A	RO	Q	-	-	-

VEGP-2 IST PROGRAM
VALVE TABLE

SYSTEM: 1302 - AFW

VLV ID	CC/PC	CAT	TYPE	FUNCTION	AT	P&ID/COORD	NP	SP	FP	A/P	PI	ET	FST	LT	NOTES/CSJ/ROJ/RR
2-HV-5118	3/313	B	8" BU	AFW Pmp Suc From CST Iso Vlv	MO	2X4DB161-2 C-8	C	O	AI	A	RO	Q	-	-	-
2-HV-5119	3/313	B	8" BU	AFW Pmp Suc From CST Iso Vlv	MO	2X4DB161-2 A-8	C	O	AI	A	RO	Q	-	-	-
2-HV-5120	2/212	B	4" GL	AFW Pmp Disch Hdr Iso Vlv	MO	2X4DB161-2 H-3	O	O/C	AI	A	RO	Q	-	-	-
2-HV-5122	2/212	B	4" GL	AFW Pmp Disch Hdr Iso Vlv	MO	2X4DB161-2 G-3	O	O/C	AI	A	RO	Q	-	-	-
2-HV-5125	2/212	B	4" GL	AFW Pmp Disch Hdr Iso Vlv	MO	2X4DB161-2 F-3	O	O/C	AI	A	RO	Q	-	-	-
2-HV-5127	2/212	B	4" GL	AFW Pmp Disch Hdr Iso Vlv	MO	2X4DB161-2 E-3	O	O/C	AI	A	RO	Q	-	-	-
2-HV-5132	2/212	B	4" GL	AFW Pmp Disch Hdr Iso Vlv	MO	2X4DB161-2 D-3	O	O/C	AI	A	RO	Q	-	-	-
2-HV-5134	2/212	B	4" GL	AFW Pmp Disch Hdr Iso Vlv	MO	2X4DB161-2 C-3	O	O/C	AI	A	RO	Q	-	-	-
2-HV-5137	2/212	B	4" GL	AFW Pmp Disch Hdr Iso Vlv	MO	2X4DB161-2 B-3	O	O/C	AI	A	RO	Q	-	-	-
2-HV-5139	2/212	B	4" GL	AFW Pmp Disch Hdr Iso Vlv	MO	2X4DB161-2 B-3	O	O/C	AI	A	RO	Q	-	-	-
2-PSV-5110	3/313	C	3/4" RV	AFW Pmp Suc RV	SA	2X4DB161-2 G-7	C	O/C	-	A	-	-	-	-	Note 6
2-PSV-5128	3/313	C	3/4" RV	AFW Pmp Suc RV	SA	2X4DB161-2 D-7	C	O/C	-	A	-	-	-	-	Note 6
2-PSV-5129	3/313	C	3/4" RV	AFW Pmp Suc RV	SA	2X4DB161-2 B-7	C	O/C	-	A	-	-	-	-	Note 6

VEGP-2 IST PROGRAM
VALVE TABLE

SYSTEM: 1305 - COND. & FW

VLV ID	CC/PC	CAT	TYPE	FUNCTION	AT	P&ID/COORD	NP	SP	FP	A/P	PI	ET	FST	LT	NOTES/CSJ/ROJ/RR
2-FV-0510	3/313	B	16" AN	Main FW Reg Vlv	AO	2X4DB168-3 D-2	O	C	C	A	RO	CS	CS	~	CSJ-33
2-FV-0520	3/313	B	16" AN	Main FW Reg Vlv	AO	2X4DB168-3 D-3	O	C	C	A	RO	CS	CS	~	CSJ-33
2-FV-0530	3/313	B	16" AN	Main FW Reg Vlv	AO	2X4DB168-3 D-7	O	C	C	A	RO	CS	CS	~	CSJ-33
2-FV-0540	3/313	B	16" AN	Main FW Reg Vlv	AO	2X4DB168-3 D-5	O	C	C	A	RO	CS	CS	~	CSJ-33
2-HV-5227	2/212	B	16" GA	Main FW Iso Vlv	EH	2X4DB168-3 F-1	O	C	C	A	RO	CS	CS	~	CSJ-34
2-HV-5228	2/212	B	16" GA	Main FW Iso Vlv	EH	2X4DB168-3 F-3	O	C	C	A	RO	CS	CS	~	CSJ-34
2-HV-5229	2/212	B	16" GA	Main FW Iso Vlv	EH	2X4DB168-3 F-7	O	C	C	A	RO	CS	CS	~	CSJ-34
2-HV-5230	2/212	B	16" GA	Main FW Iso Vlv	EH	2X4DB168-3 F-5	O	C	C	A	RO	CS	CS	~	CSJ-34
2-LV-5242	3/313	B	4" GL	Main FW Bypass Reg Vlv	AO	2X4DB168-3 D-5	O/C	C	C	A	RO	Q	Q	~	~
2-LV-5243	3/313	B	4" GL	Main FW Bypass Reg Vlv	AO	2X4DB168-3 D-2	O/C	C	C	A	RO	Q	Q	~	~
2-LV-5244	3/313	B	4" GL	Main FW Bypass Reg Vlv	AO	2X4DB168-3 D-3	O/C	C	C	A	RO	Q	Q	~	~
2-LV-5245	3/313	B	4" GL	Main FW Bypass Reg Vlv	AO	2X4DB168-3 D-7	O/C	C	C	A	RO	Q	Q	~	~

VEGP-2 IST PROGRAM
VALVE TABLE

SYSTEM: 1411 - COND. CHEM. INJ.

