Florida Power & Light Company, 6501 S. Ocean Drive, Jensen Beach, FL 34957

September 11, 2007

L-2007-144
10 CFR 50.4
10 CFR 50.55a

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

Re: St. Lucie Units 1 and 2
Docket Nos. 50-335 and 50-389
Fourth Ten-Year Interval
In-Service-Test Program Submittal

The fourth ten-year in-service-test (IST) interval for St. Lucie Units 1 and 2 begins on February 11, 2008 and ends on February 10, 2018. Pursuant to the provisions of 10 CFR 50.55a(f)(4)(ii), the enclosed program outlines the IST plans for St. Lucie Units and 2 based on the requirements of of the American Society of Mechanical Engineers (ASME) OM Code 2001 Edition through 2003 Addenda (ASME OM Code 2001/2003a). The IST program plan includes Mandatory Appendix II of the ASME OM Code 2001 Edition through 2002 Addenda (as modified by 10CFR50.55a(b)(3)(iv)(A), (B), and (D)) for check valve condition monitoring activities.

This submittal also contains relief requests for the fourth ten- year interval requiring NRC approval in accordance with 10 CFR 50.55a(a)(3)(i), 50.55a(a)(3)(ii), and 50.55a(f)(5)(iii), for relief from, or as alternatives to, the requirements of the ASME OM Code.

The details of the 10CFR 50.55a relief requests are provided in Attachment 1. The IST Fourth Ten-Year IST Program is provided in Attachment 2.

Please contact Ken Frehafer at (772) 467-7748 if there are any questions on this submittal.

Very truly yours,

Gordon L. Johnston
Site Vice President
St. Lucie Plant

Attachments

GLJ/KWF

A047

NRR

Pump Relief Request – PR-01
Charging Pump Vibration Frequency Response Range
(Page 1 of 3)

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

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

1. ASME Code Component(s) Affected

Pump	Description	Class	Category	Unit
1CHG 1A	Reactor Coolant Charging Pump 1A	2	Group A	1
1CHG 1B	Reactor Coolant Charging Pump 1B	2	Group A	1
1CHG 1C	Reactor Coolant Charging Pump 1C	2	Group A	1
2CHG 2A	Reactor Coolant Charging Pump 2A	2	Group A	2
2CHG 2B	Reactor Coolant Charging Pump 2B	2	Group A	2
2CHG 2C	Reactor Coolant Charging Pump 2C	2	Group A	2

2. Applicable Code Edition and Addenda

ASME OM Code 2001 Edition through 2003 Addenda

3. Applicable Code Requirement

ISTB-3510(e), *Frequency Response Range*. The frequency response range of the vibration-measuring transducers and their readout system shall be from one-third minimum pump shaft rotational speed to at least 1000 Hz.

4. Reason for Request

The reactor coolant charging pumps are positive displacement pumps that operate at approximately 205-210 rpm which equates to a rotational frequency of 3.41 Hz. The one-third minimum speed frequency response required for the vibration instrumentation correlates to 1.13 Hz (68 cpm).

The equipment used to measure vibration at St. Lucie is the Computational Systems Inc. (CSI) model 2120 Machinery Analyzer with Wilcoxon model 793 accelerometer probes. The CSI 2120 Machinery Analyzer integrator frequency response is essentially flat down to DC[1]. While the Wilcoxon model 793 accelerometer probe frequency response range meets the Code accuracy range requirement of ± 5.0% in the range from 1.5 – 5,000 Hz, the frequency response drops to only +/-10% for frequencies between 1.0 – 1.5 Hz. As a result the vibration instrumentation meets

Pump Relief Request – PR-01
(Page 2 of 3)

all of the Code accuracy requirements down to 1.5 Hz, but does not meet the frequency response accuracy of less than +/-5.0% for between 1.13 and 1.5 Hz, which is the low end of the one-third minimum speed requirement of ISTB-3510(e).

In addition to the physical limitations of the available instrumentation, calibration of the instrumentation can only be performed to a minimum frequency of only 2 Hz. The provider of calibration services for St. Lucie is unable to qualify calibration to frequencies less than 2 Hz. This is due to the unavailability of suitable vibration measurement standards for performing the calibration. The NIST Calibration Service Users Guide lists the lowest frequency NIST standard pickup (24010C) available is calibrated at 2 Hz. FPL Quality Assurance Program requires this instrumentation to be calibrated and traceable to NIST standards

This frequency response range of this instrumentation, while not meeting the extreme low end of the readout requirements of ISTB-3510(e) adequately envelops all potential noise contributors that could indicate degradation of the charging pumps. The instrumentation is fully qualified to measure all expected synchronous vibration levels.

Additionally, this test equipment will be used for measuring the vibrational frequencies which would equate to that of the pumps one-third running speed. Qualification of the accuracy of the readings at these frequencies is considered unnecessary and would impose undue hardship. This is considered acceptable as there are virtually no mechanical degradation scenarios where only a sub-synchronous vibration component would develop on the charging pumps. For example:

a) Oil whirl, which presents itself at frequencies below the rotational frequency of the pump (i.e. 0.38X - 0.48X) is not applicable to a horizontal, triplex, reciprocating pump.
b) A light rub / impact could generate a vibrational component at a frequency below the pump's rotational frequency (e.g. 0.5X (102.5 cpm)), but would also usually generate a harmonic vibrational components that would present as either integer and half-integer multiples of the running speed of the pump. (e.g. a light rub vibrations occurring at 0.5X, where X equals the rotational frequency of the pump, could also produce a vibrational component that could be measured at integer multiples of the original frequency, i.e. 1X, 1.5X, 2X, etc), and would thus be identified in the calibrated range of the equipment.
c) A heavy rub generates increased integer values of multiple running speed components, as well as processing the 1X phase measurement. In either case the overall vibration level would still show an increase from both the attenuated sub-synchronous and 1X vibration components as well as the higher harmonic vibration components.

Pump Relief Request – PR-01
(Page 3 of 3)

d) Looseness in the power train would most likely be identified through the measurement of a vibrational component(s) found at frequencies which are multiples of the pumps rotational frequency. (i.e. 1X and 2X where X equals the rotational frequency of the pump).

Based on the above information, the use of Computational Systems Inc. (CSI) model 2120 Machinery Analyzer with Wilcoxon model 793 accelerometer probes provides sufficiently reliable data to identify changes from baseline readings to indicate possible problems with the pumps.

5. Proposed Alternative and Basis for Use

The measurement of the vibration associated with the Reactor Coolant Charging Pumps 1A, 1B, 1C, 2A, 2B, and 2C will be taken utilizing the Computational Systems Inc. (CSI) model 2120 Machinery Analyzer with Wilcoxon model 793 accelerometer probes, or equivalent. Calibration of the instrumentation will be qualified to a minimum frequency of only 2 Hz.

These pumps as a result of their design are not susceptible to degradation mechanisms that would only manifest themselves in the unmonitored/non-calibrated range (1.13 to 2 Hz) without also becoming prevalent in the monitored range (2-1000 Hz)

6. Duration of Proposed Alternative

This proposed alternative will be utilized for the entire 4th 120 month interval.

7. Precedents

This relief request was initially approved as Relief Request PR-07 on a 1 year interim basis by Safety Evaluation and letter dated March 16, 1999, for the third ten-year interval at St. Lucie Plant 1 & 2. Then on December 7, 2000, following the purchase of equipment with greater low end accuracy, this Relief Request again identified as PR-07, was approved for the remainder of the third ten-year interval at St. Lucie Plant 1 & 2.

(1) – DC stands for 'Direct Current', and relates to the description of the CSI 2120 integrator frequency in that when there is no vibration, there is no sinusoidal component to the electrical signal generated, which is what would be found with the measurement of direct current, as apposed to an alternating current.

Pump Relief Request – PR-02
Hydrazine Pump Vibration Frequency Response Range
(Page 1 of 3)

Proposed Alternative in Accordance with 10 CFR 50.55a(f)(5)(iii)

Inservice Testing Impracticality

1. **ASME Code Component(s) Affected**

Pump	Description	Class	Category	Unit
2HYD 2A	Hydrazine Pump 2A	2	Group B	2
2HYD 2B	Hydrazine Pump 2B	2	Group B	2

2. **Applicable Code Edition and Addenda**

ASME OM Code 2001 Edition through 2003 Addenda

3. **Applicable Code Requirement**

ISTB-5323(d) and (e) - Comprehensive Test Procedure.

(d) Vibration (displacement or velocity) shall be determined and compared with corresponding reference values. Vibration measurements are to be broad band (unfiltered). If velocity measurements are used, they shall be peak. If displacement amplitudes are used, they shall be peak-to-peak.

(e) All deviations from the reference values shall be compared with the ranges of Table ISTB-5300-1 or Table ISTB-5300-2, as applicable, and corrective action taken as specified in ISTB-6200. For reciprocating positive displacement pumps, vibration measurements shall be compared to the relative criteria shown in the alert and required action ranges of Table ISTB-5300-1 [2]

4. **Impracticality of Compliance**

The hydrazine pumps are reciprocating positive displacement pumps which are characterized as metering pumps. These pump operate at extremely slow speed (2HYD 2A at 39 rpm and 2HYD 2B at 37 rpm), which equates to a rotational frequency of 0.65 Hz. In accordance with the Code, the required low limit of the frequency response for the vibration instruments would be one third of this or 0.21 Hz. Portable instruments satisfying this requirement are commercially unavailable. The low frequency vibration instrumentation presently in use at St. Lucie is the Computational Systems Inc. (CSI) model 2120 Machinery Analyzer with Wilcoxon model 793 accelerometer probes.

Pump Relief Request – PR-02
(Page 2 of 3)

While the Wilcoxon model 793 accelerometer probe frequency response range meets the Code accuracy range requirement of ± 5.0% in the range from 1.5 – 5,000 Hz, the frequency response drops to only +/-10% for frequencies between 1.0 – 1.5 Hz. Below 1.0 Hz, the frequency response is not provided by the vendor. For these reason, vibration readings taken, even with the low frequency probe, are essentially meaningless and of no value in identifying degradation of these pumps. Furthermore, the classical analysis of rotating components upon which the Code is based is not readily adaptable to slow moving components such as these positive displacement pumps.

These pumps are classified as Group B pumps per ISTB-2000. While these pumps which are designed and built for continuous operation, they are only operated 1 to 2 hours per year. That calculates to less than 5000 cycles between comprehensive testing when the measurement of the pumps vibration is called for. The mechanisms of wear and degradation of rotating machinery are time and cycle dependant and, in this case, the number of repetitive wearing actions (cycles) is small both in frequency and absolute numbers. As a result, little degradation is expected with respect to vibration performance between testing periods. Thus, the probability of any significant pump deterioration over the plant's lifetime is extremely small.

5. Burden Caused by Compliance

The performance of vibrational testing with the equipment currently commercially available, is not capable of measuring the pumps vibrational response to accuracies as required by the Code. Vibrational testing at the available accuracy limits with the currently commercially available equipment would not be expected to detect pump degradation as these pumps. These pumps, classified as Group B pumps, operate so infrequently that wear due to operation is not expected during the plants life time, making the effort of taking vibrational measurement effectively meaningless.

6. Proposed Alternative and Basis for Use

In lieu of measuring pump vibration on a comprehensive biennial frequency, these pumps will be maintained and inspected in accordance with the St. Lucie Preventative Maintenance Program that reflects the recommendations of the pump's manufacturer (Union Pump Co.) dated May 24, 1999. Preventative Maintenance, at a minimum, includes the periodic changing of the crankcase lubricating oil and oil analyses to identify significant wearing of internals, disassembly and inspection as well as the verification of bolting torque . This program is adequate for determining pump degradation that could impact operability and reliability.

Pump Relief Request – PR-02
(Page 3 of 3)

7. **Duration of Proposed Alternative**

This proposed alternative will be utilized for the entire 4th 120 month interval.

8. **Precedents**

This relief request was previously approved for the third ten-year interval at St. Lucie Plant 1 & 2 as Relief Request PR-08, by Safety Evaluation and Letter dated March 16, 1999.

Pump Relief Request – PR-03
Hydrazine Pump Flow Testing
(Page 1 of 3)

Proposed Alternative in Accordance with 10 CFR 50.55a(f)(5)(iii)

Inservice Testing Impracticality

1. **ASME Code Component(s) Affected**

Pump	Description	Class	Category	Unit
2HYD 2A	Hydrazine Pump 2A	2	Group B	2
2HYD 2B	Hydrazine Pump 2B	2	Group B	2

2. **Applicable Code Edition and Addenda**

ASME OM Code 2001 Edition through 2003 Addenda

3. **Applicable Code Requirement**
ISTB-5322 – Group B Test Procedure, section (b), The flow rate shall be determined and compared to its reference value.

4. **Impracticality of Compliance**

The hydrazine pumps are reciprocating positive displacement pumps with variable speed control. They are classified as metering pumps and are designed to accurately displace a predetermined volume of liquid in a specific period of time. The pump has a single plunger and makes only one suction and one discharge stroke during each cycle (shaft rotation).

The pumps operate at a very slow speed (2HYD 2B is tested at 37 cpm) to supply the Technical Specification required hydrazine flowrate of 0.71 to 0.82 gpm. [TSR 4.6.2.2] Due to the simplified design of these pumps, instantaneous flow is continuously accelerating and decelerating - following an oscillating waveform. Each cycle of the pump is approximately 1.6 seconds in duration with no flow produced during the pumps' 0.8 second suction stroke. The installed flowrate instrumentation utilizes a differential pressure orifice located in the suction line common to both pumps. Due to the characteristic oscillating flowrate, flow through this orifice pulsates sharply with each pump stroke resulting in erratic flowrate readings. The flow orifice also senses pressure feedback during each pump stroke cycle as a result of echoes of the pressure pulsation produced by the pump stroke which are reflected back to the flow element by the system piping and valves. The characteristic oscillating flowrate also makes it impractical to dampen using standard dampening devices.

Pump Relief Request – PR-03
(Page 2 of 3)

Attempts to use various techniques in averaging the indicated flowrate readings were proven to be inconsistent and inaccurate when compared to actual flow.

It was therefore determined that as a result of the pumps flow characteristics combined with the design limitation of the installed flow instrumentation, flow measurements to the requirements of ISTB-5322 can not be obtained under the current configuration.

As an alternative to the use of the installed instrumentation, the flowrates of the pumps can be determined through collection of the pumps' output in a container of known volume over a measured period of time. This method has been verified accurate through a comparison of the measured results to the correlation between pump speed and piston displacement.

5. Burden Caused by Compliance

While the method of verifying the pumps flowrate through the time dependent collection of the pumps discharge into a container of known volume is proven to be accurate, it is undesirable to perform this measurement on the Group B quarterly frequency based on the personnel hazards associated with testing. Hydrazine is a hazardous, highly flammable liquid with cumulative toxic effects when absorbed through the skin, inhaled or ingested. It has also been identified as a known carcinogen.

6. Proposed Alternative and Basis for Use

For this reason, it is proposed to only perform the IST acceptable measurement of flow during the comprehensive pump test which is performed on a biennial frequency, during refueling outages. Measuring the flowrate as described above during each refueling outage in conjunction with the sites application of it's Preventative Maintenance Program that reflects the recommendations of the pump's manufacturer (Union Pump Co.) dated May 24, 1999. The preventative maintenance performed on these pumps per the manufactures recommendations consists of, at a minimum, the periodic changing of the crankcase lubrication oil and oil analyses to identify significant wearing of internals, disassembly and inspection as well as the verification of bolting torque. Application of these preventative maintenance requirements along with the biennial measurement of the pumps flowrate, differential pressure and speed is appropriate and adequate for detecting any significant pump degradation and ensuring the continued operability and reliability of these pumps.

Pump Relief Request – PR-03
(Page 3 of 3)

Quarterly pump tests will consist of the verification of each pumps discharge pressure when operated at rated speed.

The basis for the acceptability of this proposed alternative test is that these pumps are standby pumps that only operate 1-2 hours per year and are only energized for testing, thus, service-related degradation with respect to hydraulic performance between testing periods is unlikely. The quarterly verification of the pumps developed head at rated speed will ensure continued operability and availability for accident mitigation.

7. Duration of Proposed Alternative

This proposed alternative will be utilized for the entire 4th 120 month interval.

8. Precedents

This relief request was previously approved for the third ten-year interval at St. Lucie Plant 1 & 2 as Relief Request PR-09, by Safety Evaluation and Letter dated March 16, 1999.

Pump Relief Request – PR-04
Low Pressure Safety Injection Pump Group Classification
(Page 1 of 5)

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

Alternative Provides Acceptable Level of Quality and Safety

1. ASME Code Component(s) Affected

Pump	Description	Class	Category	Unit
1LPSI 1A	Low Pressure Safety Injection Pump 1A	2	A/B	1
1LPSI 1B	Low Pressure Safety Injection Pump 1B	2	A/B	1
2LPSI 2A	Low Pressure Safety Injection Pump 2A	2	A/B	2
2LPSI 2B	Low Pressure Safety Injection Pump 2B	2	A/B	2

2. Applicable Code Edition and Addenda

ASME OM Code 2001 Edition through 2003 Addenda

3. Applicable Code Requirement

ISTB-1300. All pumps within the scope of ISTA-1100 and ISTB-1100 shall be categorized as either a Group A or Group B pump.

ISTB-1400*(b)*, identify each pump to be tested in accordance with the rules of this Subsection and categorize it as either a Group A or Group B pump and list the pumps in the plant records (see ISTB-9000). A pump that meets both Group A and Group B definitions shall be categorized as a Group A pump.

4. Reason for Request

At St. Lucie, the Low Pressure Safety Injection Pumps are pumps that are used during cold shutdown and refueling conditions in order to provide cooling flow through the reactor, each individually providing approximately 3000 gpm of flow. During normal power operation, these pumps are unable to develop sufficient head to over come the pressure necessary to inject into the RCS, and thus are only able to operate through their minimum flow lines, recirculating flow back to the Refueling Water Tank (RWT) at only 40 gpm for Unit 1 and 100 gpm for Unit 2.

Pump Relief Request – PR-04
(Page 2 of 5)

Operation of these high capacity pumps under these low flow conditions results in the generation of vibrational levels greater than those measured during pump full flow operation. The low flow vibrational level for St. Lucie Unit 1 pumps 1LPSI 1A and B, have been know to exceed the vibrational alert levels as prescribed by Table ISTB-5100-1 of 0.325 in./sec.

Prior to the issuance of the1995 edition of the OM Code, where the ISTB Group A and Group B concept were introduced, St. Lucie addressed the Unit 1 pumps normal generation of excess vibration during low flow quarterly testing through the submittal of a Relief Request to increase the Codes alert limits from 0.325 in./sec to 0.500in./sec. This request was made under the rules of 10 CFR 50.59a(a)(3)(ii), "Hardship or Unusual Difficulty without Compensating Increase in Level of Quality or Safety", and was approved by the NRC by Safety Evaluation and Letter dated March 16, 1998. (St. Lucie 3rd Interval Relief Request PR-12).

In addition to the vibration concern with the Unit 1 LPSI pumps, St. Lucie has previously requested and been granted relief from measuring flow during normal operation of both Unit 1 and Unit 2 LPSI pumps. The reason for this request was that during operation, these high flow, low head pumps were incapable of developing sufficient head to overcome reactor coolant system (RCS) pressure, thus leaving only the min flow recirculation flow path available, which is not equipped with flow measurement instrumentation. Relief was granted via NRC Safety Evaluation and Letter dated March 16, 1999 under the rules of 10 CFR 50.559(f)(6)(i), "Inservice Testing Impracticality" (St. Lucie 3rd Interval Relief Request PR-06). This Relief essentially categorized these pumps as Group B during normal plant operation, and Group A during Refueling Operation.

It was also pointed out in the St. Lucie's 3rd Interval Relief Request PR-06, that the elimination of flowrate measurement through the minimum flow line was consistent with the philosophy and intent of NRC Generic Letter 89-04, Position 9 provided flow testing is performed under substantial flow condition that are present during either cold shutdown or refueling conditions.

The concept of ISTB Group A and Group B was developed recognizing that pumps that operate in a standby role, (i.e. Group B) are not subjected to the same wear and fatigue mechanism as those pump that operate either continuously or routinely. With this realization, it was recognized that it was not necessary to perform the same level of testing on a Group B pump as it was on a Group A pump, as a result of the Group B pumps standby nature. The mechanisms which contribute to possible degradation are simply not present. Without a wear mechanism to produce degradation, there would be no need to inspect for signs of degradation as a result of wear.

Pump Relief Request – PR-04
(Page 3 of 5)

In addition, as is the case with these Low Pressure Safety Injection Pumps, prolonged operation under minimum flow conditions can be detrimental to the long term health of the pump. During low flow conditions, vibration velocity levels of five and ten times the running speed frequency (5X/10X), are significantly greater due to elevated vane pass vibration caused by the velocity vector not striking the volute at an optimal angle. [1] In order to maintain the long term health of these pump, it is the operational goal to keep to a minimum the amount of time that each pump is run on a min flow configuration. Recognizing that most Group B pumps share the same min flow configuration which can result in increased levels of vibrations that could contribute to a reduction in the pumps health, the OM Code has even removed the minimum 2 minute run time requirement for Group B testing. [ISTB-5100(a)(2), ISTB-5200(a)(2) and ISTB-5300(a)(2)]

This proposed relief will result in a lower potential for pump degradation due to pump wear, while still being capable of measuring/determining pump performance. The basis of this relief request will show that the proposed alternative would provide an acceptable level of quality and safety.

The Low Pressure Safety Injection Pumps meet the categorization requirements of a Group A pumps in that they are operated routinely during plant shutdowns and refueling outages. However, these pumps also meet the criteria of a Group B pump, in that during normal operation (reactor critical) they are not operated except for testing.

Classifying these pumps as group B during power operation minimizes the time required to perform quarterly testing. The 2001/2003a OM Code testing requirements eliminated the two-minute minimum pump run-time for quarterly Group B pump testing. Eliminating the minimum pump run-time requirement and the requirement to record vibration levels is expected to reduce the length of time that each pump is run quarterly. As these pumps are only called upon to operate during normal plant operation in support of either their own or in support of a required surveillance, there is no time or wear related degradation mechanism that would warrant performing more than Group B quarterly testing.

NUREG/CP-0137, Vol. 1, Proceedings of the Third NRC/American Society of Mechanical Engineers (ASME) Symposium on Valve and Pump Testing, includes a paper entitled, "Description of Comprehensive Pump Test Change to ASME Code, Subsection ISTB." [2] This paper details the philosophy of classifying pumps as Group A or Group B. According to the author, the intent of having different test requirements for different pump groups is so to relate the requirements for the amount and degree of quarterly performance monitoring to the amount of degradation expected based on pump operation.

Pump Relief Request – PR-04
(Page 4 of 5)

Testing the LPSI pumps quarterly as Group A pumps during power operation is contrary to the philosophy elucidated by this referenced paper. Quarterly Group A testing during normal operation on minimum flow recirculation would subject these pumps to an increased potential for degradation due to pump wear (caused by low-flow operation) than would the quarterly perform of a Group B battery of tests. Group A testing during power operation may be more detrimental to the long-term health of these components than Group B testing.

In addition, the quarterly performance of the required Group A vibration monitoring would result in the placement of the Unit 1 pumps into an Alert category, resulting in the doubling of their quarterly testing frequency, all because these pumps when operated under a low flow condition have a natural tendency to exhibit higher than permitted amplitudes that allowed in the Code. Doubling of these pumps testing frequency would only result in these pumps being subjected to more potentially detrimental damage.

It is believed that the proposed alternate testing is adequate and appropriate, and is capable of properly monitoring pump operability as intended by the Code. It should be recognized that extended operation of these pumps under minimum flow conditions for no justifiable reason does not add to plant safety and could have a significant negative impact on pump and system operability and reliability.

5. Proposed Alternative and Basis for Use

It Is proposed that the Low Pressure Safety Injection Pumps be tested as standby pumps (Group B) during power operation and as continuously operating pumps (Group A) during refueling operations.

Using the provisions of this relief request as an alternative to the specific requirements of ISTB-1300 and ISTB-1400(b) identified above will provide adequate indication of pump performance and continue to provide an acceptable level of quality and safety.

6. Duration of Proposed Alternative

This proposed alternative will be utilized for the entire 4th 120 month interval.

7. Precedents

A similar relief request identified as PR-12 has been previously approved for Calvert Cliffs Nuclear Power Plant on May 16, 2002 (TAC Nos. MB3782 and MB3783), as has a similar relief request identified as PR-04 for Three Mile Island, Unit 1 on July 7, 2005 (TAC. Nos. MC2558)

Pump Relief Request – PR-04
(Page 5 of 5)

8. References

(1) - J. Stall, FPL, to USNRC, "Inservice Test Program, Relief Request PR-12 Supplement," L-98-264, October 9, 1998

(2) - R. Scott Hartley "Description of Comprehensive Pump Test Change to ASME Code, Subsection ISTB," July, 1994

Pump Relief Request – PR-05
LPSI Pressure Instrumentation
(Page 1 of 3)

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

Alternative Provides Acceptable Level of Quality and Safety

1. **ASME Code Component(s) Affected**

Pump	Description	Class	Category	Unit
1LPSI 1A	Low Press. Safety Inj. Pump 1A	2	A/B	1
1LPSI 1B	Low Press. Safety Inj. Pump 1B	2	A/B	1
2LPSI 2A	Low Press. Safety Inj. Pump 2A	2	A/B	2
2LPSI 2B	Low Press. Safety Inj. Pump 2B	2	A/B	2

2. **Applicable Code Edition and Addenda**

ASME OM Code 2001 Edition through 2003 Addenda

3. **Applicable Code Requirement**

ISTB-3510(b)(1) – *Range*, The full scale range of each analog instrument shall be not greater than three times the reference value.