VLV ID	CC/PC	CAT	TYPE	FUNCTION	AT	P&ID/COORD	NP	SP	FP	A/P	PI	ET	FST	LT	NOTES/CSJ/ROJ/RR
2-1411-U4-676	2/212	A	1/2" GL	Chem Sup to SG Ctmt Iso Vlv	MA	2X4DB159-1 G-2	C	C	-	P	-	-	-	AJ	-
2-1411-U4-677	2/212	A	1/2" GL	Chem Sup to SG Ctmt Iso Vlv	MA	2X4DB159-1 C-2	C	C	-	P	-	-	-	AJ	-
2-1411-U4-678	2/212	A	1/2" GL	Chem Sup to SG Ctmt Iso Vlv	MA	2X4DB159-3 G-2	C	C	-	P	-	-	-	AJ	-
2-1411-U4-679	2/212	A	1/2" GL	Chem Sup to SG Ctmt Iso Vlv	MA	2X4DB159-3 C-3	C	C	-	P	-	-	-	AJ	-
2-HV-5278	2/212	A	1/2" GL	Chem Sup to SG Ctmt Iso Vlv	AO	2X4DB159-3 G-2	C	C	-	P	RO	-	-	AJ	-
2-HV-5279	2/212	A	1/2" GL	Chem Sup to SG Ctmt Iso Vlv	AO	2X4DB159-3 C-2	C	C	-	P	RO	-	-	AJ	-
2-HV-5280	2/212	A	1/2" GL	Chem Sup to SG Ctmt Iso Vlv	AO	2X4DB159-1 G-2	C	C	-	P	RO	-	-	AJ	-
2-HV-5281	2/212	A	1/2" GL	Chem Sup to SG Ctmt Iso Vlv	AO	2X4DB159-1 C-2	C	C	-	P	RO	-	-	AJ	-

VEGP-2 IST PROGRAM
VALVE TABLE

SYSTEM: 1418 - DEMIN. WATER

VLV ID	CC/PC	CAT	TYPE	FUNCTION	AT	P&ID/COORD	NP	SP	FP	A/P	PI	ET	FST	LT	NOTES/CSJ/ROJ/RR
2-1418-U4-005	2/212	A	2" GL	Demin Water Sup to Ctmt Iso Vlv	MA	AX4DB190-2 B-4	C	C	~	P	~	~	~	AJ	~
2-1418-U4-038	2/212	AC	2" CH	Demin Water Sup to Ctmt Iso CH	SA	AX4DB190-2 B-3	C	C	~	P	~	~	~	AJ	~
2-PSV-17589	2/212	AC	1.5" RV	Demin Water Sup to Ctmt RV	SA	AX4DB190-2 C-3	C	C	~	P	~	~	~	AJ	~

VEGP-2 IST PROGRAM
VALVE TABLE

SYSTEM: 1505 - CTMT AIR PURIF.

VLV ID	CC/PC	CAT	TYPE	FUNCTION	AT	P&ID/COORD	NP	SP	FP	A/P	PI	ET	FST	LT	NOTES/CSJ/ROJ/RR
2-HV-2626A	2/212	A	24" BU	Ctmt Purge Sup Ctmt Iso Vlv	MO	2X4DB213-1 E-7	O/C	C	AI	A	RO	CS	-	AJ	CSJ-35
2-HV-2626B	2/212	A	14" BU	Ctmt Mini-Purge Sup Ctmt Iso Vlv	AO	2X4DB213-1 D-7	O/C	C	C	A	RO	Q	Q	AJ	-
2-HV-2627A	2/212	A	24" BU	Ctmt Purge Sup Ctmt Iso Vlv	MO	2X4DB213-1 E-6	O/C	C	AI	A	RO	CS	-	AJ	CSJ-35
2-HV-2627B	2/212	A	14" BU	Ctmt Mini-Purge Sup Ctmt Iso Vlv	AO	2X4DB213-1 D-6	O/C	C	C	A	RO	Q	Q	AJ	-

VEGP-2 IST PROGRAM
VALVE TABLE

SYSTEM: 1506 - CTMT AIR PURIF.

VLV ID	CC/PC	CAT	TYPE	FUNCTION	AT	P&ID/COORD	NP	SP	FP	A/P	PI	ET	FST	LT	NOTES/CSJ/ROJ/RR
2-HV-2628A	2/213	A	24" BU	Ctmt Purge Sup Ctmt Iso Vlv	MO	2X4DB213-1 C-7	O/C	C	AI	A	RO	CS	-	AJ	CSJ-36
2-HV-2628B	2/212	A	14" BU	Ctmt Mini-Purge Sup Ctmt Iso Vlv	AO	2X4DB213-1 B-7	O/C	C	C	A	RO	Q	Q	AJ	-
2-HV-2629A	2/212	A	24" BU	Ctmt Purge Sup Ctmt Iso Vlv	MO	2X4DB213-1 C-6	O/C	C	AI	A	RO	CS	-	AJ	CSJ-36
2-HV-2629B	2/212	A	14" BU	Ctmt Mini-Purge Sup Ctmt Iso Vlv	AO	2X4DB213-1 B-6	O/C	C	C	A	RO	Q	Q	AJ	-

VEGP-2 IST PROGRAM
VALVE TABLE

SYSTEM: 1508 - CTMT AIR PURIF.

VLV ID	CC/PC	CAT	TYPE	FUNCTION	AT	P&ID/COORD	NP	SP	FP	A/P	PI	ET	FST	LT	NOTES/CSJ/ROJ/RR
2-1508-U4-012	2/212	A	4" GA	Ctmt Post Accident Purge Exh Ctmt Man Iso Vlv	MA	2X4DB213-1 G-6	C	C	-	P	-	-	-	AJ	-
2-HV-2624A	2/212	A	4" BU	Ctmt Post Accident Purge Exh Ctmt Iso Vlv	MO	2X4DB213-1 G-7	C	C	-	P	RO	-	-	AJ	-
2-HV-2624B	2/212	A	4" BU	Ctmt Post Accident Purge Exh Ctmt Iso Vlv	MO	2X4DB213-1 F-7	C	C	-	P	RO	-	-	AJ	-

VEGP-2 IST PROGRAM
VALVE TABLE

SYSTEM: 1513 - CTMT AIR PURIF.

VLV ID	CC/PC	CAT	TYPE	FUNCTION	AT	P&ID/COORD	NP	SP	FP	A/P	PI	ET	FST	LT	NOTES/CSJ/ROJ/RR
2-1513-U4-001	2/212	AC	3/4" CH	H2 Analyzer Ret to Ctmt Iso CH	SA	2X4DB213-2 B-7	C	O/C	-	A	-	Q RO	-	AJ	ROJ-29
2-1513-U4-002	2/212	AC	3/4" CH	H2 Analyzer Ret to Ctmt Iso CH	SA	2X4DB213-2 B-7	C	O/C	-	A	-	Q RO	-	AJ	ROJ-29
2-HV-2790A	2/212	A	3/4" GL	H2 Analyzer Sup From Ctmt Iso Vlv	SO	2X4DB213-2 E-7	C	O/C	C	A	RO	Q	Q	AJ	-
2-HV-2790B	2/212	A	3/4" GL	H2 Analyzer Sup From Ctmt Iso Vlv	SO	2X4DB213-2 D-7	C	O/C	C	A	RO	Q	Q	AJ	-
2-HV-2791A	2/212	A	3/4" GL	H2 Analyzer Sup From Ctmt Iso Vlv	SO	2X4DB213-2 E-6	C	O/C	C	A	RO	Q	Q	AJ	-
2-HV-2791B	2/212	A	3/4" GL	H2 Analyzer Sup From Ctmt Iso Vlv	SO	2X4DB213-2 C-6	C	O/C	C	A	RO	Q	Q	AJ	-
2-HV-2792A	2/212	A	3/4" GL	H2 Analyzer Sup From Ctmt Iso Vlv	SO	2X4DB213-2 C-7	C	O/C	C	A	RO	Q	Q	AJ	-
2-HV-2792B	2/212	A	3/4" GL	H2 Analyzer Sup From Ctmt Iso Vlv	SO	2X4DB213-2 C-7	C	O/C	C	A	RO	Q	Q	AJ	-
2-HV-2793A	2/212	A	3/4" GL	H2 Analyzer Ret to Ctmt Iso Vlv	SO	2x4DB213-2 B-6	C	O/C	C	A	RO	Q	Q	AJ	-
2-HV-2793B	2/212	A	3/4" GL	H2 Analyzer Ret to Ctmt Iso Vlv	SO	2x4DB213-2 B-6	C	O/C	C	A	RO	Q	Q	AJ	-

VEGP-2 IST PROGRAM
VALVE TABLE

SYSTEM: 1592 - ESF CHILLERS

VLV ID	CC/PC	CAT	TYPE	FUNCTION	AT	P&ID/COORD	NP	SP	FP	A/P	PI	ET	FST	LT	NOTES/CSJ/ROJ/RR
2-1592-U4-188	3/313	C	1" CH	Chilled Water Makeup From Demin Water Sys CH	SA	2X4DB221 F-7	O/C	C	-	A	-	Q	-	-	-
2-1592-U4-192	3/313	C	1" CH	Chilled Water Makeup From Demin Water Sys CH	SA	2X4DB221 C-7	O/C	C	-	A	-	Q	-	-	-
2-PSV-22404	3/313	C	3/4" RV	Demin Water to Exp Tank RV	SA	2X4DB221 G-7	C	O/C	-	A	-	-	-	-	Note 6
2-PSV-22405	3/313	C	3/4" RV	Demin Water to Exp Tank RV	SA	2X4DB221 D-7	C	O/C	-	A	-	-	-	-	Note 6