4. **Reason for Request**

Table ISTB-3500-1 requires the accuracy of instruments used to measure differential pressure for Group A and B tests to be equal to or better than ± 2 percent based on full-scale reading of the instrument. This means that the accuracy of the actual measurement can vary as much as ± 6 percent for Group A and B tests, assuming the range of the instrument is extended to the maximum allowed deviation (3 times the reference value).

Pump Relief Request – PR-05
(Page 2 of 3)

An example of calculating indicated instrument accuracy for Group A and B test is as follows (from NUREG-1482, Rev. 1, Paragraph 5.5.1):

This example uses a reference pressure value of 20 psig and an analog pressure gauge with full scale range of 60 psig that is calibrated to ± 2% of full scale.

Code requirement:

Reference value = 20 psig
3 x reference value = 60 psig
Instrument tolerance = 1.2 psig (± 2.0% x 60 psig)

Indicated accuracy:

Instrument tolerance / Reference value x 100 = Indicated accuracy

± 1.2 psig / 20 psig x 100 = ± 6%

Following the methodology used in NUREG-1482 and the example above, the indicated instrument accuracy can be calculated for each pressure instrument in this relief request. The following table provides the calculated indicated instrument accuracies:

Table 1: Calculated Instrument Accuracies for Selected Pressure Instruments

PUMP ID	INSTR NUMBER	PARAMETER	REF VALUE	INSTR RANGE	INSTR ACCUR	INSTR TOL	IND ACCUR
1A LPSI	PI-3314	Discharge Pressure	200 PSIG	0-600 PSIG	± 0.5%	± 3 PSIG	± 1.5%
1B LPSI	PI-3315	Discharge Pressure	195 PSIG	0-600 PSIG	± 0.5%	± 3 PSIG	± 1.5%
2A LPSI	PI-3314	Discharge Pressure	190 PSIG	0-600 PSIG	± 0.5%	± 3 PSIG	± 1.6%
2B LPSI	PI-3315	Discharge Pressure	185 PSIG	0-600 PSIG	± 0.5%	± 3 PSIG	± 1.6%

Where:

REF VALUE = reference value established by the procedure

INSTR ACCUR = accuracy to which instrument is calibrated

INSTR TOL = maximum INSTR RANGE times INSTR ACCUR

IND ACCUR = INSTR TOL divided by REF VALUE times 100

Pump Relief Request – PR-05
(Page 3 of 3)

As shown on Table 1, the indicated accuracy for all the instruments is less than or equal to 1.6% of the reference value. These accuracy's are better than those allowed by the Code for both Group A or B test. Therefore, there is no overall impact on the capability to detect and monitor degradation during pump tests based on use of these instruments. Continued use of the existing installed instruments is supported by NUREG-1482, Rev. 1, Paragraph 5.5.1 which states that when the range of an installed analog instrument is greater than 3 times the reference value but the accuracy of the instrument is more conservative than the Code, NRC staff may grant relief when the combination of the range and accuracy yields a reading at least equivalent to the reading achieved from instruments that meet the Code requirements (i.e., up to ± 6% for Group A and B test).

5. Proposed Alternative and Basis for Use

Since the indicated accuracy of each permanently installed instrument is less than the allowed tolerance, FPL requests approval for continued use of the instruments listed in this relief request.

6. Duration of Proposed Alternative

This proposed alternative will be utilized for the entire 4th 120 month interval.

7. Precedents

This relief request was previously approved for the third ten-year interval at St. Lucie Plant 1 & 2 as Relief Request PR-13, by Safety Evaluation and Letter dated December 7, 2000.

Pump Relief Request – PR-06
Boric Acid Makeup (BAM) Pumps Quarterly Flow Test
(Page 1 of 3)

Proposed Alternative in Accordance with 10 CFR 50.55a(f)(5)(iii)

Inservice Testing Impracticality

1. **ASME Code Component(s) Affected**

Pump	Description	Class	Category	Unit
1BAM 1A	Boric Acid Makeup Pump 1A	2	Group A	1
1BAM 1B	Boric Acid Makeup Pump 1B	2	Group A	1
2BAM 2A	Boric Acid Makeup Pump 2A	2	Group A	2
2BAM 2B	Boric Acid Makeup Pump 2B	2	Group A	2

2. **Applicable Code Edition and Addenda**

ASME OM Code 2001 Edition through 2003 Addenda

3. **Applicable Code Requirement**

ISTB-5121(b) – The resistance of the system shall be varied until the flow rate equals the reference point. The differential pressure shall then be determined and compared to its reference value. Alternatively, the flow rate shall be varied until the differential pressure equals the reference point and the flow rate determined and compared to the reference flow rate value.

4. **Reason for Request**

There are four flowpaths available for performing inservice testing of the BAM Pumps. These include the primary flow path to the charging pump suction header, a recirculation line leading back to the Refueling Water Tank (RWT), a line leading to the Volume Control Tank (VCT) and the BAM Tank recirculation line. For reasons stated below, none of these flow paths are either available or equipped to support pump Group A testing during plant operation or cold shutdown:

a. Operating of the BAM Pumps aligned to discharge into the charging pump suction header will result in the introduction of highly concentrated boric acid solution from the boric acid makeup tanks into the suction of the charging pumps. During plant operation this would result in the addition of excess boron to the RCS. This rapid insertion of negative reactivity would result in RCS cooldown and de-pressurization. A large enough boron addition could

Pump Relief Request – PR-06
(Page 2 of 3)

result in an unscheduled plant trip and a possible safety injection system actuation. During cold shutdown, the introduction of excess quantities of boric acid into the RCS via this flowpath is also undesirable from the aspect of maintaining proper plant chemistry and the inherent difficulties that may be encountered during the subsequent startup due to the over-boration of the RCS. In addition, the waste management system would be overburdened by the large amounts of RCS coolant that would then require processing to reduce boron concentration.

b. Another alternate flowpath would involve the operation of a BAM Pump aligned to recirculate water to the Refueling Water Tank (RWT). This alignment would result in depletion of the associated BAM Tank inventory. During normal operation Technical Specifications requires a combination of one or both BAM Tanks be maintained with a certain volume and concentration of boric acid. The transfer of borated water from either one or both of the BAM Tanks could result not only the loss of a required boration source as defined by Technical Specifications, but in the case of St. Lucie Unit 2, could result in an increase of boron concentration above the RWT concentration limit. (Unit 2 RWT boron concentration is required to be between 1720 and 2100 ppm) In addition this flow path is not equipped with flow measurement instrumentation, so flow could not be readily determined.

c. Alignment of a BAM Pump to the Volume Control Tank (VCT) will also result in the same issues as described in (b) above in regards to the depletion of the associated BAM tank of it's inventory. In this case, not only could the transfer of borated water from either one or both of the BAM Tanks result in a loss of the required boration sources as defined by Technical Specifications, but injecting the highly borated water into the VCT would introduce this highly borated water to the suction of the charging pumps, resulting in the addition of negative reactivity into the RCS, with the possible same results as described in (a) above. Again, this flow path is also not equipped with flow measuring instrumentation.

It is noted that in options (b) and (c) above, transference of the contents of a BAM tank, a fixed and limited amount of volume, will result in the reduction of suction pressure over the course of the test, to the BAM Pump with the result of producing a variable flow rate which could not be easily compared/trended to previous flow measurements.(i.e. repeatability) BAM Tanks' level typically varies from test to test by as much as 15 to 20 feet.

d. Alignment of a BAM Pump to recirculate flow back to the BAM Tank is accomplished through a fixed resistance circuit, which is essentially the pumps minimum flow test line, the same flowpath which is also utilized to periodically mix the contents of each tank, so as to prevent stratification of the

Pump Relief Request – PR-06
(Page 3 of 3)

highly borated water. While operation of the BAM Pumps can be accomplished without the introduction of highly borated water to the RCS or affecting the limits associated with the maintenance of the required number of borated water sources, there is no flowrate measuring instrumentation installed in these lines

5. Proposed Alternative and Basis for Use

It is proposed that quarterly Group A testing of the BAM pumps be accomplished utilizing the fixed-resistance BAM tank recirculation line. Pump differential pressure and vibration will be measured and compared to their respective reference values per ISTB-5121(c) and (d).

The removal of quarterly flow testing of these pumps has been deemed acceptable per NRC Generic Letter 89-04, Position 9, which allows elimination of minimum flow test line flowrate measurements providing inservice tests are performed during cold shutdowns or refueling periods under full or substantial flow conditions where pump flowrate is recorded and evaluated. The proposed alternate testing is consistent with this philosophy and the intent of Position 9.

Full flow testing will continue to be performed on a Comprehensive test frequency, during refueling conditions.

6. Duration of Proposed Alternative

This proposed alternative will be utilized for the entire 4th 120 month interval.

7. Precedents

This relief request was previously approved for the third ten-year interval at St. Lucie Plant 1 & 2 as Relief Request PR-03, by Safety Evaluation and Letter dated March 16, 1999.

St. Lucie Inservice Testing Program for Pumps and Valves

Fourth Ten-Year Interval

(PSL-ENG-SEOS-07-030 Appendix 1 Rev. 0 - 263 total pages)

FPL

St Lucie
Inservice Testing (IST) Program
for
Pumps and Valves

4th 10 yr Interval

1.0 INTRODUCTION

1.1 Purpose

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

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

St. Lucie Plant, Unit 1 was designed and licensed to operate with the Hot Standby condition defined as the "safe" shutdown condition (Unit 1 UFSAR, Section 7.4).

St. Lucie Plant, Unit 2 was designed and licensed to operate with "safe shutdown" being defined depending on plant operating conditions as hot standby, hot shutdown or cold shutdown (Unit 2 UFSAR, Section 7.4).

The Inservice Inspection (ISI) Classification Boundaries are identical to the Design Classification or Quality Group Boundaries shown on the plant Piping and Instrument Diagrams (P&IDs) listed in Attachment 1. This Inservice Testing (IST) Program was developed using the following documents:

- Title 10, Code of Federal Regulations, Part 50, Paragraph 50.55a
- Standard Review Plan 3.9.6, "Inservice Testing of Pumps and Valves"
- Safety Analysis Report, St. Lucie Plant
- Technical Specifications, St. Lucie Plant, Unit 1
- Technical Specifications, St. Lucie Plant, Unit 2
- NUREG-1482, Rev. 1 "Guidelines for Inservice Testing at Nuclear Power Plants"

1.2 SCOPE

The IST program plan has been prepared to meet the requirements of the American Society of Mechanical Engineers (ASME) OM Code 2001 Edition through 2003 Addenda (ASME OM Code 2001/2003a). Mandatory Appendix II of the ASME OM Code 2001Edition through 2002 Addenda (as modified by 10CFR50.55a(b)(3)(iv)(A), (B) and (D)) will be used for check valve condition monitoring activities.

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

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

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

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

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

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

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

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

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

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

The St. Lucie Nuclear Plant fourth 120-month Pump and Valve Inservice Testing Plan for Unit's 1 and 2 will be in effect as follows:

- Unit One: **Begin:** February 11, 2008(1) **End:** February 10, 2018
- Unit Two: **Begin:** February 11, 2008(2) **End:** February 10, 2018

The NRC also reviewed and found "No Significant Impact" as it relates the environmental impact associated with the combining of interval dates as documented by NRC letter dated May 30, 2001.

(1) - By letter L-85-431 dated November 13, 1985, Florida Power & Light Company (FPL) requested NRC's approval to extend the first ten-year inspection interval for St. Lucie Unit 1 to February 11, 1988. By letter dated November 20, 1985 (Denton to Williams), the NRC staff approved the expansion and, as a result, the second ten-year inservice testing interval for St. Lucie Unit 1 began February 11, 1988, and the third interval began February 11, 1998.

(2) - St. Lucie Plant Unit No. 2 – Exemption from the requirements of 10 CFR 50.55a(f)(4)(ii) and 10 CFR 50.55a(f)(5)(i) regarding schedule for second and third inservice testing program interval (TAC No. MB0615), was approved by the NRC under correspondence Docket No. 50-389, dated June 12, 2001. This exemption effectively set the start of the Unit 2 third 120 month interval to correspond with the start of the Unit 1 third 120 month interval.

2.0 INSERVICE TESTING PLAN FOR PUMPS

2.1 Pump Inservice Testing Plan Description

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

2.2 Pump Plan Table Description

The pumps included in the St. Lucie Nuclear Plant IST Plan are listed in Attachment 13. The information contained in these tables identifies those pumps which are required to be tested to the requirements of Subsection ISTB of the ASME OM Code 2001 Edition through 2003 Addenda, along with their applicable tests, and test frequencies. The Pump Plan Table is divided into sections based upon Plant System. The headings for the pump tables are delineated below.

Pump Number — A unique identifier for the pump. Each pump is preceded with a Unit designator for the pump:

1	Unit 1
2	Unit 2

Pump Name — The descriptive name for the pump.

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

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

IST Group — Pump Group as defined in ISTB-2000.

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

2.2 Pump Plan Table Description (Cont'd)

Safety Class — The ASME Code classification of the valve.

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

Pump Type — The type of pump.

Centrifugal
Positive Displacement
Vertical Line Shaft

Pump Driver — The type of pump driver.

Motor	Motor driven
Turbine	Steam turbine driven
Engine	Combustion Engine

2.2 Pump Plan Table Description (Cont'd)

Test Type — Measured test parameters.

DIS-P(1)	Discharge Pressure (Measured only for positive displacement pumps)
dP(1)	Differential Pressure as calculated by subtracting the suction from the discharge pressures or obtained by direct measurement.
Q(1)	Flow Rate as measured using a rate or quantity meter installed in the pump test circuit.
S(1)	Pump Speed (Measured only for variable speed pumps)
SKID	Parameter(s) as determined by St. Lucie Plant are verified through the testing of the sub-assemblies parent/major component
V(1)	Vibration, (Pump bearing).

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

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

Test Freq. — The frequency for performing the specified Inservice Test.

M3	Quarterly (92 Days)
2Y	Two Years (Biennial)

2.2 Pump Plan Table Description (Cont'd)

Relief Request	A relief request number is listed when a specific Code requirement is determined to be impracticable.
Tech. Pos.	Reference a Technical Position(s) by it's specific number(s). A Technical Position is written to document how Code requirements are being implemented at the station when the requirement(s) of the Code are not easily interpreted.

3.0 INSERVICE TESTING PLAN FOR VALVES

3.1 Valve Inservice Testing Plan Description

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

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

3.2 Valve Plan Table Description

The valves in Attachment 15 list all ASME Class 1, 2, 3 and NC Valves that have been scoped to be with in the IST Program and have been assigned Valve Categories. Valves exempt per ASME OM Code ISTC-1200 are not listed. The Valve Plan Table is divided into sections by Plant System. The following information is included for each valve.

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

1	Unit 1
2	Unit 2

Valve Name — The description of the valve.

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

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

3.2 Valve Plan Table Description (Cont'd)

Safety Class — The ASME Classification of the valve.

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

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

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

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

Category C – Valves, which are self-actuating in response to some system characteristic, such as pressure (relief valves) or flow direction (check valves).

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

N/A – Valves which have been included into the IST Program as the result of either a regulatory or utility commitment.

Valve Size — The nominal size of the valve, in inches.

3.2 Valve Plan Table Description (Cont'd)

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

3W	3-Way Valve
4W	4-Way Valve
ANG	Angle
BAL	Ball Valve
BTF	Butterfly Valve
CK	Check Valve
DIA	Diaphragm Valve
GA	Gate Valve
GL	Globe Valve
NEEDLE	Needle Valve
PCHECK	Power Check Valve
PLG	Plug Valve
PLT	Pilot Valve
RPD	Rupture Disk
RV	Relief Valve
SCK	Stop Check Valve
SV	Safety
XFC	Excess Flow Check Valve

ACT. Type — The actuator type abbreviation.

AO	Air Operator
M	Manual
MO	Motor Operator
PO	Power Operated
SA	Self-Actuating
SAP	Self-Actuated Pilot
SO	Solenoid Operator

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

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

3.2 Valve Plan Table Description (Cont'd)

Normal Position — The normal position of the valve during normal power operation. If the valves system does not operate during power operation, then the normal position is the position of the valve when the system is not operating.

C	Closed
FLOW	Flow straight through a 3-way valve
LC	Locked Closed
LO	Locked Open
LT	Locked Throttled
N/A	Not Applicable
O	Open
SYS	System Condition Dependent
TH	Throttled
VENT	Vent out the side of a 3-way valve

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

C	Closed
D	De-energized (3-way and 4-way valves)
FLOW	Flow straight through a 3-way valve
LT	Locked Throttled
N/A	Valve has no Safety Related Position
O	Open
O/C	Open or Closed
VENT	Vent out the side of a 3-way valve

3.2 Valve Plan Table Description (Cont'd)

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

CC	Exercised Closed – Check Valve[1]
CO	Exercise Open – Check Valve[1]
CP	Partial Exercise Open[1]
DT	Rupture Disk / Explosive Valves
FSC	Fail Safe Test Closed
FSO	Fail Safe Test Open
FSS	Fail Safe Solenoid
FSV	Fail Safe Vent
LT-J	Leakage Rate Test (Appendix J)
LT-S	Leakage Rate Test (Seat, ISTC-3630)
ME	Manual Exercise
OPR	Operator Rounds (condition monitoring)
PIT	Position Indication Test
RVT	Relief Valve Test
SD	Solenoid De-energize
SE	Solenoid Energize
ST-C	Stroke Time Closed
ST-O	Stroke Time Open
TMP	Temperature Monitoring
VAC	Vacuum Breaker Test

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

3.2 Valve Plan Table Description (Cont'd)

Test Freq. The test frequency abbreviation.

AppJ	Appendix J
CM	Condition Monitoring[1]
CS	Cold Shutdown
M3	Quarterly
OP	Operating Activities[2]
RR	Refuel Outage
2Y	Every 2 years
5Y	Every 5 years
10Y	Every 10 years

- Note that the frequency listed in the Program Plan is that frequency as required by the applicable section for the Code. The test/operator activity which is performed for which credit is taken may occur more frequently.

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

Deferred Just. Deferred Test Justification. This field refers to either an applicable Cold Shutdown Justifications or Refuel Outage Justifications.

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

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

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[1] Frequency is as indicated in respective Condition Monitoring Plan for that valve group.
[2] Satisfied i.a.w. Technical Position, TP-05, "Check Valve in Regular Use"

Technical Position. A Technical Position is a document which is used by the utility/Owner uses to clarify their interpretation of Code requirements when it is felt by the utility or Owner that either the requirements of the Code are not easily interpreted or when they simply want to document how Code requirement is being implemented at the station. Technical Positions are identified by their unique number identifier which contains either a "TP" prefix. Technical Positions are contained in Attachment 11 of this document.

Also in this column are identified the applicable Check Valve Condition Monitoring Program groups, when applicable.

4.0 ATTACHMENTS:

Attachment 1
System and P&ID Listing

Attachment 2
Pump Relief Request Index

Attachment 3
Pump Relief Requests

Attachment 4
Valve Relief Request Index

Attachment 5
Valve Relief Requests

Attachment 6
Cold Shutdown Justification Index

Attachment 7
Cold Shutdown Justifications

Attachment 8
Refuel Outage Justification Index

Attachment 9
Refuel Outage Justifications

Attachment 10
Technical Positions Index

Attachment 11
Technical Positions

Attachment 12
Inservice Testing Pump Table Index

4.0 ATTACHMENTS (Cont'd)

Attachment 13
Inservice Testing Pump Table

Attachment 14
Inservice Testing Valve Table Index

Attachment 15
Inservice Testing Valve Table

ATTACHMENT 1

SYSTEM AND P&ID LISTING

UNIT 1

Drawing Number / Sheet	Rev	Title
8770-G-078/110A	30	Reactor Coolant System
8770-G-078/110B	25	Reactor Coolant System
8770-G-078/111A	14	Reactor Coolant Pump 1A1
8770-G-078/111B	14	Reactor Coolant Pump 1A2
8770-G-078/111C	13	Reactor Coolant Pump 1B1
8770-G-078/111D	15	Reactor Coolant Pump 1B2
8770-G-078/120A	23	Chemical and Volume Control
8770-G-078/120B	16 17	Chemical and Volume Control
8770-G-078/121A	33 38	Chemical and Volume Control
8770-G-078/121B	30 32	Chemical and Volume Control
8770-G-078/130A	26 27	Safety Injection System
8770-G-078/130B	29 31	Safety Injection System
8770-G-078/131A	26 27	Safety Injection System
8770-G-078/131B	18 19	Safety Injection System
8770-G-078/140	17	Fuel Pool System
8770-G-078/150	12 13	Sampling System
8770-G-078/160A	18 21	Waste Management System
8770-G-078/163A	34	Waste Management System
8770-G-078/163B	32	Waste Management System
8770-G-079/1	51 52	Main Steam System
8770-G-079/7	4	Main Steam System
8770-G-080/3	51 53	Feedwater and Condensate Systems
8770-G-080/4	39 40	Feedwater and Condensate Systems
8770-G-080/5	3	Main Feedwater
8770-G-082/2	23 24	Circulating and Intake Cooling Water System
8770-G-083/1A	57 58	Component Cooling System
8770-G-083/1B	55 56	Component Cooling System
8770-G-084/1B	44	Domestic & Make-up Water Systems
8770-G-084/1C	43	Domestic & Make-up Water Systems
8770-G-085/1A	38	Service Air System
8770-G-085/2A	39	Instrument Air System
8770-G-085/2C	40 41	Instrument Air System
8770-G-085/3	21	Instrument Air System
8770-G-086/1	41 42	Miscellaneous Systems

ATTACHMENT 1 (Cont'd)

SYSTEM AND P&ID LISTING

UNIT 1
(continued)

Drawing Number / Sheet	Rev	Title
8770-G-088/1	47 50	Containment Spray and Refueling Water Systems
8770-G-088/2	44 46	Containment Spray and Refueling Water Systems
8770-G-091/1	6 7	Miscellaneous Systems
8770-G-092/1	29	Miscellaneous Sampling Systems
8770-G-093	39 40	Miscellaneous Systems
8770-G-096/1A	17 18	Emergency Diesel Generator System - Diesel Engine 1A1
8770-G-096/1B	16	Emergency Diesel Generator System - Diesel Engine 1A2
8770-G-096/1C	16 17	Emergency Diesel Generator System - Air Start Pkg. 1A
8770-G-096/2A	15 16	Emergency Diesel Generator System - Diesel Engine 1B1
8770-G-096/2B	15	Emergency Diesel Generator System - Diesel Engine 1B2
8770-G-096/2C	13 14	Emergency Diesel Generator System - Air Start Pkg. 1B
8770-G-878	33	HVAC - Control Diagrams (Sheet 1)
8770-G-879	39	HVAC - Control Diagrams (Sheet 2)

ATTACHMENT 1 (Cont'd)

SYSTEM AND P&ID LISTING

UNIT 2

Drawing Number / Sheet	Rev	Title
2998-G-078/107	11	Reactor Coolant System
2998-G-078/108	4 5	Reactor Coolant System
2998-G-078/109	16 18	Reactor Coolant System
2998-G-078/110	7	Reactor Coolant System
2998-G-078/115	6	Reactor Coolant System
2998-G-078/120	16 17	Chemical and Volume Control
2998-G-078/121A	29 30	Chemical and Volume Control
2998-G-078/121B	24 27	Chemical and Volume Control
2998-G-078/122	24 25	Chemical and Volume Control
2998-G-078/130A	18 19	Safety Injection System
2998-G-078/130B	27 28	Safety Injection System
2998-G-078/131	18 19	Safety Injection System
2998-G-078/132	8 9	Safety Injection System
2998-G-078/140	8	Fuel Pool System
2998-G-078/153	8	Sampling System
2998-G-078/160A	9 11	Waste Management System
2998-G-078/163A	20	Waste Management System
2998-G-078/163B	17 18	Waste Management System
2998-G-079/1	37 38	Main Steam System
2998-G-079/7	1	Main Steam System
2998-G-080/2A	38 41	Feedwater and Condensate Systems
2998-G-080/2B	35	Feedwater and Condensate Systems
2998-G-082/2	51 52	Circulating and Intake Cooling Water System
2998-G-083/1	38 39	Component Cooling System
2998-G-083/2	36 39	Component Cooling System
2998-G-084/1	34 35	Domestic & Make-up Water Systems
2998-G-085/1	27 28	Service Air System
2998-G-085/2A	36 37	Instrument Air System
2998-G-085/2B	44 46	Instrument Air System
2998-G-085/2C	37 39	Instrument Air System
2998-G-086/1	46	Miscellaneous Systems
2998-G-088/1	36 38	Containment Spray and Refueling Water Systems
2998-G-088/2	37 40	Containment Spray and Refueling Water Systems
2998-G-091/1	24	Miscellaneous Systems
2998-G-092/1	25	Miscellaneous Sampling Systems

ATTACHMENT 1 (Cont'd)

SYSTEM AND P&ID LISTING

UNIT 2
(continued)

Drawing Number / Sheet	Rev	Title
2998-G-096/1A	16	Emergency Diesel Generator System - Diesel Engine 2A1
2998-G-096/1B	16	Emergency Diesel Generator System - Diesel Engine 2A2
2998-G-096/1C	14 15	Emergency Diesel Generator System - Air Start Pkg. 2A
2998-G-096/2A	15	Emergency Diesel Generator System - Diesel Engine 2B1
2998-G-096/2B	16	Emergency Diesel Generator System - Diesel Engine 2B2
2998-G-096/2C	10 12	Emergency Diesel Generator System - Air Start Pkg. 2B
2998-G-878	33	HVAC - Control Diagrams (Sheet 1)
2998-G-879/2	27	HVAC - Control Diagrams (Sheet 2)
2998-G-879/3	29	HVAC - Control Diagrams (Sheet 3)
2298-9695	11	MFIV Hydraulic Actuator

ATTACHMENT 2

PUMP RELIEF REQUEST INDEX

Designator	Description	Approval Date
PR-01	Charging Pump Vibration Frequency Response Range	
PR-02	Hydrazine Pump Vibration Frequency Response Range	
PR-03	Hydrazine Pump Flow Testing	
PR-04	Low Pressure Safety Injection Pump Group Classification	
PR-05	LPSI Pressure Instrumentation	
PR-06	Boric Acid Makeup (BAM) Pumps Quarterly Flow Test	
PR-07	Diesel Fuel Oil Transfer Pump 2A Comprehensive Flow Testing	
PR-08	Unit 1 Diesel Fuel Oil Transfer Pump Testing	

ATTACHMENT 3

PUMP RELIEF REQUESTS

Pump Relief Request – PR-01
Charging Pump Vibration Frequency Response Range
(Page 1 of 3)

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

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

1. ASME Code Component(s) Affected

Pump	Description	Class	Category	Unit
1CHG 1A	Reactor Coolant Charging Pump 1A	2	Group A	1
1CHG 1B	Reactor Coolant Charging Pump 1B	2	Group A	1
1CHG 1C	Reactor Coolant Charging Pump 1C	2	Group A	1
2CHG 2A	Reactor Coolant Charging Pump 2A	2	Group A	2
2CHG 2B	Reactor Coolant Charging Pump 2B	2	Group A	2
2CHG 2C	Reactor Coolant Charging Pump 2C	2	Group A	2

2. Applicable Code Edition and Addenda

ASME OM Code 2001 Edition through 2003 Addenda

3. Applicable Code Requirement

ISTB-3510(e), *Frequency Response Range*. The frequency response range of the vibration-measuring transducers and their readout system shall be from one-third minimum pump shaft rotational speed to at least 1000 Hz.

4. Reason for Request

The reactor coolant charging pumps are positive displacement pumps that operate at approximately 205-210 rpm which equates to a rotational frequency of 3.41 Hz. The one-third minimum speed frequency response required for the vibration instrumentation correlates to 1.13 Hz (68 cpm).

The equipment used to measure vibration at St. Lucie is the Computational Systems Inc. (CSI) model 2120 Machinery Analyzer with Wilcoxon model 793 accelerometer probes. The CSI 2120 Machinery Analyzer integrator frequency response is essentially flat down to DC[1]. While the Wilcoxon model 793 accelerometer probe frequency response range meets the Code accuracy range requirement of ± 5.0% in the range from 1.5 – 5,000 Hz, the frequency response drops to only +/-10% for frequencies between 1.0 – 1.5 Hz. As a result the vibration instrumentation meets

Pump Relief Request – PR-01
(Page 2 of 3)

all of the Code accuracy requirements down to 1.5 Hz, but does not meet the frequency response accuracy of less than +/-5.0% for between 1.13 and 1.5 Hz, which is the low end of the one-third minimum speed requirement of ISTB-3510(e).

In addition to the physical limitations of the available instrumentation, calibration of the instrumentation can only be performed to a minimum frequency of only 2 Hz. The provider of calibration services for St. Lucie is unable to qualify calibration to frequencies less than 2 Hz. This is due to the unavailability of suitable vibration measurement standards for performing the calibration. The NIST Calibration Service Users Guide lists the lowest frequency NIST standard pickup (24010C) available is calibrated at 2 Hz. FPL Quality Assurance Program requires this instrumentation to be calibrated and traceable to NIST standards

This frequency response range of this instrumentation, while not meeting the extreme low end of the readout requirements of ISTB-3510(e) adequately envelops all potential noise contributors that could indicate degradation of the charging pumps. The instrumentation is fully qualified to measure all expected synchronous vibration levels.

Additionally, this test equipment will be used for measuring the vibrational frequencies which would equate to that of the pumps one-third running speed. Qualification of the accuracy of the readings at these frequencies is considered unnecessary and would impose undue hardship. This is considered acceptable as there are virtually no mechanical degradation scenarios where only a sub-synchronous vibration component would develop on the charging pumps. For example:

a) Oil whirl, which presents itself at frequencies below the rotational frequency of the pump (i.e. 0.38X - 0.48X) is not applicable to a horizontal, triplex, reciprocating pump.
b) A light rub / impact could generate a vibrational component at a frequency below the pump's rotational frequency (e.g. 0.5X (102.5 cpm)), but would also usually generate a harmonic vibrational components that would present as either integer and half-integer multiples of the running speed of the pump. (e.g. a light rub vibrations occurring at 0.5X, where X equals the rotational frequency of the pump, could also produce a vibrational component that could be measured at integer multiples of the original frequency, i.e. 1X, 1.5X, 2X, etc), and would thus be identified in the calibrated range of the equipment.
c) A heavy rub generates increased integer values of multiple running speed components, as well as processing the 1X phase measurement. In either case the overall vibration level would still show an increase from both the attenuated sub-synchronous and 1X vibration components as well as the higher harmonic vibration components.

Pump Relief Request – PR-01
(Page 3 of 3)

d) Looseness in the power train would most likely be identified through the measurement of a vibrational component(s) found at frequencies which are multiples of the pumps rotational frequency. (i.e. 1X and 2X where X equals the rotational frequency of the pump).

Based on the above information, the use of Computational Systems Inc. (CSI) model 2120 Machinery Analyzer with Wilcoxon model 793 accelerometer probes provides sufficiently reliable data to identify changes from baseline readings to indicate possible problems with the pumps.

5. Proposed Alternative and Basis for Use

The measurement of the vibration associated with the Reactor Coolant Charging Pumps 1A, 1B, 1C, 2A, 2B, and 2C will be taken utilizing the Computational Systems Inc. (CSI) model 2120 Machinery Analyzer with Wilcoxon model 793 accelerometer probes, or equivalent. Calibration of the instrumentation will be qualified to a minimum frequency of only 2 Hz.

These pumps as a result of their design are not susceptible to degradation mechanisms that would only manifest themselves in the unmonitored/non-calibrated range (1.13 to 2 Hz) without also becoming prevalent in the monitored range (2-1000 Hz)

6. Duration of Proposed Alternative

This proposed alternative will be utilized for the entire 4th 120 month interval.

7. Precedents

This relief request was initially approved as Relief Request PR-07 on a 1 year interim basis by Safety Evaluation and letter dated March 16, 1999, for the third ten-year interval at St. Lucie Plant 1 & 2. Then on December 7, 2000, following the purchase of equipment with greater low end accuracy, this Relief Request again identified as PR-07, was approved for the remainder of the third ten-year interval at St. Lucie Plant 1 & 2.

(1) – DC stands for 'Direct Current', and relates to the description of the CSI 2120 integrator frequency in that when there is no vibration, there is no sinusoidal component to the electrical signal generated, which is what would be found with the measurement of direct current, as apposed to an alternating current.

Pump Relief Request – PR-02
Hydrazine Pump Vibration Frequency Response Range
(Page 1 of 3)

Proposed Alternative in Accordance with 10 CFR 50.55a(f)(5)(iii)

Inservice Testing Impracticality

1. **ASME Code Component(s) Affected**

Pump	Description	Class	Category	Unit
2HYD 2A	Hydrazine Pump 2A	2	Group B	2
2HYD 2B	Hydrazine Pump 2B	2	Group B	2

2. **Applicable Code Edition and Addenda**

ASME OM Code 2001 Edition through 2003 Addenda

3. **Applicable Code Requirement**

ISTB-5323(d) and (e) - Comprehensive Test Procedure.

(d) Vibration (displacement or velocity) shall be determined and compared with corresponding reference values. Vibration measurements are to be broad band (unfiltered). If velocity measurements are used, they shall be peak. If displacement amplitudes are used, they shall be peak-to-peak.

(e) All deviations from the reference values shall be compared with the ranges of Table ISTB-5300-1 or Table ISTB-5300-2, as applicable, and corrective action taken as specified in ISTB-6200. For reciprocating positive displacement pumps, vibration measurements shall be compared to the relative criteria shown in the alert and required action ranges of Table ISTB-5300-1 [2]

4. **Impracticality of Compliance**

The hydrazine pumps are reciprocating positive displacement pumps which are characterized as metering pumps. These pump operate at extremely slow speed (2HYD 2A at 39 rpm and 2HYD 2B at 37 rpm), which equates to a rotational frequency of 0.65 Hz. In accordance with the Code, the required low limit of the frequency response for the vibration instruments would be one third of this or 0.21 Hz. Portable instruments satisfying this requirement are commercially unavailable. The low frequency vibration instrumentation presently in use at St. Lucie is the Computational Systems Inc. (CSI) model 2120 Machinery Analyzer with Wilcoxon model 793 accelerometer probes.

Pump Relief Request – PR-02
(Page 2 of 3)

While the Wilcoxon model 793 accelerometer probe frequency response range meets the Code accuracy range requirement of ± 5.0% in the range from 1.5 – 5,000 Hz, the frequency response drops to only +/-10% for frequencies between 1.0 – 1.5 Hz. Below 1.0 Hz, the frequency response is not provided by the vendor. For these reason, vibration readings taken, even with the low frequency probe, are essentially meaningless and of no value in identifying degradation of these pumps. Furthermore, the classical analysis of rotating components upon which the Code is based is not readily adaptable to slow moving components such as these positive displacement pumps.

These pumps are classified as Group B pumps per ISTB-2000. While these pumps which are designed and built for continuous operation, they are only operated 1 to 2 hours per year. That calculates to less than 5000 cycles between comprehensive testing when the measurement of the pumps vibration is called for. The mechanisms of wear and degradation of rotating machinery are time and cycle dependant and, in this case, the number of repetitive wearing actions (cycles) is small both in frequency and absolute numbers. As a result, little degradation is expected with respect to vibration performance between testing periods. Thus, the probability of any significant pump deterioration over the plant's lifetime is extremely small.

5. Burden Caused by Compliance

The performance of vibrational testing with the equipment currently commercially available, is not capable of measuring the pumps vibrational response to accuracies as required by the Code. Vibrational testing at the available accuracy limits with the currently commercially available equipment would not be expected to detect pump degradation as these pumps. These pumps, classified as Group B pumps, operate so infrequently that wear due to operation is not expected during the plants life time, making the effort of taking vibrational measurement effectively meaningless.

6. Proposed Alternative and Basis for Use

In lieu of measuring pump vibration on a comprehensive biennial frequency, these pumps will be maintained and inspected in accordance with the St. Lucie Preventative Maintenance Program that reflects the recommendations of the pump's manufacturer (Union Pump Co.) dated May 24, 1999. Preventative Maintenance, at a minimum, includes the periodic changing of the crankcase lubricating oil and oil analyses to identify significant wearing of internals, disassembly and inspection as well as the verification of bolting torque . This program is adequate for determining pump degradation that could impact operability and reliability.

Pump Relief Request – PR-02
(Page 3 of 3)

7. Duration of Proposed Alternative

This proposed alternative will be utilized for the entire 4th 120 month interval.

8. Precedents

This relief request was previously approved for the third ten-year interval at St. Lucie Plant 1 & 2 as Relief Request PR-08, by Safety Evaluation and Letter dated March 16, 1999.

Pump Relief Request – PR-03
Hydrazine Pump Flow Testing
(Page 1 of 3)

Proposed Alternative in Accordance with 10 CFR 50.55a(f)(5)(iii)

Inservice Testing Impracticality

1. **ASME Code Component(s) Affected**

Pump	Description	Class	Category	Unit
2HYD 2A	Hydrazine Pump 2A	2	Group B	2
2HYD 2B	Hydrazine Pump 2B	2	Group B	2

2. **Applicable Code Edition and Addenda**

ASME OM Code 2001 Edition through 2003 Addenda

3. **Applicable Code Requirement**
ISTB-5322 – Group B Test Procedure, section (b), The flow rate shall be determined and compared to its reference value.

4. **Impracticality of Compliance**

The hydrazine pumps are reciprocating positive displacement pumps with variable speed control. They are classified as metering pumps and are designed to accurately displace a predetermined volume of liquid in a specific period of time. The pump has a single plunger and makes only one suction and one discharge stroke during each cycle (shaft rotation).

The pumps operate at a very slow speed (2HYD 2B is tested at 37 cpm) to supply the Technical Specification required hydrazine flowrate of 0.71 to 0.82 gpm. [TSR 4.6.2.2] Due to the simplified design of these pumps, instantaneous flow is continuously accelerating and decelerating - following an oscillating waveform. Each cycle of the pump is approximately 1.6 seconds in duration with no flow produced during the pumps' 0.8 second suction stroke. The installed flowrate instrumentation utilizes a differential pressure orifice located in the suction line common to both pumps. Due to the characteristic oscillating flowrate, flow through this orifice pulsates sharply with each pump stroke resulting in erratic flowrate readings. The flow orifice also senses pressure feedback during each pump stroke cycle as a result of echoes of the pressure pulsation produced by the pump stroke which are reflected back to the flow element by the system piping and valves. The characteristic oscillating flowrate also makes it impractical to dampen using standard dampening devices.

Pump Relief Request – PR-03
(Page 2 of 3)

Attempts to use various techniques in averaging the indicated flowrate readings were proven to be inconsistent and inaccurate when compared to actual flow.

It was therefore determined that as a result of the pumps flow characteristics combined with the design limitation of the installed flow instrumentation, flow measurements to the requirements of ISTB-5322 can not be obtained under the current configuration.

As an alternative to the use of the installed instrumentation, the flowrates of the pumps can be determined through collection of the pumps' output in a container of known volume over a measured period of time. This method has been verified accurate through a comparison of the measured results to the correlation between pump speed and piston displacement.

5. Burden Caused by Compliance

While the method of verifying the pumps flowrate through the time dependent collection of the pumps discharge into a container of known volume is proven to be accurate, it is undesirable to perform this measurement on the Group B quarterly frequency based on the personnel hazards associated with testing. Hydrazine is a hazardous, highly flammable liquid with cumulative toxic effects when absorbed through the skin, inhaled or ingested. It has also been identified as a known carcinogen.

6. Proposed Alternative and Basis for Use

For this reason, it is proposed to only perform the IST acceptable measurement of flow during the comprehensive pump test which is performed on a biennial frequency, during refueling outages. Measuring the flowrate as described above during each refueling outage in conjunction with the sites application of it's Preventative Maintenance Program that reflects the recommendations of the pump's manufacturer (Union Pump Co.) dated May 24, 1999. The preventative maintenance performed on these pumps per the manufactures recommendations consists of, at a minimum, the periodic changing of the crankcase lubrication oil and oil analyses to identify significant wearing of internals, disassembly and inspection as well as the verification of bolting torque. Application of these preventative maintenance requirements along with the biennial measurement of the pumps flowrate, differential pressure and speed is appropriate and adequate for detecting any significant pump degradation and ensuring the continued operability and reliability of these pumps.

Pump Relief Request – PR-03
(Page 3 of 3)

Quarterly pump tests will consist of the verification of each pumps discharge pressure when operated at rated speed.

The basis for the acceptability of this proposed alternative test is that these pumps are standby pumps that only operate 1-2 hours per year and are only energized for testing, thus, service-related degradation with respect to hydraulic performance between testing periods is unlikely. The quarterly verification of the pumps developed head at rated speed will ensure continued operability and availability for accident mitigation.

7. Duration of Proposed Alternative

This proposed alternative will be utilized for the entire 4th 120 month interval.

8. Precedents

This relief request was previously approved for the third ten-year interval at St. Lucie Plant 1 & 2 as Relief Request PR-09, by Safety Evaluation and Letter dated March 16, 1999.

Pump Relief Request – PR-04
Low Pressure Safety Injection Pump Group Classification
(Page 1 of 5)

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

Alternative Provides Acceptable Level of Quality and Safety

1. ASME Code Component(s) Affected

Pump	Description	Class	Category	Unit
1LPSI 1A	Low Pressure Safety Injection Pump 1A	2	A/B	1
1LPSI 1B	Low Pressure Safety Injection Pump 1B	2	A/B	1
2LPSI 2A	Low Pressure Safety Injection Pump 2A	2	A/B	2
2LPSI 2B	Low Pressure Safety Injection Pump 2B	2	A/B	2

2. Applicable Code Edition and Addenda

ASME OM Code 2001 Edition through 2003 Addenda

3. Applicable Code Requirement

ISTB-1300. All pumps within the scope of ISTA-1100 and ISTB-1100 shall be categorized as either a Group A or Group B pump.

ISTB-1400*(b)*, identify each pump to be tested in accordance with the rules of this Subsection and categorize it as either a Group A or Group B pump and list the pumps in the plant records (see ISTB-9000). A pump that meets both Group A and Group B definitions shall be categorized as a Group A pump.

4. Reason for Request

At St. Lucie, the Low Pressure Safety Injection Pumps are pumps that are used during cold shutdown and refueling conditions in order to provide cooling flow through the reactor, each individually providing approximately 3000 gpm of flow. During normal power operation, these pumps are unable to develop sufficient head to over come the pressure necessary to inject into the RCS, and thus are only able to operate through their minimum flow lines, recirculating flow back to the Refueling Water Tank (RWT) at only 40 gpm for Unit 1 and 100 gpm for Unit 2.

Pump Relief Request – PR-04
(Page 2 of 5)

Operation of these high capacity pumps under these low flow conditions results in the generation of vibrational levels greater than those measured during pump full flow operation. The low flow vibrational level for St. Lucie Unit 1 pumps 1LPSI 1A and B, have been know to exceed the vibrational alert levels as prescribed by Table ISTB-5100-1 of 0.325 in./sec.

Prior to the issuance of the1995 edition of the OM Code, where the ISTB Group A and Group B concept were introduced, St. Lucie addressed the Unit 1 pumps normal generation of excess vibration during low flow quarterly testing through the submittal of a Relief Request to increase the Codes alert limits from 0.325 in./sec to 0.500in./sec. This request was made under the rules of 10 CFR 50.59a(a)(3)(ii), "Hardship or Unusual Difficulty without Compensating Increase in Level of Quality or Safety", and was approved by the NRC by Safety Evaluation and Letter dated March 16, 1998. (St. Lucie 3rd Interval Relief Request PR-12).

In addition to the vibration concern with the Unit 1 LPSI pumps, St. Lucie has previously requested and been granted relief from measuring flow during normal operation of both Unit 1 and Unit 2 LPSI pumps. The reason for this request was that during operation, these high flow, low head pumps were incapable of developing sufficient head to overcome reactor coolant system (RCS) pressure, thus leaving only the min flow recirculation flow path available, which is not equipped with flow measurement instrumentation. Relief was granted via NRC Safety Evaluation and Letter dated March 16, 1999 under the rules of 10 CFR 50.559(f)(6)(i), "Inservice Testing Impracticality" (St. Lucie 3rd Interval Relief Request PR-06). This Relief essentially categorized these pumps as Group B during normal plant operation, and Group A during Refueling Operation.

It was also pointed out in the St. Lucie's 3rd Interval Relief Request PR-06, that the elimination of flowrate measurement through the minimum flow line was consistent with the philosophy and intent of NRC Generic Letter 89-04, Position 9 provided flow testing is performed under substantial flow condition that are present during either cold shutdown or refueling conditions.

The concept of ISTB Group A and Group B was developed recognizing that pumps that operate in a standby role, (i.e. Group B) are not subjected to the same wear and fatigue mechanism as those pump that operate either continuously or routinely. With this realization, it was recognized that it was not necessary to perform the same level of testing on a Group B pump as it was on a Group A pump, as a result of the Group B pumps standby nature. The mechanisms which contribute to possible degradation are simply not present. Without a wear mechanism to produce degradation, there would be no need to inspect for signs of degradation as a result of wear.

Pump Relief Request – PR-04
(Page 3 of 5)

In addition, as is the case with these Low Pressure Safety Injection Pumps, prolonged operation under minimum flow conditions can be detrimental to the long term health of the pump. During low flow conditions, vibration velocity levels of five and ten times the running speed frequency (5X/10X), are significantly greater due to elevated vane pass vibration caused by the velocity vector not striking the volute at an optimal angle. (1) In order to maintain the long term health of these pump, it is the operational goal to keep to a minimum the amount of time that each pump is run on a min flow configuration. Recognizing that most Group B pumps share the same min flow configuration which can result in increased levels of vibrations that could contribute to a reduction in the pumps health, the OM Code has even removed the minimum 2 minute run time requirement for Group B testing. [ISTB-5100(a)(2), ISTB-5200(a)(2) and ISTB-5300(a)(2)]

This proposed relief will result in a lower potential for pump degradation due to pump wear, while still being capable of measuring/determining pump performance. The basis of this relief request will show that the proposed alternative would provide an acceptable level of quality and safety.

The Low Pressure Safety Injection Pumps meet the categorization requirements of a Group A pumps in that they are operated routinely during plant shutdowns and refueling outages. However, these pumps also meet the criteria of a Group B pump, in that during normal operation (reactor critical) they are not operated except for testing.

Classifying these pumps as group B during power operation minimizes the time required to perform quarterly testing. The 2001/2003a OM Code testing requirements eliminated the two-minute minimum pump run-time for quarterly Group B pump testing. Eliminating the minimum pump run-time requirement and the requirement to record vibration levels is expected to reduce the length of time that each pump is run quarterly. As these pumps are only called upon to operate during normal plant operation in support of either their own or in support of a required surveillance, there is no time or wear related degradation mechanism that would warrant performing more than Group B quarterly testing.

NUREG/CP-0137, Vol. 1, Proceedings of the Third NRC/American Society of Mechanical Engineers (ASME) Symposium on Valve and Pump Testing, includes a paper entitled, "Description of Comprehensive Pump Test Change to ASME Code, Subsection ISTB." (2) This paper details the philosophy of classifying pumps as Group A or Group B. According to the author, the intent of having different test requirements for different pump groups is so to relate the requirements for the amount and degree of quarterly performance monitoring to the amount of degradation expected based on pump operation.

Pump Relief Request – PR-04
(Page 4 of 5)

Testing the LPSI pumps quarterly as Group A pumps during power operation is contrary to the philosophy elucidated by this referenced paper. Quarterly Group A testing during normal operation on minimum flow recirculation would subject these pumps to an increased potential for degradation due to pump wear (caused by low-flow operation) than would the quarterly perform of a Group B battery of tests. Group A testing during power operation may be more detrimental to the long-term health of these components than Group B testing.

In addition, the quarterly performance of the required Group A vibration monitoring would result in the placement of the Unit 1 pumps into an Alert category, resulting in the doubling of their quarterly testing frequency, all because these pumps when operated under a low flow condition have a natural tendency to exhibit higher than permitted amplitudes that allowed in the Code. Doubling of these pumps testing frequency would only result in these pumps being subjected to more potentially detrimental damage.

It is believed that the proposed alternate testing is adequate and appropriate, and is capable of properly monitoring pump operability as intended by the Code. It should be recognized that extended operation of these pumps under minimum flow conditions for no justifiable reason does not add to plant safety and could have a significant negative impact on pump and system operability and reliability.

5. Proposed Alternative and Basis for Use

It Is proposed that the Low Pressure Safety Injection Pumps be tested as standby pumps (Group B) during power operation and as continuously operating pumps (Group A) during refueling operations.

Using the provisions of this relief request as an alternative to the specific requirements of ISTB-1300 and ISTB-1400(b) identified above will provide adequate indication of pump performance and continue to provide an acceptable level of quality and safety.

6. Duration of Proposed Alternative

This proposed alternative will be utilized for the entire 4th 120 month interval.

7. Precedents

A similar relief request identified as PR-12 has been previously approved for Calvert Cliffs Nuclear Power Plant on May 16, 2002 (TAC Nos. MB3782 and MB3783), as has a similar relief request identified as PR-04 for Three Mile Island, Unit 1 on July 7, 2005 (TAC. Nos. MC2558)

Pump Relief Request – PR-04
(Page 5 of 5)

8. References

(1) - J. Stall, FPL, to USNRC, "Inservice Test Program, Relief Request PR-12 Supplement," L-98-264, October 9, 1998

(2) - R. Scott Hartley "Description of Comprehensive Pump Test Change to ASME Code, Subsection ISTB," July, 1994

Pump Relief Request – PR-05
LPSI Pressure Instrumentation
(Page 1 of 3)

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

Alternative Provides Acceptable Level of Quality and Safety

1. **ASME Code Component(s) Affected**

Pump	Description	Class	Category	Unit
1LPSI 1A	Low Press. Safety Inj. Pump 1A	2	A/B	1
1LPSI 1B	Low Press. Safety Inj. Pump 1B	2	A/B	1
2LPSI 2A	Low Press. Safety Inj. Pump 2A	2	A/B	2
2LPSI 2B	Low Press. Safety Inj. Pump 2B	2	A/B	2

2. **Applicable Code Edition and Addenda**

ASME OM Code 2001 Edition through 2003 Addenda

3. **Applicable Code Requirement**

ISTB-3510(b)(1) – *Range*, The full scale range of each analog instrument shall be not greater than three times the reference value.

4. **Reason for Request**

Table ISTB-3500-1 requires the accuracy of instruments used to measure differential pressure for Group A and B tests to be equal to or better than ± 2 percent based on full-scale reading of the instrument. This means that the accuracy of the actual measurement can vary as much as ± 6 percent for Group A and B tests, assuming the range of the instrument is extended to the maximum allowed deviation (3 times the reference value).