VEGP-2 IST PROGRAM
VALVE TABLE

SYSTEM: 1609 - RADIATION MONITOR

VLV ID	CC/PC	CAT	TYPE	FUNCTION	AT	P&ID/COORD	NP	SP	FP	A/P	PI	ET	FST	LT	NOTES/CSJ/ROJ/RR
2-HV-12975	2/212	A	1" GA	Sam Line To Air Sam Pan Ctmt Iso Vlv	SO	2X4DB213-2 E-3	O	C	C	A	RO	Q	Q	AJ	~
2-HV-12976	2/212	A	1" GA	Sam Line To Air Sam Pan Ctmt Iso Vlv	SO	2X4DB213-2 E-2	O	C	C	A	RO	Q	Q	AJ	~
2-HV-12977	2/212	A	1" GL	Sam Line Ret From Air Sam Pan Ctmt Iso Vlv	SO	2X4DB213-2 D-2	O	C	C	A	RO	Q	Q	AJ	~
2-HV-12978	2/212	A	1" GL	Sam Line Ret From Air Sam Pan Ctmt Iso Vlv	SO	2X4DB213-2 D-3	O	C	C	A	RO	Q	Q	AJ	~

VEGP-2 IST PROGRAM
VALVE TABLE

SYSTEM: 1901 - WASTE PROC.

VLV ID	CC/PC	CAT	TYPE	FUNCTION	AT	P&ID/COORD	NP	SP	FP	A/P	PI	ET	FST	LT	NOTES/CSJ/ROJ/RR
2-HV-7126	2/212	A	3/4" DI	RCDT Vent/H2 Sup Ctmt Iso Vlv	AO	2X4DB127 G-5	O	C	C	A	RO	Q	Q	AJ	~
2-HV-7136	2/212	A	3" DI	RCDT Pmp Disch Ctmt Iso Vlv	AO	2X4DB127 E-1	O	C	C	A	RO	Q	Q	AJ	~
2-HV-7150	2/212	A	3/4" DI	RCDT Vent/H2 Sup Ctmt Iso Vlv	AO	2X4DB127 G-4	O	C	C	A	RO	Q	Q	AJ	~
2-HV-7699	2/212	A	3" DI	RCDT Pmp Disch Ctmt Iso Vlv	AO	2X4DB127 D-1	O	C	C	A	RO	Q	Q	AJ	~

VEGP-2 IST PROGRAM
VALVE TABLE

SYSTEM: 2301 - FIRE PROT.

VLV ID	CC/PC	CAT	TYPE	FUNCTION	AT	P&ID/COORD	NP	SP	FP	A/P	PI	ET	FST	LT	NOTES/CSJ/ROJ/RR
2-2301-U4-036	2/212	AC	6" CH	Fire Prot Water Sup to Ctmt Iso CH	SA	2X4DB174-4 B-7	C	C	-	P	-	-	-	AJ	-
2-HV-27901	2/212	A	4" GA	Fire Prot Water Sup to Ctmt Iso Vlv	AO	2X4DB174-4 B-7	C	C	C	P	RO	CS	CS	AJ	CSJ-37

VEGP-2 IST PROGRAM
VALVE TABLE

SYSTEM: 2401 - SERVICE AIR

VLV ID	CC/PC	CAT	TYPE	FUNCTION	AT	P&ID/COORD	NP	SP	FP	A/P	PI	ET	FST	LT	NOTES/CSJ/ROJ/RR
2-2401-U4-034	2/212	AC	4" CH	Ser Air Sup Inbrd Ctmt Iso CH	SA	2X4DB186-1 D-3	C	C	~	P	~	~	~	AJ	~
2-2401-U4-184	2/212	AC	1.50" CH	Breathing Air Sup Ctmt Iso CH	SA	2X4DB186-1 C-3	C	C	~	P	~	~	~	AJ	~
2-2401-U4-211	2/212	A	1.50" GA	Breathing Air Sup Ctmt Iso Vlv	MA	2X4DB186-1 C-3	C	C	~	P	~	~	~	AJ	~
2-HV-9385	2/212	A	4" GA	Ser Air Sup Obrd Ctmt Iso Vlv	AO	2X4DB186-1 D-4	C	C	C	P	RO	Q	Q	AJ	~

VEGP-2 IST PROGRAM
VALVE TABLE

SYSTEM: 2402 - N2 TO ACCUM. & STEAM

VLV ID	CC/PC	CAT	TYPE	FUNCTION	AT	P&ID/COORD	NP	SP	FP	A/P	PI	ET	FST	LT	NOTES/CSJ/ROJ/RR
2-2402-U4-017	2/212	AC	1" CH	Nitrogen Sup to Accums, Inbrd Ctmt Iso CH	SA	2X4DB120 G-1	C	C	-	A	-	RO	-	AJ	ROJ-30
2-HV-8880	2/212	A	1" GL	Nitrogen Sup To Accums, Obrd Ctmt Iso Vlv	AO	2X4DB120 G-1	O/C	C	C	A	RO	Q	Q	AJ	-

VEGP-2 IST PROGRAM
VALVE TABLE

SYSTEM: 2420 - INSTRUMENT AIR

VLV ID	CC/PC	CAT	TYPE	FUNCTION	AT	P&ID/COORD	NP	SP	FP	A/P	PI	ET	FST	LT	NOTES/CSJ/ROJ/RR
2-2420-U4-049	2/212	AC	2" CH	Inst Air Sup Inbrd Ctmt Iso CH	SA	2X4DB186-4 A-7	O	C	-	A	-	RO	-	AJ	ROJ-31
2-HV-9378	2/212	A	2" GL	Inst Air Sup to Ctmt Obrd Ctmt Iso Vlv	AO	2X4DB186-4 A-7	O	C	C	A	RO	CS	CS	AJ	CSJ-38