Pump Relief Request – PR-05
(Page 2 of 3)

An example of calculating indicated instrument accuracy for Group A and B test is as follows (from NUREG-1482, Rev. 1, Paragraph 5.5.1):

> This example uses a reference pressure value of 20 psig and an analog pressure gauge with full scale range of 60 psig that is calibrated to ± 2% of full scale.
>
> Code requirement:
>
> Reference value = 20 psig
> 3 x reference value = 60 psig
> Instrument tolerance = 1.2 psig (± 2.0% x 60 psig)
>
> Indicated accuracy:
>
> Instrument tolerance / Reference value x 100 = Indicated accuracy
>
> ± 1.2 psig / 20 psig x 100 = ± 6%

Following the methodology used in NUREG-1482 and the example above, the indicated instrument accuracy can be calculated for each pressure instrument in this relief request. The following table provides the calculated indicated instrument accuracies:

Table 1: Calculated Instrument Accuracies for Selected Pressure Instruments

PUMP ID	INSTR NUMBER	PARAMETER	REF VALUE	INSTR RANGE	INSTR ACCUR	INSTR TOL	IND ACCUR
1A LPSI	PI-3314	Discharge Pressure	200 PSIG	0-600 PSIG	± 0.5%	± 3 PSIG	± 1.5%
1B LPSI	PI-3315	Discharge Pressure	195 PSIG	0-600 PSIG	± 0.5%	± 3 PSIG	± 1.5%
2A LPSI	PI-3314	Discharge Pressure	190 PSIG	0-600 PSIG	± 0.5%	± 3 PSIG	± 1.6%
2B LPSI	PI-3315	Discharge Pressure	185 PSIG	0-600 PSIG	± 0.5%	± 3 PSIG	± 1.6%

Where:

REF VALUE = reference value established by the procedure

INSTR ACCUR = accuracy to which instrument is calibrated

INSTR TOL = maximum INSTR RANGE times INSTR ACCUR

IND ACCUR = INSTR TOL divided by REF VALUE times 100

Pump Relief Request – PR-05
(Page 3 of 3)

As shown on Table 1, the indicated accuracy for all the instruments is less than or equal to 1.6% of the reference value. These accuracy's are better than those allowed by the Code for both Group A or B test. Therefore, there is no overall impact on the capability to detect and monitor degradation during pump tests based on use of these instruments. Continued use of the existing installed instruments is supported by NUREG-1482, Rev. 1, Paragraph 5.5.1 which states that when the range of an installed analog instrument is greater than 3 times the reference value but the accuracy of the instrument is more conservative than the Code, NRC staff may grant relief when the combination of the range and accuracy yields a reading at least equivalent to the reading achieved from instruments that meet the Code requirements (i.e., up to ± 6% for Group A and B test).

5. Proposed Alternative and Basis for Use

Since the indicated accuracy of each permanently installed instrument is less than the allowed tolerance, FPL requests approval for continued use of the instruments listed in this relief request.

6. Duration of Proposed Alternative

This proposed alternative will be utilized for the entire 4th 120 month interval.

7. Precedents

This relief request was previously approved for the third ten-year interval at St. Lucie Plant 1 & 2 as Relief Request PR-13, by Safety Evaluation and Letter dated December 7, 2000.

Pump Relief Request – PR-06
Boric Acid Makeup (BAM) Pumps Quarterly Flow Test
(Page 1 of 3)

Proposed Alternative in Accordance with 10 CFR 50.55a(f)(5)(iii)

Inservice Testing Impracticality

1. **ASME Code Component(s) Affected**

Pump	Description	Class	Category	Unit
1BAM 1A	Boric Acid Makeup Pump 1A	2	Group A	1
1BAM 1B	Boric Acid Makeup Pump 1B	2	Group A	1
2BAM 2A	Boric Acid Makeup Pump 2A	2	Group A	2
2BAM 2B	Boric Acid Makeup Pump 2B	2	Group A	2

2. **Applicable Code Edition and Addenda**

ASME OM Code 2001 Edition through 2003 Addenda

3. **Applicable Code Requirement**

ISTB-5121(b) – The resistance of the system shall be varied until the flow rate equals the reference point. The differential pressure shall then be determined and compared to its reference value. Alternatively, the flow rate shall be varied until the differential pressure equals the reference point and the flow rate determined and compared to the reference flow rate value.

4. **Reason for Request**

There are four flowpaths available for performing inservice testing of the BAM Pumps. These include the primary flow path to the charging pump suction header, a recirculation line leading back to the Refueling Water Tank (RWT), a line leading to the Volume Control Tank (VCT) and the BAM Tank recirculation line. For reasons stated below, none of these flow paths are either available or equipped to support pump Group A testing during plant operation or cold shutdown:

a. Operating of the BAM Pumps aligned to discharge into the charging pump suction header will result in the introduction of highly concentrated boric acid solution from the boric acid makeup tanks into the suction of the charging pumps. During plant operation this would result in the addition of excess boron to the RCS. This rapid insertion of negative reactivity would result in RCS cooldown and de-pressurization. A large enough boron addition could

Pump Relief Request – PR-06
(Page 2 of 3)

result in an unscheduled plant trip and a possible safety injection system actuation. During cold shutdown, the introduction of excess quantities of boric acid into the RCS via this flowpath is also undesirable from the aspect of maintaining proper plant chemistry and the inherent difficulties that may be encountered during the subsequent startup due to the over-boration of the RCS. In addition, the waste management system would be overburdened by the large amounts of RCS coolant that would then require processing to reduce boron concentration.

b. Another alternate flowpath would involve the operation of a BAM Pump aligned to recirculate water to the Refueling Water Tank (RWT). This alignment would result in depletion of the associated BAM Tank inventory. During normal operation Technical Specifications requires a combination of one or both BAM Tanks be maintained with a certain volume and concentration of boric acid. The transfer of borated water from either one or both of the BAM Tanks could result not only the loss of a required boration source as defined by Technical Specifications, but in the case of St. Lucie Unit 2, could result in an increase of boron concentration above the RWT concentration limit. (Unit 2 RWT boron concentration is required to be between 1720 and 2100 ppm) In addition this flow path is not equipped with flow measurement instrumentation, so flow could not be readily determined.

c. Alignment of a BAM Pump to the Volume Control Tank (VCT) will also result in the same issues as described in (b) above in regards to the depletion of the associated BAM tank of it's inventory. In this case, not only could the transfer of borated water from either one or both of the BAM Tanks result in a loss of the required boration sources as defined by Technical Specifications, but injecting the highly borated water into the VCT would introduce this highly borated water to the suction of the charging pumps, resulting in the addition of negative reactivity into the RCS, with the possible same results as described in (a) above. Again, this flow path is also not equipped with flow measuring instrumentation.

It is noted that in options (b) and (c) above, transference of the contents of a BAM tank, a fixed and limited amount of volume, will result in the reduction of suction pressure over the course of the test, to the BAM Pump with the result of producing a variable flow rate which could not be easily compared/trended to previous flow measurements.(i.e. repeatability) BAM Tanks' level typically varies from test to test by as much as 15 to 20 feet.

d. Alignment of a BAM Pump to recirculate flow back to the BAM Tank is accomplished through a fixed resistance circuit, which is essentially the pumps minimum flow test line, the same flowpath which is also utilized to periodically mix the contents of each tank, so as to prevent stratification of the

Pump Relief Request – PR-06
(Page 3 of 3)

highly borated water. While operation of the BAM Pumps can be accomplished without the introduction of highly borated water to the RCS or affecting the limits associated with the maintenance of the required number of borated water sources, there is no flowrate measuring instrumentation installed in these lines

5. Proposed Alternative and Basis for Use

It is proposed that quarterly Group A testing of the BAM pumps be accomplished utilizing the fixed-resistance BAM tank recirculation line. Pump differential pressure and vibration will be measured and compared to their respective reference values per ISTB-5121(c) and (d).

The removal of quarterly flow testing of these pumps has been deemed acceptable per NRC Generic Letter 89-04, Position 9, which allows elimination of minimum flow test line flowrate measurements providing inservice tests are performed during cold shutdowns or refueling periods under full or substantial flow conditions where pump flowrate is recorded and evaluated. The proposed alternate testing is consistent with this philosophy and the intent of Position 9.

Full flow testing will continue to be performed on a Comprehensive test frequency, during refueling conditions.

6. Duration of Proposed Alternative

This proposed alternative will be utilized for the entire 4th 120 month interval.

7. Precedents

This relief request was previously approved for the third ten-year interval at St. Lucie Plant 1 & 2 as Relief Request PR-03, by Safety Evaluation and Letter dated March 16, 1999.

Pump Relief Request – PR-07
Diesel Fuel Oil Transfer Pump 2A Comprehensive Flow Testing
(Page 1 of 3)

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

Alternative Provides Acceptable Level of Quality and Safety

1. ASME Code Component(s) Affected

Pump	Description	Class	Category	Unit
2DOT 2A	Diesel Fuel Oil Transfer Pump 1A	3*	Group B	2

* - Optional Upgrade to Class 3

NOTE
The St. Lucie Units 1 & 2 diesel fuel oil system was optionally upgraded to Class 3 and thus, testing is optional per ISTA-1320, "Classification". Consequently, this relief request is provided for information only and approval is not required.

2. Applicable Code Edition and Addenda

ASME OM Code 2001 Edition through 2003 Addenda

3. Applicable Code Requirement

ISTB-3300(e)(1) – Reference values shall be established within +/- 20% of pump design flow rate for the comprehensive test.

4. Reason for Request

Pursuant to 10 CFR 50.55a, "Codes and Standards", paragraph (a)(3), relief is requested from the requirement of ASME OM Code ISTB-3300(3)(1). The basis of the relief request is that the proposed alternative would provide an acceptable level of quality and safety.

The specified +/- 20% of pump design flow rate can not be achieved for the subject pump during normal quarterly Group B testing or during the Comprehensive pump test due to the alignment of the respective units diesel oil storage tanks. The design flow rate of the diesel oil transfer pump is 64 gpm at 68 feet of head as determined from the manufacturers pump curve at the Best Efficiency Point (BEP).

Pump Relief Request – PR-07
(Page 2 of 3)

Specifically, relief is requested from ISTB-3300(e)(1) in meeting the specified +/- 20% of design flow (51.2 gpm [64 gpm x 80%]) during the comprehensive pump test.

5. Proposed Alternative and Basis for Use

The Diesel Fuel Oil Transfer pump is required to automatically start when the associated Emergency Diesel Generator (EDG) is started during accident conditions and the associated Day Tank level decreases below the low level setpoint. The pump is required to transfer fuel oil from the Diesel Oil Storage Tank to the associated EDG Day Tank for consumption by the EDG.

The pump has an original manufacturers design rating of 25 gpm. UFSAR Table 9.5-1 indicates a flow rate of 25 gpm corresponding to 30 psig discharge pressure for the pump. The St. Lucie EDG Design Basis requires a flow rate of 9.5 gpm, which is at least twice the consumption rate of the EDG (4.75 gpm).

The 2A Diesel Oil Transfer Pump is a constant speed, centrifugal pump model 3196 manufactured by Gould. During normal operation the pump is in the standby mode aligned to take suction from the Diesel Oil Storage Tank (DOST) and discharge to the EDG Day Tank.

The design of the Diesel Fuel Oil system is such that the test loop used during quarterly testing allows recirculating flow back to the respective DOST. This flow path is un-instrumented and considered a fixed resistance system (see Attachment 1, Unit 2 Diesel Oil Transfer Pump Flow Path Sketch). Since the pump is categorized as a group B pump, differential pressure is used as the measured parameter while flow is not measured, nor is it required to be measured.

For the comprehensive test, however, the 2A Diesel Oil Transfer pump is aligned to take suction from the 2A DOST and discharge to the 2B DOST. In this alignment, the level change in the DOST can be correlated to pump delivered flow. Several issues exist with this alignment including a narrow band of DOST level constrained by Technical Specifications. The Unit 2 DOSTs are 125 gallons per inch of level. The overflows are located at 29 feet 2 ¼ inches. The minimum Unit 2 Technical Specification volume is greater than 40,000 gallons. Adding the unusable volume in the DOST, the minimum Technical Specification level corresponds to 27 feet.

The associated diesel consumption rate for the subject pump is less than 10 gpm, however, the pump Best Efficiency Point (BEP) flow rate is approximately 64 gpm. During the comprehensive pump test using the flow path described above, the reference value for flow is approximately 46 gpm. This value is 71.9 % of the BEP flow rate. The minimum Code required flow rate for the comprehensive test is 51.2 or 80%.

Pump Relief Request – PR-07
(Page 3 of 3)

As an alternative to testing at +/- 20 % of design flow, St. Lucie will test the 2A Diesel Oil Transfer pump at a reference flow rate of approximately 46 gpm versus 51.2 gpm (20 % of design flow of 64 gpm) each refueling outage. All other requirements of the comprehensive test will be followed. At this reference point of 46 gpm, the characteristic curve for the pump is essentially the same slope as at the Code required 51.2 gpm. Pump degradation as noted by measuring flow rate can be detected for a given differential pressure reference value.

The reference flow rate of 46 gpm corresponds to 71.9 % of pump design flow. At the reference conditions the flow values are currently at a point on the curve that is effective for monitoring and detecting degradation. Testing at this reference point has resulted in very repeatable measurements. To establish the flow rate within +/- 20 % of the BEP would require a flow rate of at least 51.2 gpm. Establishing the flow at 51.2 gpm does not increase the ability to detect degradation or assess pump conditions since the slope of the pump curve is essentially a straight line from 40 gpm to 60 gpm. Therefore, testing at higher flows does not increase the ability to detect hydraulic degradation.

The proposed flow rate reference value for the comprehensive test is 46 gpm. The slope of the pump manufacturer's curve at 46 gpm is approximately 4 gpm change for a change of 2 feet of head. The slope of the manufacturer's pump curve at the minimum Code required test point (51.2 gpm) is approximately 4 gpm change for a change of 2 feet of head. There is no significant difference between the slopes at these two points on the curve. Therefore the ability to detect and monitor degradation is not increased by increasing the flow rate.

Performance of the comprehensive test at approximately 5 gpm less than the Code required flow provides an accurate assessment of pump health and operational readiness.

Based on inventory concerns with the performance of this test, coupled with the risk of declaring multiple diesel generators inoperable, this alternative provides an acceptable level of quality and safety.

6. Duration of Proposed Alternative

This proposed alternative will be utilized for the entire 4th 120 month interval.

7. Precedents

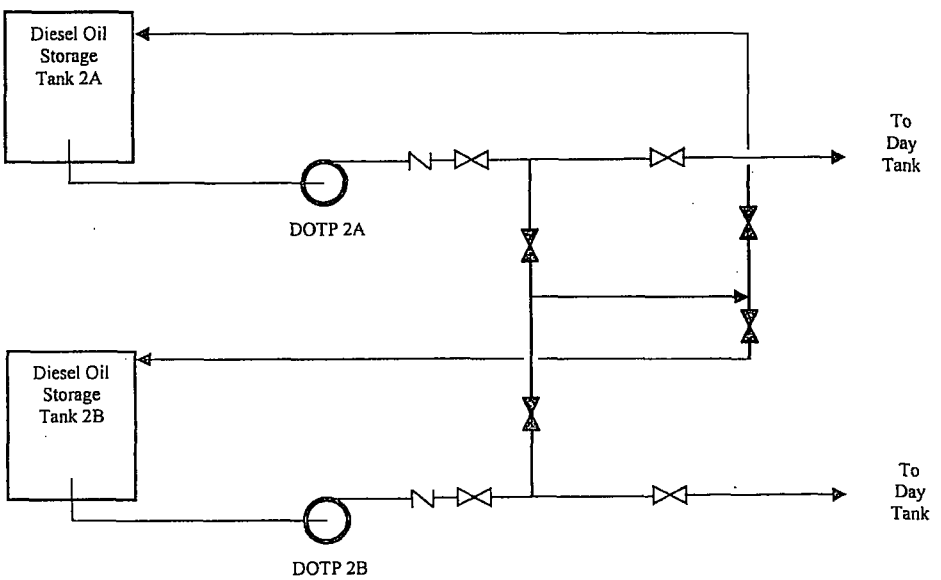
None

10 CFR 50.55a Request Number PR-07

(continued)

Attachment 1

Unit 2 Diesel Oil Transfer Pump Flow Path Sketch



Pump Relief Request – PR-08
Unit 1 Diesel Fuel Oil Transfer Pump Testing
(Page 1 of 4)

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

Alternative Provides Acceptable Level of Quality and Safety

1. ASME Code Component(s) Affected

Pump	Description	Class	Category	Unit
1DOT 1A	Diesel Fuel Oil Transfer Pump 1A	3*	Group B	1
1DOT 1B	Diesel Fuel Oil Transfer Pump 1B	3*	Group B	1

* - Optional Upgrade to Class 3

NOTE
The St. Lucie Units 1 & 2 diesel fuel oil system was optionally upgraded to Class 3 and thus, testing is optional per ISTA-1320, "Classification". Consequently, this relief request is provided for information only and approval is not required.

2. Applicable Code Edition and Addenda

ASME OM Code 2001 Edition through 2003 Addenda

3. Applicable Code Requirement

ISTB-5223 requires that "Comprehensive tests shall be conducted with the pump operating at a specified reference point."

4. Reason for Request

Pursuant to 10 CFR 50.55a, "Codes and Standards", paragraph (a)(3), relief is requested from the requirements of ASME OM Code ISTB-5223. The basis of the relief request is that the proposed alternative would provide an acceptable level of quality and safety.

As discussed in NUREG-1482 Revision 1, "Guidance for Inservice Testing at Nuclear Power Plants," Section 5.2, the use of pump curves for reference values of flow rate and differential pressure is acceptable when it is impractical to establish a set of fixed reference values. Section 5.2 of NUREG-1482 delineates the elements

Pump Relief Request – PR-08
(Page 2 of 4)

on the procedures for developing and implementing the curves that should be incorporated in to the IST Program. These elements are included in ASME OM Code Case OMN-9. Since Code Case OMN-9 is applicable to OM Code 1990 through OMb Code 1992, relief is required to implement Code Case OMN-9 with later editions of the Code.

In the latest (last revised August 2, 2006) issuance of 10 CFR 50.55a, 10 CFR 50.55(a)(b) states in part, that Regulatory Guide 1.192, "Operating and Maintenance Code Case Acceptability, ASME Code" (June 2003), has been approved for incorporation by reference by the Director of the Office of the Federal Register pursuant to 5 U.S.C. 552(a)and 1 CFR part 51. In Regulatory Guide 1.192, it states within Table 2, "Conditionally Acceptable OM Code Cases", that the alternative rules of ASME Code Case OMN-9, Rev. 0, may be applied with the following provisions:

(1) When a reference curve may have been affected by repair, replacement, or routine servicing of a pump, a new reference curve must be determined, or an existing reference curve must be reconfirmed, in accordance with Section 3 of this Code Case.

(2) If it is necessary or desirable, for some reason other than that stated in Section 4 of this Code Case, to establish an additional reference curve or set of curves, these new curves must be determined in accordance with Section 3.

This conditional acceptance of OMN-9, Rev. 0, per Regulatory Guide 1.192 is applicable in lieu of the provisions for using a pump curve for testing as specified in Subsection ISTB of the 1995 Edition up to and including the 2000 Addenda of the ASME OM Code.

St. Lucie Power Station proposes to adopt the requirements of Code Case OMN-9, as presented reaffirmed in the ASME OMb Code for 2006, in lieu of those requirements stated in ISTB-5223 for operating the pump at a specified reference point during the Comprehensive tests.

5. Proposed Alternative and Basis for Use

There is no instrumentation installed on the diesel fuel oil transfer system for readily determining pump flow rate information. Testing is performed by transferring fuel oil from one fuel oil storage tank to the opposite trains tank. Measurements of initial and final fuel oil tank levels are utilized for determining pump flow rate over the duration of the test. This methodology does not readily allow pump flow to be fixed to a reference value without repeated iterations of testing. Repeated testing is impractical due to the complex nature of the test and the relatively narrow band of fuel oil storage tank inventory available for testing.

Pump Relief Request – PR-08
(Page 3 of 4)

As discussed above it is extremely difficult to return to a specific value of flow rate for testing of these pumps. Multiple reference points could be established according to the Code, but it would be impracticable to obtain reference values at every possible point.

Therefore, the subject pumps will be tested in a range of flows and the results will be compared to acceptance criteria based on a portion of the pump curve and the hydraulic acceptance criteria given in ISTB.

Evaluation of pump performance and system requirements indicates that the diesel fuel oil transfer pumps have been performing acceptably. Comparison of pump head and flow values to expected values derived from the manufacturers pump curves indicates no abnormalities or degradation.

The following elements are used in developing and implementing the reference pump curves.

(1) A reference pump curve (flow rate vs. discharge pressure) has been established for the 1A and 1 B diesel fuel oil transfer pumps. These curves represent acceptable pump performance which exceeds the performance indicated on the manufacturers pump curves.

(2) To reduce the uncertainty associated with the pump curves and increase the adequacy of the acceptance criteria, special pressure test gauges (plus or minus 0.5 full scale accuracy) were installed. Level in the fuel oil tank is measured using a level tape that is capable of measuring fuel oil tank level change to plus or minus 1/16th of an inch. The amount of fuel transferred is sufficient to include allowance for fuel oil tank volume inaccuracy within this 1/16th of an inch level span. The combination of level measurement accuracy and test interval facilitates accurate flow rate measurements meeting Code accuracy requirements.

(3) The reference pump curves are based on five test points enveloping the rated capacity of the pumps and the portion of the curves to be duplicated during future testing.

(4) The reference pump curves exhibit an essentially constant downward slope throughout all flows for the pumps. The design flow is within in the range of test flow points. The pump design flow and the Best Efficiency Point (BEP) for the pumps bound the portion of the curves to be duplicated for future testing.

Pump Relief Request – PR-08
(Page 4 of 4)

(5) The acceptance criteria limits do not conflict with Technical Specifications or Final Safety Analysis Report operability criteria. The testing is adequate for ensuring the design flow of 25 gpm is capable of being transferred to the emergency diesel generators as required.

(6) Review of vibration data shows no significant variance in vibration readings over the range of flows tested. Thus only one fixed reference value has been assigned for each vibration location.

(7) After any maintenance or repair that may affect the existing reference pump curve, a new reference pump curve shall be determined or the existing pump curve validated by an inservice test. New reference pump curves shall be established based upon at least 5 points enveloping the rated capacity of the pumps and the portion of the curves to be duplicated during future testing.

Acceptance criteria will be based on a portion of the pump curve and not on discreet reference values. The guidelines set forth in Code Case OMN-9 and the conditions identified in Regulatory Guide 1.192 will be followed.

Using the provisions of this relief request as an alternative to the specific requirements of ISTB-5223 identified above will provide adequate indication of pump performance and continue to provide an acceptable level of quality and safety. Therefore, pursuant to 10 CFR 50.55a(a)(3)(i) we request relief from the specific ISTB Code requirements identified in this relief request.

6. Duration of Proposed Alternative

This proposed alternative will be utilized for the entire 4th 120 month interval.

7. Precedents

A similar relief request was utilized during the third ten-year interval at St. Lucie Plant Unit 1 and was identified as Relief Request PR-14.

Similar relief requests, P-3 and P-4, were previously approved for North Anna Power Station Units 1 & 2 on April 11, 2006. Docket Nos. 50-338 and 50-339 (TAC Nos. MC6663, MC6664, MC6665, and MC6666).

ATTACHMENT 4

VALVE RELIEF REQUEST INDEX

Designator	Description	Approval Date
	NONE	

ATTACHMENT 5

VALVE RELIEF REQUESTS

NONE

ATTACHMENT 6

COLD SHUTDOWN JUSTIFICATION INDEX

Cold Shutdown Justification No.	Description
CS-01	Pressurizer Spray Control Valves – Unit 1
CS-02	Reactor Coolant System Vents
CS-03	Auxiliary Pressurizer Spray Valves
CS-04	Letdown Line Isolation Valves
CS-05	Volume Control Tank Outlet Valve
CS-06	RCP Seal Water Return Valves
CS-07	SI Pump Discharge Check Valves
CS-08	Shutdown Cooling Suction RCS Isolation Valves
CS-09	Main Steam Isolation Valves
CS-10	Main Steam Isolation Valve Bypass Valves
CS-11	Main Feedwater Pump Isolation Valves
CS-12	Main Feedwater Isolation Valves
CS-13	RCP Cooling Water Supply / Return Isolation Valves
CS-14	SIT Vent Valves
CS-15	Primary Containment Instrument Air Supply
CS-16	Unit 2 Containment Purge Valves

ATTACHMENT 7

COLD SHUTDOWN JUSTIFICATIONS

Cold Shutdown Justification - CS-01
(Rev. 0)
(Page 1 of 1)

Valve Number	System	Class	Category	Unit
1PCV-1100E	RCS	1	B	1
1PCV-1100F	RCS	1	B	1

Function

These angle valves are the unit 1 Pressurizer Spray Valves. During normal power operations, these two air operated valves are used to control RCS pressure by automatically throttling the spray flow into the pressurizer. During a post-LOCA recovery, hot-leg injection into the reactor is required. The alternate flowpath for hot-leg injection is via the auxiliary spray line into the pressurizer and out through the surge line into the RCS hot-leg. To insure the maximum hot-leg injection flow, this valve must be closed to block any back flow through the normal spray line into the RCS cold-leg.

Justification

It is impracticable to full stroke close exercise these valves during operation as it would have an immediate negative effect on RCS pressure. The increased spray flow would condense part of the steam bubble inside the pressurizer, resulting in a rapid drop in pressurizer pressure, resulting in a rapid drop in RCS pressure, resulting in a plant trip.

Alternative Frequency

These subject valves shall be full-stroke exercised to the closed position during cold shutdown per ISTC-3521(c)

Cold Shutdown Justification - CS-02
(Rev. 0)
(Page 1 of 1)

Valve Number	System	Class	Category	Unit
1V1441	RCS	2	B	1
1V1442	RCS	2	B	1
1V1443	RCS	2	B	1
1V1444	RCS	2	B	1
1V1445	RCS	2	B	1
1V1446	RCS	2	B	1
1V1449	RCS	2	B	1
2V1460	RCS	2	B	2
2V1461	RCS	2	B	2
2V1462	RCS	2	B	2
2V1463	RCS	2	B	2
2V1464	RCS	2	B	2
2V1465	RCS	2	B	2
2V1466	RCS	2	B	2

Function

These globe valves are the Reactor Coolant Gas Vent Valves. This normally closed (key locked) solenoid operated valve must open to vent non-condensable gases trapped in the reactor vessel head/pressurizer to either the quench tank or the containment atmosphere during post accident conditions when large quantities of gases may collect in these high points. During normal plant operation, the valve is maintained closed to prevent inadvertent operation of the system .

Justification

It is impracticable to exercise these valves closed during normal power operations. Stroking these valves during normal operation would result in not only an increase in the leakage rate from the RCS to levels not allowable in Technical Specifications, but due to a high dP across the valve, would result in a higher probability of the valve sticking open, which would result in even greater leakage from the RCS and result in the violation of Technical Specification 3.4.15 (both Unit 1 and 2), which requires that these valves be closed during modes 1 through 4. It is therefore impractical to stroke these valves which are required by Technical Specifications to be locked closed during Modes 1 through 4.

Alternative Frequency

These subject valves shall be full-stroke exercised to during cold shutdown per ISTC-3521(c)

Cold Shutdown Justification - CS-03
(Rev. 0)
(Page 1 of 1)

Valve Number	System	Class	Category	Unit
1SE-02-03	CVCS	1	B	1
1SE-02-04	CVCS	1	B	1
2SE-02-03	CVCS	1	B	2
2SE-02-04	CVCS	1	B	2

Function

These normally locked closed (key switch) solenoid operated globe valves are the Aux Pressurizer Spray Isolation Valve. These valves must open by remote manual operation to provide a flow path from the charging system to the pressurizer. This function provides an auxiliary flow path to cool and depressurize the pressurizer. The Unit 1 valves must also open by remote manual operation to provide an alternate hot leg injection flow path from the HPSI pumps to the pressurizer during long term post accident cooling

Justification

It is impracticable to exercise these valves open or closed during normal power operations. Opening either one of the units valves (or failure in the open position) during plant operation would result in an undesirable RCS pressure transient that could result in a plant trip. In addition to the immediate pressure transient consequences, flow through these valves would result in subjecting the pressurizer lines and spray nozzles to a thermal shock.

Alternative Frequency

These subject valves shall be full-stroke exercised during cold shutdown per ISTC-3521(c)

Cold Shutdown Justification - CS-04
(Rev. 0)
(Page 1 of 1)

Valve Number	System	Class	Category	Unit
1V2515	CVCS	1	A	1
1V2516	CVCS	1	A	1
2V2515	CVCS	1	B	2
2V2516	CVCS	1	A	2
2V2522	CVCS	2	A	2
2V2523	CVCS	2	B	2

Function

Valves 1(2)V2515/16 are air operated globe valves, located in the supply line to the Regenerative Heat Exchanger from the RCS. These valves are required to close upon receipt of either a CIS or SIAS signal and function as containment isolation valves. (except for 2V2515, which only closes on an SIAS and does not function as a CIV)

Valve 2V2522 is the Unit 2 Letdown Containment Isolation Valve, an air operated globe valve and closes on a CIS signal.

Valve 2V2523 is the Unit 2 Charging Header Isolation Valve, an air operated gate valve, through which charging flow passes on its way back to the RCS

Justification

It is impracticable to exercise these valves open or closed during normal power operations. Stroke time testing any of these valve, which would involve the closure of the valve during operation would result in either the removal of charging into the RCS, or the cessation of letdown flow, resulting in pressurizer level transients that could result in a potential plant trip and shutdown.

In addition to pressurizer level transients, closure of 2V2523 has the potential of causing damage to the operating charging pump by dead heading the pump and lifting it's relief valve.

Alternative Frequency

These subject valves shall be full-stroke exercised during cold shutdown per ISTC-3521(c)

Cold Shutdown Justification - CS-05
(Rev. 0)
(Page 1 of 1)

Valve Number	System	Class	Category	Unit
1V2501	CVCS	2	B	1
2V2501	CVCS	2	B	2

Function

Valves 1(2)V2501 are the Unit 1 and 2 Volume Control Tank (VCT) Discharge Isolation Gate Valves. These valve remain open during power operation, providing a suction flowpath from the VCT to the charging pump suction. These valves close upon receipt of a SIAS to prevent diversion, along with it's associated downstream check valve, of flow from the charging system back into the VCT.

Justification

It is impracticable to exercise these valves open or closed during normal power operations. Closing this valve during power operation would isolate the VCT from the charging pump suction header and potentially damage any operating charging pump. In addition, loss of suction flow to a charging pump would result in loss of charging flow, which would then be accompanied by a pressurizer level transient resulting in the potential of a plant trip.

Alternative Frequency

These subject valves shall be full-stroke exercised during cold shutdown per ISTC-3521(c)

Cold Shutdown Justification - CS-06
(Rev. 0)
(Page 1 of 1)

Valve Number	System	Class	Category	Unit
1SE-01-1	CVCS	2	A	1
1V2505	CVCS	2	A	1
2V2505	CVCS	2	A	2
2V2524	CVCS	2	A	2

Function

These above reference valves are either air operated gate or globe valves in the Reactor Coolant Pump (RCP) seal return line. These valve close upon a CIS.

Justification

It is impracticable to exercise these valves closed during normal power operations. The closure of any of these valves during power operation, which would be during RCP operation, would remove RCP seal flow, resulting in damage to the pumps seal package. Pump seal failure would result in immediate plant shutdown.

Alternative Frequency

These subject valves shall be full-stroke exercised during cold shutdown, when RCPs are secured per ISTC-3521(c)

Cold Shutdown Justification - CS-07
(Rev. 0)
(Page 1 of 1)

Valve Number	System	Class	Category	Unit
1V3659	SI	2	B	1
1V3660	SI	2	B	1

Function

These motor operated valves must remain open to provide a flowpath for minimum flow requirements for the HPSI and LPSI pumps. These valves must also close so as to isolate the min flow path from the HPSI and LPSI Pumps to the RWT following receipt of a recirculation actuation signal (RAS).

Justification

It is impracticable to exercise these valves closed during normal power operations. Closure of either of these two valves during Modes 1-4 would result in rendering all the HPSI and LPSI pumps inoperable, having removed their recirculation path back to the RWT. Without a pump min flow recirculation path, operation of either class of pump could result in damage to the pump due to loss of cooling flow. As a result, it is undesirable to stroke time test these valves in any other condition then when the associated pumps are OOS, to prevent potential damage to the pump.

Alternative Frequency

These subject valves shall be full-stroke exercised during cold shutdown, when neither the LPSI or HPSI pumps are capable of automatic starting. ISTC-3521(c)

Cold Shutdown Justification - CS-08
(Rev. 0)
(Page 1 of 1)

Valve Number	System	Class	Category	Unit
1V3480	SI	1	A	1
1V3481	SI	1	A	1
1V3651	SI	1	A	1
1V3652	SI	1	A	1
2V3480	SI	1	A	2
2V3481	SI	1	A	2
2V3651	SI	1	A	2
2V3652	SI	1	A	2

Function

These motor operated gate valves are the shutdown cooling suction isolation valves. These valves must open to provide a suction flowpath from the RCS for shutdown cooling. The Unit 1 valves must open to provide a flowpath following a LOCA for hot let injection. These valves must also close to provide a Pressure Isolation Valve (PIV) function between the RCS and the shutdown cooling system.

Justification

It is impracticable to exercise these valves open or closed (full or partial) during normal power operations since opening the valves places the plant in an undesirable configuration.

These valves are provided with electrical interlocks that prevent opening during reactor power operation, when RCS pressure exceeds 267 psia (276 psia for Unit 2). If the interlocks were to be defeated during normal operation these valves would be subjected to a large differential pressure (in excess of 2000 psid). At this differential pressure the valve operators are incapable of opening the valves. Then even if they could be opened at these higher differential pressure, the resultant stroking of the valve could result in damage to their seating surfaces. For these reasons exercising these valves in any plant condition other than cold shutdown is impractical.

Alternative Frequency

These valves will be exercised open and closed on a Cold Shutdown frequency during conditions which allow for an adequate test to be performed per. ISTC-3521(c)

Cold Shutdown Justification - CS-09
(Rev. 0)
(Page 1 of 1)

Valve Number	System	Class	Category	Unit
1HCV-08-1A	MS	2	B/C	1
1HCV-08-1B	MS	2	B/C	1
2HCV-08-1A	MS	2	B	2
2HCV-08-1B	MS	2	B	2

Function

These valves on Unit 1 are air operated power check valves, and on Unit two are air operated globe valves. These valves are open to provide a flow path for steam from the steam generators to the turbine. This valve must close to prevent the uncontrolled blowdown of the associated steam generator in the event of a main steam line break, and to prevent the release of radioactive material in the event of a Steam Generator Tube Rupture.

Justification

It is impracticable to exercise these valves closed during normal power operations since closing these valves places the plant in an undesirable configuration.

Closing these valves for testing during normal power operations would interrupt steam flow from the Steam Generator to the main steam/turbine systems and result in a severe transient. Partial stroke exercising these valves is also impracticable since even a part-stroke exercise increases the risk of a valve closure when the unit is generating power.

Alternative Frequency

These valves will be exercised closed on a Cold Shutdown frequency during conditions which allow for an adequate test to be performed per. ISTC-3521(c)

Cold Shutdown Justification - CS-10
(Rev. 0)
(Page 1 of 1)

Valve Number	System	Class	Category	Unit
2MV-08-1A	MS	2	B	2
2MV-08-1B	MS	2	B	2

Function

These motor operated globe valves are the Main Steam Isolation Valve Bypass Valves. These valve are opened during start up to provide steam downstream of the MSIV's to warm the lines. These valves are closed to provide pressure boundary integrity, containment integrity and provide isolation of the affected steam generator following a SGTR.

Justification

It is impracticable to exercise these valves closed during normal power operations since opening the valves places the plant in an undesirable configuration.

These Unit 2 valves, while installed in an orientation that ensures that they will close on an MSIS can not be assured to close against reverse steam flow. As a result both physical and administrative controls have been put in place so that during normal plant operation, the bypass valves are closed and the control circuit defeat switches are in the DEFEAT position with the key removed. [Ref. System Training Instruction 0711304, Rev. 16, page 19]

The operating criteria and interlocks prevent opening either of these valves whenever the MSIV or Bypass valve in the other steam line are open. Thus during normal plant operation these valves cannot be cycled.

Alternative Frequency

These valves will be exercised closed on a Cold Shutdown frequency during conditions which allow for an adequate test to be performed per. ISTC-3521(c)

Cold Shutdown Justification - CS-11
(Rev. 0)
(Page 1 of 1)

Valve Number	System	Class	Category	Unit
1MV-09-01	FW	NC	B	1
1MV-09-02	FW	NC	B	1

Function

These motor driven gate valves are the Main Feedwater Pump Discharge Isolation Valves. This valve close upon receipt of either a Safety Injection Actuation Signal (SIAS) or Main Steam Isolation Signal (MSIS) to minimize the amount of water that may be injected into a faulted Steam Generator.

Justification

It is impracticable to exercise these valves closed during normal power operations since exercising these valves may result in a plant transient and subsequent reactor trip.

Exercising these valves closed during normal power operations requires isolating normal feedwater flow to the Steam Generator. This testing could result in a severe transient (i.e. level) in the associated Steam Generator and subsequent trip or the reactor. Partial stroke exercising these valves is also impracticable since even a part-stroke exercise increases the risk of a valve closure when the unit is generating power.

Alternative Frequency

These valves will be exercised to their safety related positions on a Cold Shutdown frequency during conditions which allow for an adequate test to be performed per. ISTC-3521(c)

Cold Shutdown Justification - CS-12
(Rev. 0)
(Page 1 of 1)

Valve Number	System	Class	Category	Unit
1HCV-09-7	FW	2	B	1
1HCV-09-8	FW	2	B	1
2HCV-09-1A	FW	2	B	2
2HCV-09-1B	FW	2	B	2
2HCV-09-2A	FW	2	B	2
2HCV-09-2B	FW	2	B	2

Function

These gate valves are the units Main Feedwater Isolation Valves. The Unit 1 pneumatically operated valves close to isolate main feedwater flow from the generator upon both an Safety Injection Isolation Signal (SIAS) and Main Steam Isolation Signal (MSIS). The Unit 2 hydraulic-pneumatically operated valves close to isolate main feedwater flow from the generator upon both a MSIS and an Aux Feedwater Actuation Signal (AFAS)

Justification

It is impracticable to exercise these valves closed during normal power operations since exercising these valves may result in a plant transient and subsequent reactor trip.

Exercising these valves closed during normal power operations requires isolating normal feedwater flow to the Steam Generator. This testing could result in a severe transient (i.e. level) in the associated Steam Generator and subsequent trip or the reactor. Partial stroke exercising these valves is also impracticable since even a part-stroke exercise increases the risk of a valve closure when the unit is generating power.

Alternative Frequency

These valves will be exercised closed on a Cold Shutdown frequency during conditions which allow for an adequate test to be performed per. ISTC-3521(c)

Cold Shutdown Justification - CS-13
(Rev. 0)
(Page 1 of 1)

Valve Number	System	Class	Category	Unit
1HCV-14-1	CCW	2	A	1
1HCV-14-2	CCW	2	A	1
1HCV-14-6	CCW	2	A	1
1HCV-14-7	CCW	2	A	1
2HCV-14-1	CCW	2	A	2
2HCV-14-2	CCW	2	A	2
2HCV-14-6	CCW	2	A	2
2HCV-14-7	CCW	2	A	2

Function

These power operated butterfly valves are the RCP Cooling Water Containment Isolation Valves. Flow through these valves provide cooling for both the RCPs and the Control Rod Drive (CRD) motors. These valves close so as to provide containment isolation.

Justification

It is impracticable to exercise these valves during normal power operations since closing the valves places the plant in an undesirable configuration.

These valves are required to remain open to ensure a continued supply of cooling water to both the reactor coolant pump and the control rod drives. Closing any of these valves during plant operation could result in severe RCP and CRD damage leading to plant operation in a potentially unsafe mode and a subsequent plant shutdown.

Alternative Frequency

These valves will be exercised closed on a Cold Shutdown frequency during conditions which allow for an adequate test to be performed per. ISTC-3521(c)

Cold Shutdown Justification - CS-14
(Rev. 0)
(Page 1 of 1)

Valve Number	System	Class	Category	Unit
2V3733	SI	2	B	2
2V3734	SI	2	B	2
2V3735	SI	2	B	2
2V3736	SI	2	B	2
2V3737	SI	2	B	2
2V3738	SI	2	B	2
2V3739	SI	2	B	2
2V3740	SI	2	B	2

Function

These globe valves are the Safety Injection Tank (SIT) Vent valves. These valves must open to vent the SIT in the event the SIT outlet MOV cannot be closed to isolate the SIT from the RCS during plant cooldown. These valves must also remain closed to maintain Safety Injection Tank nitrogen pressure during Modes 1-3.

Justification

It is impracticable to exercise these valves during normal power operations since the act of testing this valve in would result in placing the plant in an undesirable configuration.

Stroking these valves during Modes 1-3 would result in venting the pressurized nitrogen cover gas from the SIT's, possibility reducing the pressure to below Technical Specification limits, potentially resulting in the unnecessary shutdown of the plant. It is for that reason that these valves are normally locked closed with their fuses pulled.

Alternative Frequency

These valve will be exercised open and closed on a Cold Shutdown frequency during conditions which allow for an adequate test to be performed per. ISTC-3521(c)

Cold Shutdown Justification - CS-15
(Rev. 0)
(Page 1 of 1)

Valve Number	System	Class	Category	Unit
2HCV-18-1	IA	2	A	2

Function

This globe valve is the Instrument Air Containment Isolation Valve. This valve provides a flow path for instrument air into containment, and must close to provide containment isolation.

Justification

It is impracticable to exercise this valve during normal power operations since the act of testing this valve would result in placing the plant in an undesirable configuration.

Closing this valve isolates operating air to critical components in the containment building including the pressurizer spray, RCP cooling water supply and return, and CVCS letdown isolation valves and could cause severe plant transients, RCP damage and a plant trip. Failure in the closed position would cause a plant shutdown and RCP damage.

Alternative Frequency

These valve will be exercised open and closed on a Cold Shutdown frequency during conditions which allow for an adequate test to be performed per. ISTC-3521(c)

Cold Shutdown Justification - CS-16
(Rev. 0)
(Page 1 of 1)

Valve Number	System	Class	Category	Unit
2FCV-25-1	HVAC	2	B	2
2FCV-25-2	HVAC	2	A	2
2FCV-25-3	HVAC	2	A	2
2FCV-25-4	HVAC	2	A	2
2FCV-25-5	HVAC	2	A	2
2FCV-25-6	HVAC	2	B	2

Function

These butterfly valves are the Containment Purge Isolation Valves. These valves provide a flow path for the introduction of exhaust air from the containment, and must close to provide containment isolation.

Justification

It is impracticable to exercise these valves during normal power operations since the act of testing this valves would result in placing the plant in an undesirable configuration.

These valves are required by Technical Specification 3.6.1.7 to be maintained in the closed position when the plant is operating in Modes 1, 2, 3 or 4. Stroking these valves while in either Modes 1, 2, 3 or 4 would result in the plant entering in an Action statement which is not the intent of the IST Program.

Alternative Frequency

These valve will be exercised open and closed on a Cold Shutdown frequency during conditions which allow for an adequate test to be performed per. ISTC-3521(c)

ATTACHMENT 8

REFUEL OUTAGE JUSTIFICATION INDEX
(Page 1 of 1)

Refueling Outage Justification No.	Description
	NONE

ATTACHMENT 9

REFUEL OUTAGE JUSTIFICATIONS

NONE

ATTACHMENT 10

STATION TECHNICAL POSITION INDEX

Technical Position No.	Description
TP-01	Bi-directional Testing of Check Valves with Non Safety Positions
TP-02	Passive Valves without Test Requirements
TP-03	Fail Safe Testing of Valves
TP-04	Manual Valve Exercise Frequency
TP-05	Check Valves in Regular Use
TP-06	Categorization of IST Pumps (Group A or B)
TP-07	Check Valve Condition Monitoring
TP-08	Thermal Relief Valves
TP-09	Classification of Skid Mounted Components
TP-10	Testing of Containment Purge Valves
TP-11	Testing of Power Operated Valves with Both Active and Passive Safety Functions.

ATTACHMENT 11

STATION TECHNICAL POSITIONS

Technical Position TP-01
(Page 1 of 3)
(Rev. 0)

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

Purpose

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

Applicability

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

Background

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

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

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

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

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

Technical Position TP-01
(Page 2 of 3)

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

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

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

Position

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

1. An appropriate means shall be determined which establishes the method for determining the open/closed non-safety function of the check valve during normal operations. The position determination may be by direct indicator, or by other positive means such as changes in system pressure, flow rate, level, temperature, seat leakage, etc. This determination shall be documented in the respective Condition Monitoring Plan for the specific check valve group. For check valves included in the Inservice Testing Program and not included in the Condition Monitoring Plan, this determination shall be documented in the IST Bases Document for the specific check valve group.

Technical Position TP-01
(Page 3 of 3)

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

3. Observation and analysis of plant logs and other records may be an acceptable method for verifying a check valves non-safety direction function verification during normal plant operations.

The open/closed non-safety function shall be recorded at a frequency required by ISTC-3510, nominally every 3 months, (with exceptions as allowed), in plant records such as the St. Lucie Station Operating Logs, Electronic Rounds, chart recorders, automated data loggers, etc. The safety function direction testing requires a Quality Record in the form of a surveillance test. Records as indicated above in 1 through 3 are satisfactory for the non-safety direction testing. A Condition report shall be generated for any issues regarding check valve operability.

Justification

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

Technical Position TP-02

(Page 1 of 2)
(Rev. 0)

Passive Valves Without Test Requirements

Purpose

The purpose of this Technical Position is to establish the station position for valves which perform a passive safety function for which there is no testing required in accordance with ISTC.

Applicability

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

'An example is a manual valve which must remain in its normal position during an accident, to perform its intended function.'

Typically, manual valves that perform a safety function are locked in their safety position and administratively controlled by St. Lucie site procedures. These valves would be considered passive. If they do not have remote position indicating systems and are categorized as B, they would not be subjected to any test requirements in accordance with Table ISTC-3500-1.

Position

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

- The valve is categorized B (seat leakage in the closed position is inconsequential for fulfillment of the valves' required function(s)) in accordance with ISTC-1300.
- The valve is considered passive (valve maintains obturator position and is not required to change obturator position to accomplish the required function(s)) in accordance with ISTA-2000.
- The valve does not have a remote position indicating system which detects and indicates valve position.

Technical Position TP-02
(Page 2 of 2)

Justification

Valves that meet this position will not be listed in the St. Lucie Inservice Testing Program, Valve Tables - Attachment 15, however, the basis for categorization and consideration of active/passive functions shall be documented in the IST Program Basis Document.

Technical Position TP-03
(Page 1 of 2)
(Rev. 0)

Fail Safe Testing of Valves

Purpose

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

Applicability

This Technical Position is applicable to valves with fail-safe actuators required to be tested in accordance with ISTC-3560.

Background

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

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

Section ISTC-3510 states;

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

Position

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

St. Lucie will also use remote position indication as applicable to verify proper fail-safe operation, provided that the indication system for the valve is periodically verified in accordance with ISTC-3700.

Technical Position TP-03
(Page 2 of 2)

Justification

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

Technical Position TP-04
(Page 1 of 2)
(Rev. 0)

Manual Valve Exercise Frequency

Purpose

The purpose of this Technical Position is to establish the station position for the frequency of exercising those manual valves which are required to be exercised.

Applicability

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

Background

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

> "Manual valves shall be full-stroke exercised at least once every 5 years, except where adverse conditions[2] may require the valve to be tested more frequently to ensure operational readiness."
>
> [2]Harsh service environment, lubricant hardening, corrosive or sediment laden process fluid, or degraded valve components are some examples of adverse conditions.

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

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

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

Position

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

Technical Position TP-04
(Page 2 of 2)

Justification

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

Technical Position TP-05
(Page 1 of 2)
(Rev. 0)

Check Valves in Regular Use

Purpose

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

Applicability

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

Background

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

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

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

Normal and/or expected system flow may vary with plant configuration and alignment. The open "safety function" of a check valve typically requires a specified design accident flow rate. For these subject valves, the normal system flow is above the design accident flow rates. Since the St. Lucie Operations staff is trained so as to be able to recognize normal plant conditions, Operator judgment has been deemed acceptable for the purpose of determining check valve open demonstration by observing either normal or expected flow rates for the plant operating condition.

Position

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

Technical Position TP-05
(Page 2 of 2)

Justification

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

Technical Position TP-06
(Page 1 of 3)
(Rev. 0)

Categorization of IST Pumps (Group A or B)

Position

The St. Lucie Station has categorized the pumps which are required to be included in the Inservice Testing Program[a] as either Group A and/or B in accordance with the requirements of ISTB-2001/2003a and St. Lucie Relief Request PR-04.

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

Pump EPN	Class	Group	Type	Function
CCW PP 1A	3	A	Centrifugal	Component Cooling Water
CCW PP 1B	3	A	Centrifugal	Component Cooling Water
CCW PP 1C	3	A	Centrifugal	Component Cooling Water
CCW PP 2A	3	A	Centrifugal	Component Cooling Water
CCW PP 2B	3	A	Centrifugal	Component Cooling Water
CCW PP 2C	3	A	Centrifugal	Component Cooling Water
BAM PP 1A	2	A	Centrifugal	Boric Acid Makeup
BAM PP 1B	2	A	Centrifugal	Boric Acid Makeup
BAM PP 2A	2	A	Centrifugal	Boric Acid Makeup
BAM PP 2B	2	A	Centrifugal	Boric Acid Makeup
CHRG PP 1A	2	A	Positive Disp	Charging
CHRG PP 1B	2	A	Positive Disp	Charging
CHRG PP 1C	2	A	Positive Disp	Charging
CHRG PP 2A	2	A	Positive Disp	Charging
CHRG PP 2B	2	A	Positive Disp	Charging
CHRG PP 2C	2	A	Positive Disp	Charging
ICW PP 1A	3	A	Vert Line Shaft	Intake Cooling Water
ICW PP 1B	3	A	Vert Line Shaft	Intake Cooling Water
ICW PP 1C	3	A	Vert Line Shaft	Intake Cooling Water
ICW PP 2A	3	A	Vert Line Shaft	Intake Cooling Water
ICW PP 2B	3	A	Vert Line Shaft	Intake Cooling Water
ICW PP 2C	3	A	Vert Line Shaft	Intake Cooling Water

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

Technical Position TP-06
(Page 2 of 3)

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

Pump EPN	Class	Group	Type	Function
CNTMT SPR PP 1A	2	B	Centrifugal	Containment Spray
CNTMT SPR PP 1B	2	B	Centrifugal	Containment Spray
CNTMT SPR PP 2A	2	B	Centrifugal	Containment Spray
CNTMT SPR PP 2B	2	B	Centrifugal	Containment Spray
HYDRZN PP 2A	2	B	Positive Disp.	Hydrazine
HYDRZN PP 2B	2	B	Positive Disp.	Hydrazine
AFW PP 1A	3	B	Centrifugal	Aux Feed Water
AFW PP 1B	3	B	Centrifugal	Aux Feed Water
AFW PP 1C	3	B	Centrifugal	Aux Feed Water
AFW PP 2A	3	B	Centrifugal	Aux Feed Water
AFW PP 2B	3	B	Centrifugal	Aux Feed Water
AFW PP 2C	3	B	Centrifugal	Aux Feed Water
HPSI PP 1A	2	B	Centrifugal	High Press Safety Inj
HPSI PP 1B	2	B	Centrifugal	High Press Safety Inj
HPSI PP 2A	2	B	Centrifugal	High Press Safety Inj
HPSI PP 2B	2	B	Centrifugal	High Press Safety Inj

ASME OM ISTB-1400(b) states in part that a pump that meets both Group A and Group B pump definitions shall be categorized as a Group A pump. Relief Request PR-04 however provides for the treatment of the below pumps as both Group A and Group B, based upon the circumstances and evaluation provided with Relief Request PR-04.