VEGP-2 IST PROGRAM
VALVE TABLE

SYSTEM: 2702 - PASS

VLV ID	CC/PC	CAT	TYPE	FUNCTION	AT	P&ID/COORD	NP	SP	FP	A/P	PI	ET	FST	LT	NOTES/CSJ/ROJ/RR
2-HV-8208	2/212	A	1" GL	PASS Liquid Sam Ret Ctmt Iso Vlv	SO	2X4DB110 F-8	C	C	C	A	RO	Q	Q	AJ	~
2-HV-8209	2/212	A	1" GL	PASS Liquid Sam Ret Ctmt Iso Vlv	SO	2X4DB110 F-7	C	C	C	A	RO	Q	Q	AJ	~
2-HV-8211	2/212	A	1" GL	PASS Gaseous Sam Ret Ctmt Iso Vlv	SO	2X4DB110 C-8	C	C	C	A	RO	Q	Q	AJ	~
2-HV-8212	2/212	A	1" GL	PASS Gaseous Sam Ret Ctmt Iso Vlv	SO	2X4DB110 C-7	C	C	C	A	RO	Q	Q	AJ	~

Vogtle IST Program Notes

1. Valve is exercised to the open position required to perform its safety function in conjunction with quaterly 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. Deleted

4. Deleted

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, 1995 edition.

COLD SHUTDOWN JUSTIFICATION

CSJ-1

SYSTEM: Reactor Coolant-System No. 1201

VALVE(S): 1(2)-1201-HV-0442A, 1(2)-1201-HV-0442B, 1(2)-1201-HV-8095A, 1(2)-1201-HV-8095B, 1(2)-1201-HV-8096A, 1(2)-1201-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 4.2.1)

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-2

SYSTEM: Reactor Coolant-System No. 1201

VALVE(S): 1(2)-1201-HV-8701A, 1(2)-1201-HV-8701B, 1(2)-1201-HV-8702A, 1(2)-1201-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 4.2.1)

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-3

SYSTEM: Reactor Coolant-System No. 1201

VALVE(S): 1(2)-1201-PV-0455A, 1(2)-1201-PV-0456A

CATEGORY: B

CLASS: 1

FUNCTION: These valves open to prevent low-temperature overpressurization of the RCS. The opening of these valves would prevent the opening of the pressurizer safety valves during relatively mild plant transients that are beyond the capacity of the pressurizer sprays. They also can be used for venting non-condensibles from the pressurizer as well as provide an alternate letdown path during emergency boration if normal letdown is unavailable.

QUARTERLY TEST REQUIREMENT: Exercise, stroke time and fail-safe test (ISTC 4.2.1)

COLD SHUTDOWN JUSTIFICATION: The PORVs are controlled by the pressurizer pressure control system which automatically opens the valves at a preset pressure. This set pressure is established to limit undesirable opening of the spring-loaded pressurizer safety valves under design load reject conditions. To exercise the PORVs during normal operation, the associated PORV block valve must first be closed to maintain the RCS pressure boundary. The PORVs have shown a tendency to stick open, or not re-seat properly, when exercised during normal operation with the block valve closed, due to the thermal expansion associated with normal operating temperature versus the ambient temperature present at cold shutdown when valve maintenance and setup is performed. If a valve sticks open during normal operation, then the associated block valve must be closed and de-energized in accordance with Technical Specification requirements and the valve is thus not available for pressure control should it be needed.

The valves can only be repaired during cold shutdown due to personnel safety concerns associated with operating temperature and pressure. Therefore the added safety benefit of exercising quarterly during normal operation is not warranted when compared to the negative aspects of a valve failing to re-close or re-seat properly. (Also reference NRC GL 90-06). Exercising at normal operating conditions is not required to determine the ability of the valves to

open and provide pressure control. These are solenoid valves and since electromagnetism, not RCS pressure, provides the motive force to open the valve, exercising at cold shutdown adequately confirms the valve's ability to open and perform it's pressure control function. This is consistent with the guidance found in NRC NUREG-1482, section 4.4.1.

QUARTERLY PARTIAL STROKE TESTING: None

COLD SHUTDOWN TESTING: Exercise, stroke time and fail-safe test. These valves will be tested prior to them being required for cold overpressurization protection as determined by the Technical Specifications.

COLD SHUTDOWN JUSTIFICATION

CSJ-4

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 4.5.1)

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-5

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 4.5.1)

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-6

SYSTEM: Safety Injection-System No. 1204

VALVE(S): 1(2)-1204-HV-8802A, 1(2)-1204-HV-8802B

CATEGORY: B

CLASS: 2

FUNCTION:	These valves open for hot leg injection.
QUARTERLY TEST REQUIREMENT:	Exercise and stroke time (ISTC 4.2.1)
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-7

SYSTEM: Safety Injection-System No. 1204

VALVE(S): 1(2)-1204-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 4.2.1)

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-8

SYSTEM: Safety Injection-System No. 1204

VALVE(S): 1(2)-1204-HV-8809A, 1(2)-1204-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 4.2.1)
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-9

SYSTEM: Safety Injection - System No. 1204

VALVE(S): 1(2)-1204-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 4.2.1)

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-10

SYSTEM: Safety Injection-System No. 1204

VALVE(S): 1(2)-1204-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 4.2.1)
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-11

SYSTEM: Safety Injection-System No. 1204

VALVE(S): 1(2)-1204-HV-8840

CATEGORY: B

CLASS: 2

FUNCTION: This valve open for hot leg injection.

QUARTERLY TEST REQUIREMENT: Exercise and stroke time (ISTC 4.2.1)

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-12

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 4.5.1)

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: These valves will be partial flow exercised quarterly.

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-13

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 4.5.1)
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:	These valves will be partial flow exercised quarterly.
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-14

SYSTEM: Residual Heat Removal - System No. 1205

VALVE: 1(2)-1205-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 4.2.1)
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-15

SYSTEM: Residual Heat Removal - System No. 1205

VALVE: 1(2)-1205-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 4.2.1)

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-16

SYSTEM: Chemical and Volume Control - 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 4.5.1)

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-17

SYSTEM: Chemical and Volume Control-System No. 1208

VALVE(S): 1(2)-1208-HV-8100, 1(2)-1208-HV-8112

CATEGORY: A

CLASS: 2

FUNCTION: These valves close to isolate containment penetration 49.

QUARTERLY TEST REQUIREMENT: Exercise and stroke time (ISTC 4.2.1)

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-18

SYSTEM: Chemical and Volume Control-System No. 1208

VALVE(S): 1(2)-1208-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 4.2.1)

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-19

SYSTEM: Chemical and Volume Control-System No. 1208

VALVE(S): 1(2)-1208-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 4.2.1)

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-20

SYSTEM: Chemical and Volume Control-System No. 1208

VALVE(S): 1(2)-1208-HV-8152, 1(2)-1208-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 4.2.1)

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-21

SYSTEM: Chemical and Volume Control - System No. 1208

VALVE(S): 1(2)-1208-HV-8508A, 1(2)-1208-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 (ISTC4.2.1)

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-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-22

SYSTEM: Chemical and Volume Control-System No. 1208

VALVE(S): 1(2)-1208-LV-0112B, 1(2)-1208-LV-0112C

CATEGORY: B

CLASS: 2

FUNCTION: These valves close to isolate the volume control tank.

QUARTERLY TEST REQUIREMENT: Exercise and stroke time (ISTC 4.2.1)

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-23

SYSTEM: Chemical and Volume Control-System No. 1208

VALVE(S): 1(2)-1208-LV-0112D, 1(2)-1208-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 4.2.1)

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-24

SYSTEM: Auxiliary Component Cooling Water - System No. 1217

VALVE(S): 1(2)-1217-HV-2041, 1(2)-1217-HV-19051, 1(2)-1217-HV-19053, 1(2)-1217-HV-19055, 1(2)-1217-HV-19057

CATEGORY: B

CLASS: 3

FUNCTION: These valves isolate if a thermal barrier rupture occurs.

QUARTERLY TEST REQUIREMENT: Exercise and stroke time (ISTC 4.2.1)

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-25

SYSTEM: Auxiliary Component Cooling Water-System No. 1217

VALVE(S): 1(2)-1217-HV-1974, 1(2)-1217-HV-1975, 1(2)-1217-HV-1978, 1(2)-1217-HV-1979

CATEGORY: A

CLASS: 2

FUNCTION: These valves close to perform a containment isolation function.

QUARTERLY TEST REQUIREMENT: Exercise and stroke time (ISTC 4.2.1)

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-26

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 4.5.1)

BASIS FOR 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 quarterly during the turbine-driven AFW pump test.

ALTERNATE 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-28.

COLD SHUTDOWN JUSTIFICATION

CSJ-27

SYSTEM: Main Steam-System No. 1301

VALVE(S): 1(2)-1301-HV-3006A, 1(2)-1301-HV-3006B, 1(2)-1301-HV-3016A, 1(2)-1301-HV-3016B, 1(2)-1301-HV-3026A, 1(2)-1301-HV-3026B, 1(2)-1301-HV-3036A, 1(2)-1301-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 4.2.1)

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 address partial exercising testing of the MSIVs in paragraph 4.2.4. 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 4.2.2 (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-28

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 4.5.1)

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-29

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 4.5.1)

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: These valves will be partial flow exercised during quarterly pump testing.

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-30

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 4.5.1)

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-31

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 4.5.1)

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: Partial or full flow is passed through these valves during various modes of plant operation.

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-32

SYSTEM: Auxiliary Feedwater - System No. 1302

VALVE(S): 1(2)-1302-HV-15196, 1(2)-1302-HV-15197, 1(2)-1302-HV-15198, 1(2)-1302-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 4.2.1)

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-33

SYSTEM: Condensate and Feedwater - System No. 1305

VALVE(S): 1(2)-1305-FV-0510, 1(2)-1305-FV-0520, 1(2)-1305-FV-0530, 1(2)-1305-FV-0540

CATEGORY:B

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 4.2.1)

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-34

SYSTEM: Condensate and Feedwater - System No. 1305

VALVE(S): 1(2)-1305-HV-5227, 1(2)-1305-HV-5228, 1(2)-1305-HV-5229, 1(2)-1305-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 4.2.1)