Pump EPN	Class	Group	Type	Function
LPSI PP 1A	2	A/B	Centrifugal	Low Press Safety Inj
LPSI PP 1B	2	A/B	Centrifugal	Low Press Safety Inj
LPSI PP 2A	2	A/B	Centrifugal	Low Press Safety Inj
LPSI PP 2B	2	A/B	Centrifugal	Low Press Safety Inj

Technical Position TP-06
(Page 3 of 3)

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

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

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

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

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

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

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

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

The following instrument accuracy requirements apply to each test type:

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

Technical Position - TP-07
(Page 1 of 6)
(Rev. 0)

Check Valve Condition Monitoring

Purpose

The purpose of this Technical Position is to document the St. Lucie Station's position on establishing and implementing a Check Valve Condition Monitoring Program in accordance with mandatory Appendix II of the ASME OM Code 2001 Edition through 2003 Addenda. The Condition Monitoring Program specified in Appendix II provides certain flexibility in establishing test types, examinations, and preventive maintenance activities along with their associated intervals, when justified based on check valve performance and operating condition.

Applicability

This Technical Position is applicable to certain valves or groups of valves as permitted by ISTC-5222, Condition Monitoring Program.

Background

10CFR50.55a was revised 11/22/99 to endorse the ASME OMa-1995 Edition with 1996 Addenda with modifications. These modifications have been incorporated into the 2003 Addenda of the 2001 Edition of the ASME OM Code. This edition of the ASME OM Code provides provisions to implement a check valve condition monitoring program for selected valves or groups of valves in accordance with mandatory Appendix II. St. Lucie's Inservice Testing Program for the 4th Ten Year Interval has been developed in accordance with the ASME OM Code 2001 Edition through 2003 Addenda. This edition of the Code provides an alternative in section ISTC-5222, Condition Monitoring Program, to the testing requirements of ISTC-3510, ISTC-3520, ISTC-3550 and ISTC-5221. This section specifies that the program shall be implemented in accordance with Appendix II, Check Valve Condition Monitoring Program.

Position

St. Lucie Station will implement a Check Valve Condition Monitoring program for selected valves or groups of valves in accordance with ISTC-5222 and Appendix II. The following guidelines will be adhered to for administering this program. Additionally, if the Appendix II program is discontinued for a valve or group of valves, then the requirements of ISTC-3510, ISTC-3520, ISTC-3550, and ISTC-5221 shall be implemented.

Technical Position - TP-07
(Page 2 of 6)

1. Purpose

The purpose of the Check Valve Condition Monitoring Program is to improve check valve performance and to optimize testing, examination, and preventive maintenance activities in order to maintain the continued acceptable performance of a select valve or group of valves.

2. Scope

The St. Lucie Station Check Valve Condition Monitoring Program will be applied to individual check valves or groups of check valves which are either candidates for improved performance or candidates which will be monitored for improved valve performance.

a. Candidates for improved valve performance are those check valves which may exhibit one or more of the following attributes:

   i. The valve(s) exhibits an unusually high failure rate during inservice testing or operations;
   ii. The valve(s) can not be exercised under normal operating conditions or during shutdown;
   iii. The valve(s) exhibits unusual, abnormal, or unexpected behavior during exercising or operations.

b. Candidates for monitoring for improved valve performance using optimization techniques, examination, and preventive maintenance activities are those check valves with documented acceptable performance that:

   i. Have had their performance improved under this program;
   ii. Cannot be exercised or are not readily exercised during normal operating condition or during shutdown;
   iii. Can only be disassembled and examined; or
   iv. It is decided that all of the associated activities of the valve or group will be optimized.

Technical Position - TP-07
(Page 3 of 6)

3. Groupings

For valves which are grouped together the following valve attributes shall be considered:

a. Valves shall be of the same manufacturer, design, size, service media, materials of construction, and orientation.
b. Maintenance and modification history shall be reviewed.
c. Test history and results shall be reviewed.
d. System design shall be considered to determine potential flow instabilities, degree of disassembly, and the need for tolerance and dimensional measurements

4. Analysis

An analysis of the test and maintenance history shall be performed to establish the basis for specifying inservice testing, examination, and preventive maintenance activities. This analysis shall include the following:

a. Identify any common failure mode or corrective maintenance patterns.
b. Analyze these common patterns to determine their significance and to identify potential failure mechanisms:

    i. Determine if certain preventive maintenance activities would mitigate the failure or maintenance patterns;
    ii. Determine if certain condition monitoring activities are possible and effective in monitoring for these failure mechanisms;
    iii. Determine if periodic disassembly and examination would be an effective method in monitoring for these failure mechanisms.
    iv. Determine if the valve grouping is required to be changed.

5. Condition Monitoring Activities

Valve obturator movement during applicable test or examination activities shall be sufficient to determine the bidirectional functionality of the moving parts. A full open exercise test, or an open test to the position required to perform its intended function is not required for this assessment.

Technical Position - TP-07
(Page 4 of 6)

a. Performance Improvement Activities

i. If sufficient information is not available or the results of the analysis performed in 4 above are not conclusive, an interim period not to exceed 5 years or 2 refueling outages, whichever is less, shall be established to determine the cause of the failure or maintenance patterns. The following activities shall be performed at sufficient intervals over the interim period.

1. Identify interim tests (e.g. nonintrusive) to assess the performance of the valve of group of valves.
2. Identify interim examinations to evaluate potential degradation mechanisms.
3. Identify other types of analysis to be performed which will assess check valve condition.
4. Identify which of these activities will be performed on each valve.
5. Identify the interval of each activity.

ii. Identify attributes that will be trended. Trending and evaluation of existing data must be used as the bases to reduce or extend the time interval between tests or examinations.

iii. Complete or revise the condition monitoring test plans to document the check valve program performance improvement activities and their associated frequencies.

iv. Perform these activities at their assigned intervals until:

1. Sufficient information is obtained to permit an adequate analysis.

2. Until the end of the interim period (2 refueling outages or 5 years, whichever is less).

v. After performance, a review shall be performed for each trended attribute along with results for each activity to determine if changes to the program are required. If changes are required, the program shall be revised before the next performance of the activity.

Technical Position - TP-07
(Page 5 of 6)

b. Optimization of Condition Monitoring Activities

i. If sufficient information is available to assess the performance adequacy of the check valve or group, then the following activities shall be performed:

1. Identify appropriate preventive maintenance activities including the intervals that are required to maintain the continued acceptable performance of the check valve or group of check valves.

2. Identify the applicable examination activities including the interval that will be used to periodically assess the condition of each check valve or group of check valves.

3. Identify the applicable test activities including intervals that will be used to periodically verify the acceptable performance of each check valve or group of check valves.

4. Identify which of these activities will be performed on each valve in the group.

5. Identify the interval of each activity. Interval extensions shall be limited to one fuel cycle per extension. Intervals shall not exceed the maximum interval shown in Table II-4000-1. All valves in a group sampling plan must be tested or examined again, before the interval can be extended again, or until the maximum interval would be exceeded.

ii. Identify attributes that will be trended. Trending and evaluation of existing data must be used to reduce or extend the time interval between tests or examinations.

iii. Revise the condition monitoring plans to document the optimized condition monitoring program activities and associated intervals for each activity.

iv. Continue performance of these activities at their associated intervals.

Technical Position - TP-07
(Page 6 of 6)

v. Review the results of the performance of each activity to determine if changes to the optimized condition monitoring program are required. Changes to IST intervals must consider plant safety and be supported by trending and evaluating both generic and plant-specific performance data to ensure the component is capable of performing its intended function(s) over the entire interval.

6. Corrective Maintenance

If corrective maintenance is performed on a check valve, the analysis used to formulate the basis of the condition-monitoring activities for that valve and its associated valve group shall be reviewed to determine if any changes are required.

7. Documentation

The condition monitoring program shall be documented in IST Manager or equivalent forms. The plan for each check valve or group of check valves shall be documented in the Condition Monitoring Tab and shall contain as a minimum the following information:

a. The list of valves in each group including the group basis.
b. Date the valve or group of valves was evaluated for inclusion or exclusion from the condition monitoring program.
c. Safety function of valve or valve group.
d. Analysis/justification which forms the basis for the program.
e. Identification of the failure or maintenance patterns for each valve
f. Condition monitoring activities including the trended attributes and the bases for the associated intervals for each valve or valve group.

Technical Position - TP-08
(Page 1 of 3)
(Rev. 0)

Thermal Relief Valves

Purpose

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

Applicability

This Technical Position is applicable to the following valves at St. Lucie.

Valve Number	System	Class	Category	Unit
1-SR-07276	FP	2	A/C	1
1-SR-07277	FP	2	A/C	1
1-SR-07278	W-MAN	N/C	C	1
1-SR-14-7A	CCW	3	C	1
1-SR-14-7B	CCW	3	C	1
1-SR-14-8A	CCW	3	C	1
1-SR-14-8B	CCW	3	C	1
1-SR-14-8C	CCW	3	C	1
1-SR-14-8D	CCW	3	C	1
1-V-2315	CVCS	2	C	1
1-V-2318	CVCS	2	C	1
1-V-2321	CVCS	2	C	1
1-V-3407	SI	3	C	1
1-V-3412	SI	2	C	1
1-V-3430	SI	2	C	1
1-V-3431	SI	2	C	1
1-V-3439	SI	2	C	1
2-SR-02123	CVCS	2	C	2
2-SR-03-1	SI	3	C	2
2-SR-03-2	SI	3	C	2
2-SR-07474	W-MAN	2	A/C	2
2-SR-07475	FP	2	A/C	2

Technical Position - TP-08
(Page 2 of 3)

Valve Number	System	Class	Category	Unit
2-SR-07476	FP	2	A/C	2
2-SR-07477	W-MAN	4	N/A	2
2-SR-14307	CCW	2	C	2
2-SR-14318	CCW	2	C	2
2-SR-14329	CCW	2	C	2
2-SR-14342	CCW	2	C	2
2-SR-14350	CCW	3	C	2
2-SR-14359	CCW	3	C	2
2-SR-14636	CCW	2	A/C	2
2-SR-14637	CCW	2	A/C	2
2-SR-15925	MUW	NC	C	2
2-SR-17221	EDG-F	3	C	2
2-SR-17222	EDG-F	3	C	2
2-V-2318	CVCS	2	C	2
2-V-2321	CVCS	2	C	2
2-V-2588	CVCS	2	C	2
2-V-3407	SI	3	C	2
2-V-3412	SI	2	C	2
2-V-3430	SI	2	C	1
2-V-3431	SI	2	C	1
2-V-3439	SI	2	C	2
2-V-3468	SI	2	C	2
2-V-3483	SI	2	C	2
2-V-3507	SI	2	C	2
2-V-3513	SI	2	C	2
2-V-3688	SI	2	C	2

Background

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

Technical Position - TP-08
(Page 3 of 3)

Code Case OMN-2 states in part:

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

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

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

Position

St. Lucie Station will treat those valves designated as thermal relief valves per the requirements of I-1390 in that they will be replaced on a 10 year frequency unless performance data indicates more frequent replacement being necessary.

History

Thermal Relief Valves were addressed in Interval 3 in Generic Relief Request VR-23

Technical Position TP-09
(Page 1 of 10)
(Rev. 0)

Classification of Skid Mounted Components

Purpose

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

Background

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

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

In the 1996a addenda to the ASME OM Code (endorsed by 10CFR50.55(a) in October 2000), the term skid-mounted was clarified by the addition of ISTA paragraph 1.7:
ISTA 1.7 Definitions

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

Technical Position TP-09
(Page 2 of 10)

This definition was further clarified in the 2001/2003a Editions of the ASME OM Code:

ISTA-2000 DEFINITIONS

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

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

ISTB-1200(c) Exclusions

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

ISTC-1200 Exemptions

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

Position

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

- The major component associated with the skid mounted component must be surveillance tested at a frequency sufficient to meet ASME Code test frequency for the skid mounted component, unless otherwise justified by St. Lucie.

Technical Position TP-09
(Page 3 of 10)

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

- The IST Bases Document should describe the bases for classifying a component as skid mounted, and the IST Program Plan should reference this technical position for the component.

* - as defined by the utility

Justification

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

Resultant Discussion

Skid Mounted Pumps

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

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

Technical Position TP-09
(Page 4 of 10)

The following IST pumps have been classified as skid mounted;

Pump EPN	Class	Type	Function
EDG EPP 1A1	3	Positive Disp	Diesel Fuel Elec Priming
EDG EPP 1A2	3	Positive Disp	Diesel Fuel Elec Priming
EDG EPP 1B1	3	Positive Disp	Diesel Fuel Elec Priming
EDG EPP 1B2	3	Positive Disp	Diesel Fuel Elec Priming
EDG EPP 2A1	3	Positive Disp	Diesel Fuel Elec Priming
EDG EPP 2A2	3	Positive Disp	Diesel Fuel Elec Priming
EDG EPP 2B1	3	Positive Disp	Diesel Fuel Elec Priming
EDG EPP 2B2	3	Positive Disp	Diesel Fuel Elec Priming
EDG SBLO AC 1A1	3	Positive Disp	Diesel Soak Back Lube Oil AC
EDG SBLO AC 1A2	3	Positive Disp	Diesel Soak Back Lube Oil AC
EDG SBLO AC 1B1	3	Positive Disp	Diesel Soak Back Lube Oil AC
EDG SBLO AC 1B2	3	Positive Disp	Diesel Soak Back Lube Oil AC
EDG SBLO AC 2A1	3	Positive Disp	Diesel Soak Back Lube Oil AC
EDG SBLO AC 2A2	3	Positive Disp	Diesel Soak Back Lube Oil AC
EDG SBLO AC 2B1	3	Positive Disp	Diesel Soak Back Lube Oil AC
EDG SBLO AC 2B2	3	Positive Disp	Diesel Soak Back Lube Oil AC
EDG SBLO DC 1A1	3	Positive Disp	Diesel Soak Back Lube Oil DC
EDG SBLO DC 1A2	3	Positive Disp	Diesel Soak Back Lube Oil DC
EDG SBLO DC 1B1	3	Positive Disp	Diesel Soak Back Lube Oil DC
EDG SBLO DC 1B2	3	Positive Disp	Diesel Soak Back Lube Oil DC
EDG SBLO DC 2A1	3	Positive Disp	Diesel Soak Back Lube Oil DC
EDG SBLO DC 2A2	3	Positive Disp	Diesel Soak Back Lube Oil DC
EDG SBLO DC 2B1	3	Positive Disp	Diesel Soak Back Lube Oil DC
EDG SBLO DC 2B2	3	Positive Disp	Diesel Soak Back Lube Oil DC
EDG TCLO AC 2A1	3	Positive Disp	Diesel Turbo Charger Lube Oil AC
EDG TCLO AC 2A2	3	Positive Disp	Diesel Turbo Charger Lube Oil AC
EDG TCLO AC 2B1	3	Positive Disp	Diesel Turbo Charger Lube Oil AC
EDG TCLO AC 2B2	3	Positive Disp	Diesel Turbo Charger Lube Oil AC
EDG TCLO DC 2A1	3	Positive Disp	Diesel Turbo Charger Lube Oil DC
EDG TCLO DC 2A2	3	Positive Disp	Diesel Turbo Charger Lube Oil DC
EDG TCLO DC 2B1	3	Positive Disp	Diesel Turbo Charger Lube Oil DC
EDG TCLO DC 2B2	3	Positive Disp	Diesel Turbo Charger Lube Oil DC

Technical Position TP-09
(Page 5 of 10)

Skid Mounted Valves

In recognition of this Technical Position on skid mounted components, only those parameters necessary for a specific valve to function in support of it's safety related major component need be considered when evaluating the ability of the major components test ability to verify the required function of the skid mounted valve. (e.g. If a skid mounted check valve has a non-safety related open function, the major component testing need not consider verification of the open non-safety function, as would have been required if the check valve were not classified as skid mounted.)

The frequency at which this skid mounted valves ability to function in support of its major component will be verified quarterly, as a minimum. This frequency is chosen so as to not be greater than the minimum test frequency associated with a non-skid mounted IST valve. If the frequency associated with the testing of a skid mounted valve is determined to be greater than quarterly, that evaluation/justification will be provided in that specific valves basis.

The following IST valves have been classified as skid mounted;

Valve EPN	Class	Type	Function
1-FCV-59-1A1	3	Gate	1A EDG Starting Air Control Valve
1-FCV-59-1B1	3	Gate	1B EDG Starting Air Control Valve
1-FCV-59-2A1	3	Gate	1A EDG Starting Air Control Valve
1-FCV-59-2B1	3	Gate	1B EDG Starting Air Control Valve
1-FCV-59-3A1	3	Gate	1A EDG Starting Air Control Valve
1-FCV-59-3B1	3	Gate	1B EDG Starting Air Control Valve
1-FCV-59-4A1	3	Gate	1A EDG Starting Air Control Valve
1-FCV-59-4B1	3	Gate	1B EDG Starting Air Control Valve
1-MV-08-3	2	Gate	1C AFW Turbine Trip Throttle Valve
1-SE-08-1A1	NC	3-way	MSIV HCV-08-1A Open Control Valve
1-SE-08-1A2	NC	3-way	MSIV HCV-08-1A Open Control Valve
1-SE-08-1A3	NC	3-way	MSIV HCV-08-1A Close Control Valve
1-SE-08-1A4	NC	3-way	MSIV HCV-08-1A Close Control Valve
1-SE-08-1B1	NC	3-way	MSIV HCV-08-1B Open Control Valve
1-SE-08-1B2	NC	3-way	MSIV HCV-08-1B Open Control Valve
1-SE-08-1B3	NC	3-way	MSIV HCV-08-1B Close Control Valve
1-SE-08-1B4	NC	3-way	MSIV HCV-08-1B Close Control Valve
1-SE-09-843	3	3-way	HCV-09-7 Actuator Train "A" Control Solenoids
1-SE-09-847	3	3-way	HCV-09-7 Actuator Train "B" Control Solenoids
1-SE-09-870	3	3-way	HCV-09-8 Actuator Train "B" Control Solenoids
1-SE-09-874	3	3-way	HCV-09-8 Actuator Train "A" Control Solenoids
1-SE-37-1	3	3-way	UHS Valve SB-37-1 Air Control Valve
1-SE-37-2	3	3-way	UHS Valve SB-37-2 Air Control Valve

Technical Position TP-09
(Page 6 of 10)

Valve EPN	Class	Type	Function
1-SE-59-1A	3	Globe	A Fuel Oil Day Tank Inlet Isolation Valve
1-SE-59-1B	3	Globe	B Fuel Oil Day Tank Inlet Isolation Valve
1-SE-59-3A	3	Globe	1A EDG Starting Air Control Valve Pilot Valve
1-SE-59-3B	3	Globe	1B EDG Starting Air Control Valve Pilot Valve
1-SE-59-4A	3	Globe	1A EDG Starting Air Control Valve Pilot Valve
1-SE-59-4B	3	Globe	1B EDG Starting Air Control Valve Pilot Valve
1-SE-59-5A	3	Globe	1A EDG Starting Air Control Valve Pilot Valve
1-SE-59-5B	3	Globe	1B EDG Starting Air Control Valve Pilot Valve
1-SE-59-6A	3	Globe	1A EDG Starting Air Control Valve Pilot Valve
1-SE-59-6B	3	Globe	1B EDG Starting Air Control Valve Pilot Valve
1-TCV-59-1A1	3	3-way	EDG 1A1 Engine Water TCV
1-TCV-59-1A2	3	3-way	EDG 1A2 Engine Water TCV
1-TCV-59-1B1	3	3-way	EDG 1B1 Engine Water TCV
1-TCV-59-1B2	3	3-way	EDG 1B2 Engine Water TCV
1-V-09831	3	3-way	HCV-09-7 Actuator "A" Train Open Pilot Vlv
1-V-09832	3	3-way	HCV-09-7 Actuator "B" Train Open Pilot Vlv
1-V-09833	3	3-way	HCV-09-7 Actuator "A" Train Close Pilot Vlv
1-V-09834	3	3-way	HCV-09-7 Actuator "B" Train Close Pilot Vlv
1-V-09861	3	3-way	HCV-09-8 Actuator "A" Train Open Pilot Vlv
1-V-09862	3	3-way	HCV-09-8 Actuator "B" Train Open Pilot Vlv
1-V-09863	3	3-way	HCV-09-8 Actuator "A" Train Close Pilot Vlv
1-V-09864	3	3-way	HCV-09-8 Actuator "B" Train Close Pilot Vlv
1-V-59010	3	Check	Soakback Lube Oil A/C Pump Discharge Check for Diesel 1A1
1-V-59011	3	Check	Soakback Lube Oil D/C Pump Discharge Check for Diesel 1A1
1-V-59025	3	Check	Soakback Lube Oil A/C Pump Discharge Check for Diesel 1A2
1-V-59026	3	Check	Soakback Lube Oil D/C Pump Discharge Check for Diesel 1A2
1-V-59040	3	Check	Soakback Lube Oil A/C Pump Discharge Check for Diesel 1B1
1-V-59041	3	Check	Soakback Lube Oil D/C Pump Discharge Check for Diesel 1B1
1-V-59055	3	Check	Soakback Lube Oil D/C Pump Discharge Check for Diesel 1B2
1-V-59056	3	Check	Soakback Lube Oil A/C Pump Discharge Check for Diesel 1B2

Technical Position TP-09
(Page 7 of 10)

Valve EPN	Class	Type	Function
1-V-59200	3	Check	Check Valve Assembly for D/G Engine Governor Air Boosters
1-V-59201	3	Check	Check Valve Assembly for D/G Engine Governor Air Boosters
1-V-59202	3	Check	Check Valve Assembly for D/G Engine Governor Air Boosters
1-V-59203	3	Check	Check Valve Assembly for D/G Engine Governor Air Boosters
2-FCV-59-1A1	3	Gate	2A EDG Starting Air Control Valve
2-FCV-59-1B1	3	Gate	2B EDG Starting Air Control Valve
2-FCV-59-2A1	3	Gate	2A EDG Starting Air Control Valve
2-FCV-59-2B1	3	Gate	2B EDG Starting Air Control Valve
2-FCV-59-3A1	3	Gate	2A EDG Starting Air Control Valve
2-FCV-59-3B1	3	Gate	2B EDG Starting Air Control Valve
2-FCV-59-4A1	3	Gate	2A EDG Starting Air Control Valve
2-FCV-59-4B1	3	Gate	2B EDG Starting Air Control Valve
2-SE-08-896	NC	3-way	MSIV Instrument Air Supply Valve
2-SE-08-897	NC	3-way	MSIV Instrument Air Supply Valve
2-SE-08-934	NC	3-way	MSIV Instrument Air Supply Valve
2-SE-08-935	NC	3-way	MSIV Instrument Air Supply Valve
2-SE-59-1A1	3	Globe	Fuel Oil Day Tank Inlet Isolation Valve
2-SE-59-1A2	3	Globe	Fuel Oil Day Tank Inlet Isolation Valve
2-SE-59-1B1	3	Globe	Fuel Oil Day Tank Inlet Isolation Valve
2-SE-59-1B2	3	Globe	Fuel Oil Day Tank Inlet Isolation Valve
2-SE-59-3A	3	Globe	2A EDG Starting Air Control Valve Pilot Valve
2-SE-59-3B	3	Globe	2B EDG Starting Air Control Valve Pilot Valve
2-SE-59-4A	3	Globe	2A EDG Starting Air Control Valve Pilot Valve
2-SE-59-4B	3	Globe	2B EDG Starting Air Control Valve Pilot Valve
2-SE-59-5A	3	Globe	2A EDG Starting Air Control Valve Pilot Valve
2-SE-59-5B	3	Globe	2B EDG Starting Air Control Valve Pilot Valve
2-SE-59-6A	3	Globe	2A EDG Starting Air Control Valve Pilot Valve
2-SE-59-6B	3	Globe	2B EDG Starting Air Control Valve Pilot Valve
2-TCV-59-1A1	3	3-way	EDG Engine Water TCV
2-TCV-59-1A2	3	3-way	EDG Engine Water TCV
2-TCV-59-1B1	3	3-way	EDG Engine Water TCV
2-TCV-59-1B2	3	3-way	EDG Engine Water TCV
2-V-08887	2	3-way	MSIV 1A Control Valve 2
2-V-08888	2	3-way	MSIV 1A Control Valve 3
2-V-08889	2	3-way	MSIV 1A Control Valve 4
2-V-08890	2	3-way	MSIV 1A Control Valve 5

Technical Position TP-09
(Page 8 of 10)