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 4.2.2 (b) requires a partial exercise test quarterly if practical. The 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, 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 TEST: Exercise, stroke time, and fail-safe test

COLD SHUTDOWN JUSTIFICATION

CSJ-35

SYSTEM: Containment Air Purification and Cleanup - System No. 1505

VALVE(S): 1(2)-1505-HV-2626A, 1(2)-1505-HV-2627A

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-36

SYSTEM: Containment Air Purification and Cleanup-System No. 1506

VALVE(S): 1(2)-1506-HV-2628A, 1(2)-1506-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-37

SYSTEM: Fire Protection Water - System No. 2301

VALVE(S): 1(2)-2301-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 4.2.1)

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-38

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 4.2.1)

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 nonconservative 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 Cold Shutdown Justification CSJ-20. 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

REFUELING OUTAGE JUSTIFICATION

ROJ-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 4.5.1)

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: None

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-2

SYSTEM: Reactor Coolant-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 REQUIREMENTS: Reverse flow closure (ISTC 4.5.1)

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 nonintrustive 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-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 4.5.1)

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-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 4.5.1)

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-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 4.5.1)

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, section 4.1.2.

REFUELING OUTAGE JUSTIFICATION

ROJ-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 4.5.1)

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 None

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 each valve will be confirmed. As endorsed by the NRC in NUREG-1482 paragraph 4.1.2, reverse flow closure will be confirmed by non-intrusive testing techniques during full flow testing.

REFUELING OUTAGE JUSTIFICATION

ROJ-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 4.5.1)

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 (paragraph 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-7

Continued

Reverse flow closure will be demonstrated by the leakage test, required by Technical Specifications, during startup after a refueling outage.

REFUELING OUTAGE JUSTIFICATION

ROJ-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 4.5.1)

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; however valves are partial exercised each cold shutdown utilizing normal flow from the RHR pumps.

ALTERNATE TESTING: The use of non-intrusive check valve testing techniques is endorsed in NUREG-1482 (paragraph 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-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 4.5.1)

BASIS FOR JUSTIFICATION: The only possible flow test during normal operation is during pump testing using the 3-inch minflow 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: Yes, in conjunction with quarterly pump testing on minimum flow recirculation.

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-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 4.5.1)

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: Yes, in conjunction with quarterly pump testing on minimum flow recirculation

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-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 4.5.1)

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.

QUARTERLY PARTIAL STROKE TESTING: None

ALTERNATE TESTING: Reverse flow closure will be confirmed at startup, after a refueling outage, by the performance of the Tech. Spec. required pressure isolation valve leakage test.

REFUELING OUTAGE JUSTIFICATION

ROJ-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 4.5.1)

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).

QUARTERLY PARTIAL EXERCISE: None

COLD SHUTDOWN 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 at each refueling outage prior to startup or if the plant has been at cold shutdown for 72 hours or more and if the leakage testing has not been performed in the previous 9 months.

REFUELING OUTAGE JUSTIFICATION

ROJ-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 4.5.1)

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-14

SYSTEM: RHR-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 4.5.1)

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: None

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. This relief request complies with the alternative to full flow testing of check valves as described in Position 2 of NRC Generic Letter 89-04.

REFUELING OUTAGE JUSTIFICATION

ROJ-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 4.5.1)

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 quarterly during pump testing.

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

REFUELING OUTAGE JUSTIFICATION

ROJ-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 4.5.1)

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.

PARTIAL QUARTERLY EXERCISE: None

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.

This refueling outage justification complies with the alternative to full flow testing of check valves as described in Position 2 of NRC Generic Letter 89-04 for extending the disassembly frequency have been reviewed and extension to every other outage is justified.

REFUELING OUTAGE JUSTIFICATION

ROJ-17

SYSTEM: Chemical and Volume Control-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 4.5.1)

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-18

SYSTEM: Chemical and Volume Control-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 4.5.1)

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-19

SYSTEM: Chemical and Volume Control-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 4.5.1)

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, paragraph 4.1.4.

REFUELING OUTAGE JUSTIFICATION

ROJ-20

SYSTEM: Chemical and Volume Control - System 1208

VALVE: 1(2)-1208-U6-124

CATEGORY: C

CLASS: 2

FUNCTION: Isolate potential leakage path outside containment

QUARTERLY TEST REQUIREMENT: Reverse flow closure (ISTC 4.5.1)

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 complies with Position 3 of NRC Generic Letter 89-04.

REFUELING OUTAGE JUSTIFICATION

ROJ-21

SYSTEM: Chemical and Volume Control - 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 4.5.1)

BASIS FOR JUSTIFICATION: During normal operation CVCS is aligned for normal charging. Therefore, only a partial-stroke exercise test is possible during power operation. 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: Yes, these valves will be partial flow exercised quarterly

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-22

SYSTEM: Chemical and Volume Control-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 recirculation to the RWST.

QUARTERLY TEST REQUIREMENT: Forward flow exercise and reverse flow closure (ISTC 4.5.1)

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 exercising by operating one charging pump would inject refueling or RHR water into the RCS and would affect RCS boron concentration which could result in a plant shutdown.

There are no provisions for utilizing flow, pressure or any other system parameters as an indication of reverse flow closure.

PARTIAL QUARTERLY EXERCISE: None, partial flow exercised during cold shutdown.

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 by non-intrusive check valve testing each refueling outage. If non-intrusive testing cannot determine closure, the valve will be disassembled and manually exercised each refueling outage.

REFUELING OUTAGE JUSTIFICATION

ROJ-23

SYSTEM: Chemical and Volume Control-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 4.5.1)

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 exercising by operating one charging pump would inject refueling or RHR water into the RCS and would affect RCS boron concentration which could result in a plant shutdown.

PARTIAL QUARTERLY EXERCISE: None, partial flow exercised during cold shutdown.

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-24

SYSTEM: Chemical and Volume Control-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 4.2.1)

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-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 4.5.1)

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-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 4.5.1)

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-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 4.5.1)

BASIS FOR JUSTIFICATION: There are no system provisions for utilizing flow or pressure as an indication of re verse flow closure.

PARTIAL QUARTERLY EXERCISE: These valves are partial forward flow exercised quarterly during the turbine-driven AFW pump test.

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-26.

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 alternative to full flow testing of check valves as described in Position 2 of NRC Generic Letter 89-04.

REFUELING OUTAGE JUSTIFICATION

ROJ-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 4.5.1)

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: None

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.

REFUELING OUTAGE JUSTIFICATION

ROJ-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 4.5.1)

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, paragraph 4.1.4.

REFUELING OUTAGE JUSTIFICATION

ROJ-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 4.5.1)

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.

QUARTERLY PARTIAL STROKE TESTING: 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, paragraph 4.1.4.

REFUELING OUTAGE JUSTIFICATION

ROJ-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 4.5.1)

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.

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GENERAL RELIEF REQUEST

RR-G-1

SYSTEMS: All in Scope of IST Program

VALVES: All in Scope of IST Program

PUMPS: All in Scope of IST Program

CLASS: 1, 2 and 3

TEST REQUIREMENT: The version of 10CFR50 in effect on May 31, 1996, paragraph 50.55a(b)(2) specifies the applicable Code to be the ASME XI, 1988 Addenda through 1989 Edition. The 1989 Edition of ASME XI references OM part 6 and 10 for inservice pump and valve testing respectfully. Paragraph 50.55a(b)(2)(viii) of the CFR specifies the Code applicable to inservice pump and valve testing to be the ASME/ANSI part 6 and ASME/ANSI part 10 of the OMa-1988 Addenda to the OM-1987 Edition.

BASIS FOR RELIEF: The ASME/ANSI OM document was issued as a Code with the ASME OM Code-1990 Edition. This edition was amended with the OMa Code-1991 Addenda, the OMb Code-1992 Addenda, and the OMc Code-1994 Addenda. The ASME OM Code-1995 Edition was issued in early 1995. With each addenda and edition of the ASME OM Code, the ASME OM Code Committee has included updated inservice testing requirements based on improved knowledge, operating history and experience and changes in testing technology. Beginning with the ASME OM Code-1990 Edition, the format of the document was also changed to read like a Code instead of a standard as it was initially drafted. Therefore, application of later versions of the ASME OM Code, than specified in 10CFR50, should enhance the quality of the IST Program.

ALTERNATE TESTING: The ASME OM Codes utilized for update of the Vogtle Inservice Testing Program shall be:

IST of Valves (except safety/relief valves) - ASME OM Code-1990 Edition

IST of Pumps - ASME OM Code-1990 Edition

IST of Safety/Relief Valves - ASME OM Code 1995 Edition (ASME OM Code-1995 Edition, Appendix I, augments the rules of Subsection ISTC 4.4.)

The NRC previously approved use of the above referenced Codes in a letter dated November 27, 1996. This relief request is identical to RR-G-1 included in the IST Valve Program.

GENERAL RELIEF REQUEST

RR-G-2

SYSTEMS: All in Scope of Unit 2 IST Program

VALVES: All in Scope of Unit 2 IST Program

PUMPS: All in Scope of Unit 2 IST Program

CLASS: 1, 2 and 3

TEST REQUIREMENT: The version of 10CFR50 in effect on May 31, 1996, paragraph 50.55a(f)(4)(ii), specifies that inservice testing to verify operational readiness of pumps and valves required for safety, conducted during successive 120-month intervals must comply with the requirements of the latest edition and addenda of the Code incorporated by reference in paragraph 10CFR50.55a(b) 12 months prior to the start of the 120-month interval.

BASIS FOR RELIEF: The commercial operation date for Vogtle Unit 1 was May 31, 1987. The commercial operation date for Vogtle Unit 2 was May 20, 1989. Maintaining both units on the same interval schedule allows both IST programs to be developed utilizing the same edition of the applicable Codes, will make it easier for involved personnel to become familiar with the Code requirements, will ensure a greater degree of consistency for IST between the units, and will reduce the cost associated with surveillance procedure revisions for the program update and for maintenance of the program documents.

ALTERNATE TESTING: Update the Vogtle Nuclear Plant Unit 2 IST Program concurrent with the Unit 1 second 10-year interval IST Program update due on May 31, 1997. The Unit 2 IST Program will be updated concurrent with the Unit 1 IST Program in accordance with the applicable regulations for the remainder of the plant life.

The NRC previously approved use of the above referenced Codes in a letter dated November 27, 1996. This relief request is identical to RR-G-1 included in the IST Valve Program.