Valve EPN	Class	Type	Function
2-V-08925	2	3-way	MSIV 1B Control Valve 2
2-V-08926	2	3-way	MSIV 1B Control Valve 3
2-V-08927	2	3-way	MSIV 1B Control Valve 4
2-V-08928	2	3-way	MSIV 1B Control Valve 5
2-V-08965	2	Check	MSIV 1A Actuator Vacuum Breaker Check Valve
2-V-08966	2	Check	MSIV 1B Actuator Vacuum Breaker Check Valve
2-V-59002	3	Check	Check Valve for Diesel Oil from Day Tank
2-V-59005	3	Check	Check Valve for Electric Motor Driven Diesel Oil Priming
2-V-59010	3	Check	Soakback Lube Oil A/C Pump Discharge Check for Diesel 2A1
2-V-59011	3	Check	Soakback Lube Oil D/C Pump Discharge Check for Diesel 2A1
2-V-59017	3	Check	Turbo Lube Oil D/C Pump Discharge Check for Diesel 2A1
2-V-59021	3	Check	Turbo Lube Oil A/C Pump Discharge Check for Diesel 2A1
2-V-59025	3	Check	Soakback Lube Oil A/C Pump Discharge Check for Diesel 2A2
2-V-59026	3	Check	Soakback Lube Oil D/C Pump Discharge Check for Diesel 2A2
2-V-59040	3	Check	Soakback Lube Oil A/C Pump Discharge Check for Diesel 2B1
2-V-59041	3	Check	Soakback Lube Oil D/C Pump Discharge Check for Diesel 2B1
2-V-59048	3	Check	Turbo Lube Oil D/C Pump Discharge Check for Diesel 2A2
2-V-59051	3	Check	Turbo Lube Oil A/C Pump Discharge Check for Diesel 2A2
2-V-59055	3	Check	Soakback Lube Oil D/C Pump Discharge Check for Diesel 2B2
2-V-59056	3	Check	Soakback Lube Oil A/C Pump Discharge Check for Diesel 2B2
2-V-59062	3	Check	Check Valve for Diesel Oil from Day Tank
2-V-59066	3	Check	Check Valve for Standby Lube Oil to D/G Engine
2-V-59078	3	Check	Check Valve for Diesel Oil from Day Tank
2-V-59081	3	Check	Check Valve for Electric Motor Driven Diesel Oil Priming

Technical Position TP-09
(Page 9 of 10)

Valve EPN	Class	Type	Function
2-V-59089	3	Check	Turbo Lube Oil A/C Pump Discharge Check for Diesel 2B1
2-V-59116	3	Check	Check Valve for Diesel Oil from Day Tank
2-V-59119	3	Check	Check Valve for Electric Motor Driven Diesel Oil Priming
2-V-59121	3	Check	Check Valve for Electric Motor-Driven Diesel Oil Priming
2-V-59127	3	Check	Turbo Lube Oil A/C Pump Discharge Check for Diesel 2B2
2-V-59165	3	Check	Turbo Lube Oil D/C Pump Discharge Check for Diesel 2B1
2-V-59183	3	Check	EDG 2A1 North Air Start Sequencing Check Valve
2-V-59187	3	Check	EDG 2A1 South Air Start Sequencing Check Valve
2-V-59191	3	Check	EDG 2A2 North Air Start Sequencing Check Valve
2-V-59192	3	Check	Check Valve Assembly for D/G Engine Governor Air Boosters
2-V-59193	3	Check	Check Valve Assembly for D/G Engine Governor Air Boosters
2-V-59194	3	Check	Check Valve for Standby Lube Oil to D/G Engine
2-V-59197	3	Check	EDG 2A2 South Air Start Sequencing Check Valve
2-V-59198	3	Check	Check Valve Assembly for D/G Engine Governor Air Boosters
2-V-59199	3	Check	Check Valve Assembly for D/G Engine Governor Air Boosters
2-V-59213	3	Check	Check Valve for Standby Lube Oil to D/G Engine
2-V-59219	3	Check	Turbo Lube Oil D/C Pump Discharge Check for Diesel 2B2
2-V-59231	3	Check	EDG 2B1 South Air Start Sequencing Check Valve
2-V-59232	3	Check	Check Valve for Standby Lube Oil to D/G Engine
2-V-59235	3	Check	EDG 2B1 North Air Start Sequencing Check Valve
2-V-59239	3	Check	EDG 2B2 North Air Start Sequencing Check Valve
2-V-59240	3	Check	Check Valve Assembly for D/G Engine Governor Air Boosters

Technical Position TP-09
(Page 10 of 10)

Valve EPN	Class	Type	Function
2-V-59241	3	Check	Check Valve Assembly for D/G Engine Governor Air Boosters
2-V-59245	3	Check	EDG 2B2 South Air Start Sequencing Check Valve
2-V-59246	3	Check	Check Valve Assembly for D/G Engine Governor Air Boosters
2-V-59247	3	Check	Check Valve Assembly for D/G Engine Governor Air Boosters
2-V-59333	3	Check	Fuel Oil Priming Pump Relief Check Valve
2-V-59334	3	Check	Fuel Oil Priming Pump Relief Check Valve
2-V-59335	3	Check	Fuel Oil Priming Pump Relief Check Valve
2-V-59336	3	Check	Fuel Oil Priming Pump Relief Check Valve

History

None

Technical Position TP-10
(Page 1 of 2)
(Rev. 0)
Testing of Containment Purge Valves

Purpose

The purpose of this Technical Position is to establish the testing requirements for Primary Containment Purge and Vent Valves which during normal operation have their fuses pulled.

Applicability

This Technical Position is applicable to those valves listed below.

Valve Number	System	Class	Category	Unit
1FCV-25-1	HVAC	2	B	1
1FCV-25-2	HVAC	2	A	1
1FCV-25-3	HVAC	2	A	1
1FCV-25-4	HVAC	2	A	1
1FCV-25-5	HVAC	2	A	1
1FCV-25-6	HVAC	2	B	1

Background

These valves are the Containment Purge Isolation Valves, both supply and exhaust. These valves are 48" butterfly valves and are either closed, or locked closed during normal power operation. (Modes 1-4)

ISTC-3510 states that active category A, B and C valves shall be exercised nominally every 3 months, except as provided by ISTC-3520, ISTC-3540, ISTC-3550, ISTC-3560. ISTC-5221, and ISTC-5222.

Of relevance in this case is ISTC-3570, which states that for a valve in a system declared inoperable or not required to be operable, the exercising test schedule need not be followed. Within 3 months before placing the system in an operable status, the valves shall be exercised and the schedule followed in accordance with (the) requirements of this Subsection.

Technical Position TP-10
(Page 2 of 2)
(Rev. 0)

In the case of these valves in the Containment Purge System, per each unit's locked valve procedures, [i.e. 1-0010123], these valves are closed, with their breakers/fuses removed. This places these valves in an inoperable position.

Position

St. Lucie Station will continue to list the stroke time and fail safe testing associated with these valve as being performed on a quarterly frequency, but with the recognition that these valves during normal operation have their power removed, will recognize them as Out of Service (OOS) per ISTC-3570. As a result, the stroke time and fail safe testing will only be scheduled to be performed on these valve immediately following the restoration of power to these valves, provided that they have not been tested within the previous 3 months.

References

Procedure 1-0010123, "Administrative Control of Valves, Locks and Switches, Rev. 157, Appendix O.

Technical Position TP-11
(Page 1 of 2)
(Rev. 0)

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

Purpose

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

Applicability

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

Background

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

Position

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

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

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

Technical Position TP-11
(Page 2 of 2)

Justification

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

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

Reply: No

History

None

ATTACHMENT 12

INSERVICE TESTING PUMP TABLE INDEX

System Designator	System Description
CCW	Component Cooling Water
CS	Containment Spray
CVCS	Chemical and Volume Control System
EDG-F	Emergency Diesel Generator – Fuel
EDG-L	Emergency Diesel Generator – Lube
FW	Feed Water
ICW	Intake Cooling Water
SI	Safety Injection

Attachment 13

Component Cooling Water (CCW)

Pump Tag	P&ID	P&ID Coor.	Category	Safety Class	Pump Type	Pump Driver	Test Type	Test Freq.	Relief Request	Tech. Pos.
CCW PP 1A	8770 G 083-1A	F-6	A	3	Centrifugal	Motor	dP(a)	M3		
							dP(c)	Y2		
							Q(a)	M3		
							Q(c)	Y2		
							V(a)	M3		
							V(c)	Y2		
	Pump Name:	Component Cooling Water Pumps								
CCW PP 1B	8770 G 083-1A	F-7	A	3	Centrifugal	Motor	dP(a)	M3		
							dP(c)	Y2		
							Q(a)	M3		
							Q(c)	Y2		
							V(a)	M3		
							V(c)	Y2		
	Pump Name:	Component Cooling Water Pumps								
CCW PP 1C	8770 G 083-1A	F-7	A	3	Centrifugal	Motor	dP(a)	M3		
							dP(c)	Y2		
							Q(a)	M3		
							Q(c)	Y2		
							V(a)	M3		
							V(c)	Y2		
	Pump Name:	Component Cooling Water Pumps								

Attachment 13

Containment Spray (CS)

Pump Tag	P&ID	P&ID Coor.	Category	Safety Class	Pump Type	Pump Driver	Test Type	Test Freq.	Relief Request	Tech. Pos.
CNTMT SPR PP 1A	8770 G 088-1	G-6	B	2	Centrifugal	Motor	dP(b)	M3		
							dP(c)	Y2		
							Q(c)	Y2		
							V(c)	Y2		
	Pump Name:	**Containment Spray Pumps**								
CNTMT SPR PP 1B	8770 G 088-1	H-6	B	2	Centrifugal	Motor	dP(b)	M3		
							dP(c)	Y2		
							Q(c)	Y2		
							V(c)	Y2		
	Pump Name:	**Containment Spray Pumps**								

Attachment 13

Chemical and Volume Control System (CVCS)

Pump Tag	P&ID	P&ID Coor.	Category	Safety Class	Pump Type	Pump Driver	Test Type	Test Freq.	Relief Request	Tech. Pos.
BAM PP 1A	8770 G 078-121B	G-4	A	2	Centrifugal	Motor	dP(a)	M3		
							dP(c)	Y2		
							Q(a)	M3	PR-06	
							Q(c)	Y2		
							V(a)	M3		
							V(c)	Y2		
	Pump Name:	Boric Acid Makeup Pumps								
BAM PP 1B	8770 G 078-121B	F-4	A	2	Centrifugal	Motor	dP(a)	M3		
							dP(c)	Y2		
							Q(a)	M3	PR-06	
							Q(c)	Y2		
							V(a)	M3		
							V(c)	Y2		
	Pump Name:	Boric Acid Makeup Pumps								
CHRG PP 1A	8770 G 078-120B	C-2	A	2	Positive Displacement	Motor	DIS-P(a)	M3		
							DIS-P(c)	Y2		
							Q(a)	M3		
							Q(c)	Y2		
							V(a)	M3	PR-01	
							V(c)	Y2	PR-01	
	Pump Name:	Charging Pumps								
CHRG PP 1B	8770 G 078-120B	E-2	A	2	Positive Displacement	Motor	DIS-P(a)	M3		
							DIS-P(c)	Y2		
							Q(a)	M3		
							Q(c)	Y2		
							V(a)	M3	PR-01	
							V(c)	Y2	PR-01	
	Pump Name:	Charging Pumps								
CHRG PP 1C	8770 G 078-120B	G-2	A	2	Positive Displacement	Motor	DIS-P(a)	M3		
							DIS-P(c)	Y2		
							Q(a)	M3		
							Q(c)	Y2		
							V(a)	M3	PR-01	
							V(c)	Y2	PR-01	
	Pump Name:	Charging Pumps								

Attachment 13

Emergency Diesel Generator - Fuel (EDG-F)

Pump Tag	P&ID	P&ID Coor.	Category	Safety Class	Pump Type	Pump Driver	Test Type	Test Freq.	Relief Request	Tech. Pos.
DOT 1A	8770 G 086-1	B-2	B	3	Centrifugal	Motor	dP(b)	M3		
							dP(c)	Y2	PR-08	
							Q(c)	Y2	PR-08	
							V(c)	Y2		
	Pump Name:	Emergency Diesel Generator Fuel Oil Transfer Pumps								
DOT 1B	8770 G 086-1	D-2	B	3	Centrifugal	Motor	dP(b)	M3		
							dP(c)	Y2	PR-08	
							Q(c)	Y2	PR-08	
							V(c)	Y2		
	Pump Name:	Emergency Diesel Generator Fuel Oil Transfer Pumps								
EDG EPP 1A1	8770 G 096-1A	G-5	N/A	3	Positive Displacement	Motor	SKID	M3		TP-09
	Pump Name:	Diesel Fuel Electric Priming Pump								
EDG EPP 1A2	8770 G 096-1B	B-3	N/A	3	Positive Displacement	Motor	SKID	M3		TP-09
	Pump Name:	Diesel Fuel Electric Priming Pump								
EDG EPP 1B1	8770 G 096-2A	G-5	N/A	3	Positive Displacement	Motor	SKID	M3		TP-09
	Pump Name:	Diesel Fuel Electric Priming Pump								
EDG EPP 1B2	8770 G 096-2B	B-3	N/A	3	Positive Displacement	Motor	SKID	M3		TP-09
	Pump Name:	Diesel Fuel Electric Priming Pump								

Attachment 13

Emergency Diesel Generator - Lube (EDG-L)

Pump Tag	P&ID	P&ID Coor.	Category	Safety Class	Pump Type	Pump Driver	Test Type	Test Freq.	Relief Request	Tech. Pos.
EDG SBLO AC 1A1	8770 G 096-1A	B-5	N/A	3	Positive Displacement	Motor	SKID	M3		TP-09
	Pump Name:	Diesel Soak Back Lube Oil AC Pump								
EDG SBLO AC 1A2	8770 G 096-1B	G-3	N/A	3	Positive Displacement	Motor	SKID	M3		TP-09
	Pump Name:	Diesel Soak Back Lube Oil AC Pump								
EDG SBLO AC 1B1	8770 G 096-2A	B-5	N/A	3	Positive Displacement	Motor	SKID	M3		TP-09
	Pump Name:	Diesel Soak Back Lube Oil AC Pump								
EDG SBLO AC 1B2	8770 G 096-2B	G-3	N/A	3	Positive Displacement	Motor	SKID	M3		TP-09
	Pump Name:	Diesel Soak Back Lube Oil AC Pump								
EDG SBLO DC 1A1	8770 G 096-1A	B-5	N/A	3	Positive Displacement	Motor	SKID	M3		TP-09
	Pump Name:	Diesel Soak Back Lube Oil DC Pump								
EDG SBLO DC 1A2	8770 G 096-1B	F-3	N/A	3	Positive Displacement	Motor	SKID	M3		TP-09
	Pump Name:	Diesel Soak Back Lube Oil DC Pump								
EDG SBLO DC 1B1	8770 G 096-2A	B-5	N/A	3	Positive Displacement	Motor	SKID	M3		TP-09
	Pump Name:	Diesel Soak Back Lube Oil DC Pump								
EDG SBLO DC 1B2	8770 G 096-2B	F-3	N/A	3	Positive Displacement	Motor	SKID	M3		TP-09
	Pump Name:	Diesel Soak Back Lube Oil DC Pump								

Attachment 13

Feedwater (FW)

Pump Tag	P&ID	P&ID Coor.	Category	Safety Class	Pump Type	Pump Driver	Test Type	Test Freq.	Relief Request	Tech. Pos.
AFW PP 1A	8770 G 080-4	E-4	B	3	Centrifugal	Motor	dP(b)	M3		
							dP(c)	Y2		
							Q(c)	Y2		
							V(c)	Y2		
	Pump Name:	**Motor Driven Auxiliary Feedwater Pumps 1A/1B**								
AFW PP 1B	8770 G 080-4	C-4	B	3	Centrifugal	Motor	dP(b)	M3		
							dP(c)	Y2		
							Q(c)	Y2		
							V(c)	Y2		
	Pump Name:	**Motor Driven Auxiliary Feedwater Pumps 1A/1B**								
AFW PP 1C	8770 G 080-4	F-4	B	3	Centrifugal	Turbine	dP(b)	M3		
							dP(c)	Y2		
							Q(c)	Y2		
							S(b)	M3		
							S(c)	Y2		
							V(c)	Y2		
	Pump Name:	**Steam Driven Auxiliary Feedwater Pump 1C**								

Attachment 13

Intake Cooling Water (ICW)

Pump Tag	P&ID	P&ID Coor.	Category	Safety Class	Pump Type	Pump Driver	Test Type	Test Freq.	Relief Request	Tech. Pos.
ICW PP 1A	8770 G 082-2	H-5	A	3	Vertical Line Shaft	Motor	dP(a)	M3		
							dP(c)	Y2		
							Q(a)	M3		
							Q(c)	Y2		
							V(a)	M3		
							V(c)	Y2		
	Pump Name:	Intake Cooling Water Pumps								
ICW PP 1B	8770 G 082-2	H-7	A	3	Vertical Line Shaft	Motor	dP(a)	M3		
							dP(c)	Y2		
							Q(a)	M3		
							Q(c)	Y2		
							V(a)	M3		
							V(c)	Y2		
	Pump Name:	Intake Cooling Water Pumps								
ICW PP 1C	8770 G 082-2	H-7	A	3	Vertical Line Shaft	Motor	dP(a)	M3		
							dP(c)	Y2		
							Q(a)	M3		
							Q(c)	Y2		
							V(a)	M3		
							V(c)	Y2		
	Pump Name:	Intake Cooling Water Pumps								

Attachment 13

Safety Injection (SI)

Pump Tag	P&ID	P&ID Coor.	Category	Safety Class	Pump Type	Pump Driver	Test Type	Test Freq.	Relief Request	Tech. Pos.
HPSI PP 1A	8770 G 078-130A	C-3	B	2	Centrifugal	Motor	dP(b)	M3		
							dP(c)	Y2		
							Q(c)	Y2		
							V(c)	Y2		
	Pump Name:	**High Pressure Safety Injection Pumps**								
HPSI PP 1B	8770 G 078-130A	G-3	B	2	Centrifugal	Motor	dP(b)	M3		
							dP(c)	Y2		
							Q(c)	Y2		
							V(c)	Y2		
	Pump Name:	**High Pressure Safety Injection Pumps**								
LPSI PP 1A	8770 G 078-130B	F-3	A/B	2	Centrifugal	Motor	dP(b)	M3	PR-04,05	
							dP(c)	Y2		
							Q(c)	Y2		
							V(c)	Y2		
	Pump Name:	**Low Pressure Safety Injection Pumps**								
LPSI PP 1B	8770 G 078-130B	G-3	A/B	2	Centrifugal	Motor	dP(b)	M3	PR-04,05	
							dP(c)	Y2		
							Q(c)	Y2		
							V(c)	Y2		
	Pump Name:	**Low Pressure Safety Injection Pumps**								

Attachment 13

Component Cooling Water (CCW)

Pump Tag	P&ID	P&ID Coor.	Category	Safety Class	Pump Type	Pump Driver	Test Type	Test Freq.	Relief Request	Tech. Pos.
CCW PP 2A	2998 G 083-1	E-6	A	3	Centrifugal	Motor	dP(a)	M3		
							dP(c)	Y2		
							Q(a)	M3		
							Q(c)	Y2		
							V(a)	M3		
							V(c)	Y2		
	Pump Name:	Component Cooling Water Pumps								
CCW PP 2B	2998 G 083-1	E-6	A	3	Centrifugal	Motor	dP(a)	M3		
							dP(c)	Y2		
							Q(a)	M3		
							Q(c)	Y2		
							V(a)	M3		
							V(c)	Y2		
	Pump Name:	Component Cooling Water Pumps								
CCW PP 2C	2998 G 083-1	E-6	A	3	Centrifugal	Motor	dP(a)	M3		
							dP(c)	Y2		
							Q(a)	M3		
							Q(c)	Y2		
							V(a)	M3		
							V(c)	Y2		
	Pump Name:	Component Cooling Water Pumps								

Attachment 13

Containment Spray (CS)

Pump Tag	P&ID	P&ID Coor.	Category	Safety Class	Pump Type	Pump Driver	Test Type	Test Freq.	Relief Request	Tech. Pos.
CNTMT SPR PP 2A	2998 G 088-1	G-5	B	2	Centrifugal	Motor	dP(b)	M3		
							dP(c)	Y2		
							Q(c)	Y2		
							V(c)	Y2		
	Pump Name:	**Containment Spray Pumps**								
CNTMT SPR PP 2B	2998 G 088-1	H-5	B	2	Centrifugal	Motor	dP(b)	M3		
							dP(c)	Y2		
							Q(c)	Y2		
							V(c)	Y2		
	Pump Name:	**Containment Spray Pumps**								
HYDRZN PP 2A	2998 G 088-1	G-3	B	2	Positive Displacement	Motor	DIS-P(b)	M3	PR-03	
							DIS-P(c)	Y2		
							Q(c)	Y2		
							Sb	M3		
							Sc	Y2		
							V(c)	Y2	PR-02	
	Pump Name:	**Hydrazine Pumps**								
HYDRZN PP 2B	2998 G 088-1	H-3	B	2	Positive Displacement	Motor	DIS-P(b)	M3	PR-03	
							DIS-P(c)	Y2		
							Q(c)	Y2		
							Sb	M3		
							Sc	Y2		
							V(c)	Y2	PR-02	
	Pump Name:	**Hydrazine Pumps**								

Attachment 13

Chemical and Volume Control System (CVCS)

Pump Tag	P&ID	P&ID Coor.	Category	Safety Class	Pump Type	Pump Driver	Test Type	Test Freq.	Relief Request	Tech. Pos.
BAM PP 2A	2998 G 078-121B	F-4	A	2	Centrifugal	Motor	dP(a)	M3		
							dP(c)	Y2		
							Q(a)	M3	PR-06	
							Q(c)	Y2		
							V(a)	M3		
							V(c)	Y2		
	Pump Name:	**Boric Acid Makeup Pumps**								
BAM PP 2B	2998 G 078-121B	G-4	A	2	Centrifugal	Motor	dP(a)	M3		
							dP(c)	Y2		
							Q(a)	M3	PR-06	
							Q(c)	Y2		
							V(a)	M3		
							V(c)	Y2		
	Pump Name:	**Boric Acid Makeup Pumps**								
CHG PP 2A	2998 G 078-122	G-2	A	2	Positive Displacement	Motor	DIS-P(a)	M3		
							DIS-P(c)	Y2		
							Q(a)	M3		
							Q(c)	Y2		
							V(a)	M3	PR-01	
							V(c)	Y2	PR-01	
	Pump Name:	**Chemical and Volume Control Pumps**								
CHG PP 2B	2998 G 078-122	E-2	A	2	Positive Displacement	Motor	DIS-P(a)	M3		
							DIS-P(c)	Y2		
							Q(a)	M3		
							Q(c)	Y2		
							V(a)	M3	PR-01	
							V(c)	Y2	PR-01	
	Pump Name:	**Chemical and Volume Control Pumps**								
CHG PP 2C	2998 G 078-122	B-2	A	2	Positive Displacement	Motor	DIS-P(a)	M3		
							DIS-P(c)	Y2		
							Q(a)	M3		
							Q(c)	Y2		
							V(a)	M3	PR-01	
							V(c)	Y2	PR-01	
	Pump Name:	**Chemical and Volume Control Pumps**								

Attachment 13

Emergency Diesel Generator - Fuel (EDG-F)

Pump Tag	P&ID	P&ID Coor.	Category	Safety Class	Pump Type	Pump Driver	Test Type	Test Freq.	Relief Request	Tech. Pos.
DOT 2A	2998 G 086-1	B-2	B	3	Centrifugal	Motor	dP(b)	M3		
							dP(c)	Y2	PR-07	
							Q(c)	Y2	PR-07	
							V(c)	Y2		
	Pump Name:	Emergency Diesel Fuel Oil Transfer Pumps								
DOT 2B	2998 G 086-1	D-2	B	3	Centrifugal	Motor	dP(b)			
							dP(c)	Y2		
							Q(c)	Y2		
							V(c)	Y2		
	Pump Name:	Emergency Diesel Fuel Oil Transfer Pumps								
EDG EPP 2A1	2998 G 096-1A	B-4	N/A	3	Positive Displacement	Motor	SKID	M3		TP-09
	Pump Name:	Diesel Fuel Electric Priming Pump								
EDG EPP 2A2	2998 G 096-1B	H-4	N/A	3	Positive Displacement	Motor	SKID	M3		TP-09
	Pump Name:	Diesel Fuel Electric Priming Pump								
EDG EPP 2B1	2998 G 096-2A	B-4	N/A	3	Positive Displacement	Motor	SKID	M3		TP-09
	Pump Name:	Diesel Fuel Electric Priming Pump								
EDG EPP 2B2	2998 G 096-2B	H-4	N/A	3	Positive Displacement	Motor	SKID	M3		TP-09
	Pump Name:	Diesel Fuel Electric Priming Pump								

Attachment 13

Emergency Diesel Generator - Lube (EDG-L)

Pump Tag	P&ID	P&ID Coor.	Category	Safety Class	Pump Type	Pump Driver	Test Type	Test Freq.	Relief Request	Tech. Pos.
EDG SBLO AC 2A1	2998 G 096-1A	G-5	N/A	3	Positive Displacement	Motor	SKID	M3		TP-09
	Pump Name:	**Diesel Soak Back Lube Oil AC Pump**								
EDG SBLO AC 2A2	2998 G 096-1B	B-5	N/A	3	Positive Displacement	Motor	SKID	M3		TP-09
	Pump Name:	**Diesel Soak Back Lube Oil AC Pump**								
EDG SBLO AC 2B1	2998 G 096-2A	G-5	N/A	3	Positive Displacement	Motor	SKID	M3		TP-09
	Pump Name:	**Diesel Soak Back Lube Oil AC Pump**								
EDG SBLO AC 2B2	2998 G 096-2B	B-5	N/A	3	Positive Displacement	Motor	SKID	M3		TP-09
	Pump Name:	**Diesel Soak Back Lube Oil AC Pump**								
EDG SBLO DC 2A1	2998 G 096-1A	G-4	N/A	3	Positive Displacement	Motor	SKID	M3		TP-09
	Pump Name:	**Diesel Soak Back Lube Oil DC Pump**								
EDG SBLO DC 2A2	2998 G 096-1B	B-4	N/A	3	Positive Displacement	Motor	SKID	M3		TP-09
	Pump Name:	**Diesel Soak Back Lube Oil DC Pump**								
EDG SBLO DC 2B1	2998 G 096-2A	G-4	N/A	3	Positive Displacement	Motor	SKID	M3		TP-09
	Pump Name:	**Diesel Soak Back Lube Oil DC Pump**								
EDG SBLO DC 2B2	2998 G 096-2B	B-4	N/A	3	Positive Displacement	Motor	SKID	M3		TP-09
	Pump Name:	**Diesel Soak Back Lube Oil DC Pump**								
EDG TCLO AC 2A1	2998 G 096-1A	G-3	N/A	3	Positive Displacement	Motor	SKID	M3		TP-09
	Pump Name:	**Diesel Turbo Charger Lube Oil AC Pump**								
EDG TCLO AC 2A2	2998 G 096-1B	B-3	N/A	3	Positive Displacement	Motor	SKID	M3		TP-09
	Pump Name:	**Diesel Turbo Charger Lube Oil AC Pump**								
EDG TCLO AC 2B1	2998 G 096-2A	G-3	N/A	3	Positive Displacement	Motor	SKID	M3		TP-09
	Pump Name:	**Diesel Turbo Charger Lube Oil AC Pump**								
EDG TCLO AC 2B2	2998 G 096-2B	B-3	N/A	3	Positive Displacement	Motor	SKID	M3		TP-09
	Pump Name:	**Diesel Turbo Charger Lube Oil AC Pump**								
EDG TCLO DC 2A1	2998 G 096-1A	G-4	N/A	3	Positive Displacement	Motor	SKID	M3		TP-09
	Pump Name:	**Diesel Turbo Charger Lube Oil DC Pump**								
EDG TCLO DC 2A2	2998 G 096-1B	B-3	N/A	3	Positive Displacement	Motor	SKID	M3		TP-09
	Pump Name:	**Diesel Turbo Charger Lube Oil DC Pump**								
EDG TCLO DC 2B1	2998 G 096-2A	G-4	N/A	3	Positive Displacement	Motor	SKID	M3		TP-09
	Pump Name:	**Diesel Turbo Charger Lube Oil DC Pump**								
EDG TCLO DC 2B2	2998 G 096-2B	B-4	N/A	3	Positive Displacement	Motor	SKID	M3		TP-09
	Pump Name:	**Diesel Turbo Charger Lube Oil DC Pump**								

Attachment 13

Feedwater (FW)

Pump Tag	P&ID	P&ID Coor.	Category	Safety Class	Pump Type	Pump Driver	Test Type	Test Freq.	Relief Request	Tech. Pos.
AFW PP 2A	2998 G 080-2B	B-4	B	3	Centrifugal	Motor	dP(b)	M3		
							dP(c)	Y2		
							Q(c)	Y2		
							V(c)	Y2		
	Pump Name:	**Motor Driven Auxiliary Feedwater Pumps 2A/2B**								
AFW PP 2B	2998 G 080-2B	E-4	B	3	Centrifugal	Motor	dP(b)	M3		
							dP(c)	Y2		
							Q(c)	Y2		
							V(c)	Y2		
	Pump Name:	**Motor Driven Auxiliary Feedwater Pumps 2A/2B**								
AFW PP 2C	2998 G 080-2B	F-3	B	3	Centrifugal	Turbine	dP(b)	M3		
							dP(c)	Y2		
							Q(c)	Y2		
							S(b)	M3		
							S(c)	Y2		
							V(c)	Y2		
	Pump Name:	**Steam Driven Auxiliary Feedwater Pump 2C**								

Attachment 13

Intake Cooling Water (ICW)

Pump Tag	P&ID	P&ID Coor.	Category	Safety Class	Pump Type	Pump Driver	Test Type	Test Freq.	Relief Request	Tech. Pos.
ICW PP 2A	2998 G 082-2	H-5	A	3	Vertical Line Shaft	Motor	dP(a)	M3		
							dP(c)	Y2		
							Q(a)	M3		
							Q(c)	Y2		
							V(a)	M3		
							V(c)	Y2		
	Pump Name:	Intake Cooling Water Pumps								
ICW PP 2B	2998 G 082-2	H-7	A	3	Vertical Line Shaft	Motor	dP(a)	M3		
							dP(c)	Y2		
							Q(a)	M3		
							Q(c)	Y2		
							V(a)	M3		
							V(c)	Y2		
	Pump Name:	Intake Cooling Water Pumps								
ICW PP 2C	2998 G 082-2	H-6	A	3	Vertical Line Shaft	Motor	dP(a)	M3		
							dP(c)	Y2		
							Q(a)	M3		
							Q(c)	Y2		
							V(a)	M3		
							V(c)	Y2		
	Pump Name:	Intake Cooling Water Pumps								

Attachment 13

Safety Injection (SI)

Pump Tag	P&ID	P&ID Coor.	Category	Safety Class	Pump Type	Pump Driver	Test Type	Test Freq.	Relief Request	Tech. Pos.
HPSI PP 2A	2998 G 078-130A	B-3	B	2	Centrifugal	Motor	dP(b)	M3		
							dP(c)	Y2		
							Q(c)	Y2		
							V(c)	Y2		
	Pump Name:	**High Pressure Safety Injection Pumps**								
HPSI PP 2B	2998 G 078-130A	F-3	B	2	Centrifugal	Motor	dP(b)	M3		
							dP(c)	Y2		
							Q(c)	Y2		
							V(c)	Y2		
	Pump Name:	**High Pressure Safety Injection Pumps**								
LPSI PP 2A	2998 G 078-130B	E-3	A/B	2	Centrifugal	Motor	dP(b)	M3	PR-04,05	
							dP(c)	Y2	PR-05	
							Q(c)	Y2		
							V(c)	Y2		
	Pump Name:	**Low Pressure Safety Injection Pumps**								
LPSI PP 2B	2998 G 078-130B	F-3	A/B	2	Centrifugal	Motor	dP(b)	M3	PR-04,05	
							dP(c)	Y2	PR-05	
							Q(c)	Y2		
							V(c)	Y2		
	Pump Name:	**Low Pressure Safety Injection Pumps**								

ATTACHMENT 14

INSERVICE TESTING VALVE TABLE INDEX

System Designator	System Description
CCW	Component Cooling Water
CS	Containment Spray
CVCS	Chemical and Volume Control System
EDG-A	Emergency Diesel Generator – Air
EDG-C	Emergency Diesel Generator - Cooling Water
EDG-F	Emergency Diesel Generator – Fuel
EDG-L	Emergency Diesel Generator - Lube
FP	Fuel Pool Cooling and Make-up
FW	Feedwater
HVAC	Heating, Ventilation and Air Conditioning
IA	Instrument Air
ICW	Intake Cooling Water
ILRT	Integrated Leak Rate Penetrations
MS	Main Steam
M-SAM	Miscellaneous Sampling
MUW	Make-up Water
RCS	Reactor Coolant System
SA	Service Air
SAM	Sampling System
SGDB	Steam Generator Blowdown
SI	Safety Injection
W-MAN	Waste Management

Attachment 15

Component Cooling Water (CCW)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1-HCV-14-1	8770 G 083-1B	E-6	2	A	8	BTF	PO	A	O	C	FSC	CS		CS-13	TP-03
											LT-J	App J			
											PIT	Y2			
											ST-C	CS		CS-13	
	Valve Name:	RCP Cooling Water Inlet Containment Isolation Valve													
1-HCV-14-10	8770 G 083-1A	H-6	3	B	16	BTF	PO	A	O	C	FSC	M3			TP-03
											PIT	Y2			
											ST-C	M3			
	Valve Name:	Nonessential Header Outlet Isolation Valve													
1-HCV-14-2	8770 G 083-1B	E-7	2	A	8	BTF	PO	A	O	C	FSC	CS		CS-13	TP-03
											LT-J	App J			
											PIT	Y2			
											ST-C	CS		CS-13	
	Valve Name:	RCP Cooling Water Outlet Containment Isolation Valve													
1-HCV-14-3A	8770 G 083-1A	F-1	3	B	14	BTF	AO	A	C	O	FSO	M3			TP-03
											PIT	Y2			
											ST-O	M3			
	Valve Name:	1A Shutdown Cooling Heat Exchanger Water Return Valve													
1-HCV-14-3B	8770 G 083-1A	F-2	3	B	14	BTF	AO	A	C	O	FSO	M3			TP-03
											PIT	Y2			
											ST-O	M3			
	Valve Name:	1B Shutdown Cooling Heat Exchanger Water Return Valve													
1-HCV-14-6	8770 G 083-1B	D-7	2	A	8	BTF	PO	A	O	C	FSC	CS		CS-13	TP-03
											LT-J	App J			
											PIT	Y2			
											ST-C	CS		CS-13	
	Valve Name:	RCP Cooling Water Outlet Containment Isolation Valve													
1-HCV-14-7	8770 G 083-1B	D-6	2	A	8	BTF	PO	A	O	C	FSC	CS		CS-13	TP-03
											LT-J	App J			
											PIT	Y2			
											ST-C	CS		CS-13	
	Valve Name:	RCP Cooling Water Inlet Containment Isolation Valve													

Attachment 15

Component Cooling Water (CCW)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1-HCV-14-8A	8770 G 083-1A	D-4	3	B	16	BTF	PO	A	O	C	FSC	M3			TP-03
											PIT	Y2			
											ST-C	M3			
	Valve Name:	Nonessential Header Inlet Isolation Valve													
1-HCV-14-8B	8770 G 083-1A	D-5	3	B	16	BTF	PO	A	O	C	FSC	M3			TP-03
											PIT	Y2			
											ST-C	M3			
	Valve Name:	Nonessential Header Inlet Isolation Valve													
1-HCV-14-9	8770 G 083-1A	H-5	3	B	16	BTF	PO	A	O	C	FSC	M3			TP-03
											PIT	Y2			
											ST-C	M3			
	Valve Name:	Nonessential Header Outlet Isolation Valve													
1-MV-14-1	8770 G 083-1A	E-6	3	B	24	BTF	MO	P	C	C	PIT	Y2			
	Valve Name:	1C CCW Pump to Header A Discharge Stop Valve													
1-MV-14-2	8770 G 083-1A	E-7	3	B	24	BTF	MO	P	O	C	PIT	Y2			
	Valve Name:	1C CCW Pump to Header B Discharge Stop Valve													
1-MV-14-3	8770 G 083-1A	G-7	3	B	24	BTF	MO	P	C	C	PIT	Y2			
	Valve Name:	Header A to 1C CCW Pump Suction Stop Valve													
1-MV-14-4	8770 G 083-1A	G-7	3	B	24	BTF	MO	P	O	C	PIT	Y2			
	Valve Name:	Header B to 1C CCW Pump Suction Stop Valve													
1-MV-14-5	8770 G 083-1A	C-2	2	B	10	BTF	MO	P	O	O	PIT	Y2			
	Valve Name:	Containment Cooling Units CCW Isolation Valve													
1-MV-14-6	8770 G 083-1A	C-3	2	B	10	BTF	MO	P	O	O	PIT	Y2			
	Valve Name:	Containment Cooling Units CCW Isolation Valve													
1-MV-14-7	8770 G 083-1A	H-2	2	B	10	BTF	MO	P	O	O	PIT	Y2			
	Valve Name:	Containment Cooling Units CCW Isolation Valve													
1-MV-14-8	8770 G 083-1A	F-3	2	B	10	BTF	MO	P	O	O	PIT	Y2			
	Valve Name:	Containment Cooling Units CCW Isolation Valve													
1-SR-14-7A	8770 G 083-1A	E-2	3	C	1x2	RV	SA	A	C	O/C	RVT	Y10			TP-08
	Valve Name:	1A Shutdown Heat Exchangers Shell Side Relief Valve													

Attachment 15

Component Cooling Water (CCW)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1-SR-14-7B	8770 G 083-1A	E-2	3	C	1x2	RV	SA	A	C	O/C	RVT	Y10			TP-08
	Valve Name:	**1B Shutdown Heat Exchangers Shell Side Relief Valve**													
1-SR-14-8A	8770 G 083-1A	A-3	3	C	1x2	RV	SA	A	C	O/C	RVT	Y10			TP-08
	Valve Name:	**1A Containment Cooling Unit CCW Relief Valve**													
1-SR-14-8B	8770 G 083-1A	A-4	3	C	1x2	RV	SA	A	C	O/C	RVT	Y10			TP-08
	Valve Name:	**1B Containment Cooling Unit CCW Relief Valve**													
1-SR-14-8C	8770 G 083-1A	A-1	3	C	1x2	RV	SA	A	C	O/C	RVT	Y10			TP-08
	Valve Name:	**1C Containment Cooling Unit CCW Relief Valve**													
1-SR-14-8D	8770 G 083-1A	A-2	3	C	1x2	RV	SA	A	C	O/C	RVT	Y10			TP-08
	Valve Name:	**1D Containment Cooling Unit CCW Relief Valve**													
1-V-14143	8770 G 083-1A	F-6	3	C	20	CK	SA	A	O	O/C	CC	M3			
											CO	M3			
	Valve Name:	**1A Component Cooling Water Pump Discharge Check Valve**													
1-V-14147	8770 G 083-1A	F-7	3	C	20	CK	SA	A	O	O/C	CC	M3			
											CO	M3			
	Valve Name:	**1B Component Cooling Water Pump Discharge Check Valve**													
1-V-14151	8770 G 083-1A	F-7	3	C	20	CK	SA	A	O	O/C	CC	M3			
											CO	M3			
	Valve Name:	**1C Component Cooling Water Pump Discharge Check Valve**													

Attachment 15

Containment Spray (CS)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1-FCV-07-1A	8770 G 088-2	B-3	2	B	12	BTF	AO	A	C	O	FSO	M3			TP-03
											PIT	Y2			
											ST-O	M3			
	Valve Name:	Containment Spray Discharge Header Control Valve													
1-FCV-07-1B	8770 G 088-2	D-3	2	B	12	BTF	AO	A	C	O	FSO	M3			TP-03
											PIT	Y2			
											ST-O	M3			
	Valve Name:	Containment Spray Discharge Header Control Valve													
1-MV-07-1A	8770 G 088-1	E-5	2	B	24	BTF	MO	A	O	O/C	PIT	Y2			
											ST-C	M3			TP-11
	Valve Name:	Isolation for RWT Feed to 'A' Train LPSI, HPSI, & CNTMT SPR													
1-MV-07-1B	8770 G 088-1	E-5	2	B	24	BTF	MO	A	O	O/C	PIT	Y2			
											ST-C	M3			TP-11
	Valve Name:	Isolation for RWT to 'B' Train LPSI, HPSI, & CNTMT Spray Pump													
1-MV-07-3A	8770 G 088-2	B-3	2	B	12	GA	MO	A	LO	O	PIT	Y2			
											ST-C	M3			
	Valve Name:	Containment Spray Discharge Header Stop Valve													
1-MV-07-3B	8770 G 088-2	D-3	2	B	12	GA	MO	A	LO	O	PIT	Y2			
											ST-C	M3			
	Valve Name:	Containment Spray Discharge Header Stop Valve													
1-SE-07-1A	8770 G 088-1	G-1	2	B	2	GL	SO	A	C	O/C	FSC	M3			TP-03
											PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	NaOH Storage Tank Discharge Valve													
1-SE-07-1B	8770 G 088-1	G-3	2	B	2	GL	SO	A	C	O/C	FSC	M3			TP-03
											PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	NaOH Storage Tank Discharge Valve													

Attachment 15

Containment Spray (CS)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1-SE-07-2A	8770 G 088-1	G-1	2	B	2	GL	SO	A	C	O/C	FSC	M3			TP-03
											PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	NaOH Storage Tank Discharge Valve													
1-SE-07-2B	8770 G 088-1	G-3	2	B	2	GL	SO	A	C	O/C	FSC	M3			TP-03
											PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	NaOH Storage Tank Discharge Valve													
1-V-07119	8770 G 088-1	E-6	2	C	24	CK	SA	A	C	O/C	CCL	CM			TP-07
											COF	CM			TP-07
	Valve Name:	1B RWT Outlet Check Valve													
1-V-07120	8770 G 088-1	E-6	2	C	24	CK	SA	A	C	O/C	CCL	CM			TP-07
											COF	CM			TP-07
	Valve Name:	1A RWT Outlet Check Valve													
1-V-07129	8770 G 088-1	H-6	2	C	12	CK	SA	A	C	O	CCL	CM			TP-01, TP-07
											COF	CM			TP-07
	Valve Name:	1B Containment Spray Pump Discharge Check Valve													
1-V-07130	8770 G 088-1	H-7	2	B	12	GA	M	A	LO	O/C	ME	Y2			TP-04
	Valve Name:	1B Containment Spray Pump Discharge Isolation Valve													
1-V-07143	8770 G 088-1	G-6	2	C	12	CK	SA	A	C	O	CCL	CM			TP-01, TP-07
											COF	CM			TP-07
	Valve Name:	1A Containment Spray Pump Discharge Check Valve													
1-V-07145	8770 G 088-1	G-7	2	B	12	GA	M	A	LO	O/C	ME	Y2			TP-04
	Valve Name:	1A Containment Spray Pump Discharge Isolation Valve													
1-V-07192	8770 G 088-2	C-4	2	C	10	CK	SA	A	C	O	CCD	CM			TP-01, TP-07
											COD	CM			TP-07
	Valve Name:	B Train Containment Spray Discharge Header Check Valve													
1-V-07193	8770 G 088-2	C-4	2	C	10	CK	SA	A	C	O	CCD	CM			TP-01, TP-07
											COD	CM			TP-07
	Valve Name:	A Train Containment Spray Discharge Header Check Valve													

Attachment 15

Containment Spray (CS)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1-V-07256	8770 G 088-1	G-4	2	C	2	CK	SA	A	C	O/C	CC	CM			TP-07
											CO	CM			TP-07
	Valve Name:	NaOH Supply Check Valve													
1-V-07258	8770 G 088-1	H-4	2	C	2	CK	SA	A	C	O/C	CC	CM			TP-07
											CO	CM			TP-07
	Valve Name:	NaOH Supply Check Valve													
1-V-07271	8770 G 088-1	H-3	2	B	3	GA	M	A	LO	O	ME	Y2			TP-04
	Valve Name:	LPSI to CS Pump 1B Suction Iso Valve													
1-V-07272	8770 G 088-1	G-4	2	B	3	GA	M	A	LO	O	ME	Y2			TP-04
	Valve Name:	LPSI to CS Pump 1A Suction Iso Valve													

Attachment 15

Chemical and Volume Control System (CVCS)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1-FCV-2161	8770 G 078-121B	G-5	2	B	1	GL	AO	A	O	C	FSC	M3			TP-03
											PIT	Y2			
											ST-C	M3			
	Valve Name:	**Boric Acid Makeup Pumps Disch to VCT Stop Valve**													
1-MV-02-2	8770 G 078-120B	F-5	2	B	2	GL	MO	P	O	O	PIT	Y2			
	Valve Name:	**Charging Header Iso Valve**													
1-SE-01-1	8770 G 078-121A	C-2	2	A	0.75	GL	SO	A	O	C	FSC	CS		CS-06	TP-03
											LT-J	App J			
											PIT	Y2			
											ST-C	CS		CS-06	
	Valve Name:	**RCP Seal Water Return Isolation Valve**													
1-SE-02-1	8770 G 078-120B	D-6	1	B	2	GL	SO	A	O	O/C	FSO	M3			TP-03
											PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	**Charging Line to RCS Cold Leg Stop Valve**													
1-SE-02-2	8770 G 078-120B	C-6	1	B	2	GL	SO	A	O	O/C	FSO	M3			TP-03
											PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	**Charging Line to RCS Cold Leg Stop Valve**													
1-SE-02-3	8770 G 078-120B	F-6	1	B	2	GL	SO	A	LC	O/C	FSC	CS		CS-03	TP-03
											PIT	Y2			
											ST-C	CS		CS-03	
											ST-O	CS		CS-03	
	Valve Name:	**Auxiliary Pressurizer Spray Isolation Valve**													
1-SE-02-4	8770 G 078-120B	E-6	1	B	2	GL	SO	A	LC	O/C	FSC	CS		CS-03	TP-03
											PIT	Y2			
											ST-C	CS		CS-03	
											ST-O	CS		CS-03	
	Valve Name:	**Auxiliary Pressurizer Spray Isolation Valve**													
1-V-02132	8770 G 078-120B	C-3	2	C	2	CK	SA	A	SYS	O/C	CC	M3			
											CO	M3			
	Valve Name:	**1A Charging Pump Discharge CV**													

Attachment 15

Chemical and Volume Control System (CVCS)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1-V-02133	8770 G 078-120B	E-3	2	C	2	CK	SA	A	SYS	O/C	CC	M3			
											CO	M3			
	Valve Name:	1B Charging Pump Discharge CV													
1-V-02134	8770 G 078-120B	G-3	2	C	2	CK	SA	A	SYS	O/C	CC	M3			
											CO	M3			
	Valve Name:	1C Charging Pump Discharge CV													
1-V-2115	8770 G 078-121A	D-5	3	C	4	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name:	Relief Valve for VCT Outlet													
1-V-2118	8770 G 078-121A	E-5	2	C	4	CK	SA	A	O	O/C	CC	CM			TP-07
											CO	CM			TP-07
	Valve Name:	VCT Discharge Header Check Valve													
1-V-2177	8770 G 078-121B	H-5	2	C	3	CK	SA	A	C	O	COF	CM			TP-07
											NI	CM			TP-01, TP-07
	Valve Name:	BAM Pump Discharge CV to Charging Pump Suction													
1-V-2190	8770 G 078-121B	G-2	2	C	3	CK	SA	A	C	O	CC	CM			TP-01, TP-07
											CO	CM			TP-07
	Valve Name:	Boric Acid Gravity Feed Check Valve													
1-V-2191	8770 G 078-121A	F-5	2	C	3	CK	SA	A	C	O/C	CC	CM			TP-07
											CO	CM			TP-07
	Valve Name:	RWT to Charging Pump Suction Check Valve													
1-V-2311	8770 G 078-121A	F-6	2	C	0.5	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name:	Charging Pump Suction Header Relief Valve													
1-V-2315	8770 G 078-120B	B-2	2	C	0.5	RV	SA	A	C	O/C	RVT	Y10			TP-08
	Valve Name:	1A Charging Pump Suction Relief Valve													
1-V-2318	8770 G 078-120B	D-2	2	C	0.5	RV	SA	A	C	O/C	RVT	Y10			TP-08
	Valve Name:	1B Charging Pump Suction Relief Valve													
1-V-2321	8770 G 078-120B	F-2	2	C	0.5	RV	SA	A	C	O/C	RVT	Y10			TP-08
	Valve Name:	1C Charging Pump Suction Relief Valve													
1-V-2324	8770 G 078-120B	F-3	2	C	1.5	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name:	1C Charging Pump Discharge Relief Valve													

Attachment 15

Chemical and Volume Control System (CVCS)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1-V-2325	8770 G 078-120B	D-3	2	C	1.5	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name:	**1B Charging Pump Discharge Relief Valve**													
1-V-2326	8770 G 078-120B	B-3	2	C	1.5	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name:	**1A Charging Pump Discharge Relief Valve**													
1-V-2336	8770 G 078-120B	G-3	2	B	2	GL	M	A	LO	O/C	ME	Y2			TP-04
	Valve Name:	**1C Charging Pump Discharge Isolation Valve**													
1-V-2337	8770 G 078-120B	E-3	2	B	2	GL	M	A	LO	O/C	ME	Y2			TP-04
	Valve Name:	**1B Charging Pump Discharge Isolation Valve**													
1-V-2338	8770 G 078-120B	D-3	2	B	2	GA	M	A	LO	O/C	ME	Y2			TP-04
	Valve Name:	**CVCS to HPSI Auxiliary Header Isolation Valve**													
1-V-2339	8770 G 078-120B	C-3	2	B	2	GL	M	A	LO	O/C	ME	Y2			TP-04
	Valve Name:	**1A Charging Pump Discharge Isolation Valve**													
1-V-2340	8770 G 078-120B	A-3	2	B	2	GA	M	A	C	O/C	ME	Y2			TP-04
	Valve Name:	**CVCS to HSPI Auxiliary Header Cross-Connect**													
1-V-2354	8770 G 078-120A	C-6	3	C	3	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name:	**Safety Rlf for Letdown Holdup Tank Dwnstrm FE-2202**													
1-V-2429	8770 G 078-120B	B-4	2	B	2	GA	M	A	LO	O/C	ME	Y2			TP-04
	Valve Name:	**Charging Line Isolation Valve**													
1-V-2430	8770 G 078-120B	B-5	2	C	2	CK	SA	A	O	O	CCNI	CM			TP-01, TP-07
											COF	CM			TP-07
	Valve Name:	**Charging Header Check Valve**													
1-V-2431	8770 G 078-120B	F-7	1	C	2	CK	SA	A	C	O	CCNI	CM			TP-01, TP-07
											COF	CM			TP-07
	Valve Name:	**Auxiliary Pressurizer Spray Check Valve**													
1-V-2432	8770 G 078-120B	D-7	1	C	2	CK	SA	A	O	O	CCNI	CM			TP-01, TP-07
											COF	CM			TP-07
	Valve Name:	**RCS Cold Leg Chrgng Line CV**													
1-V-2433	8770 G 078-120B	C-7	1	C	2	CK	SA	A	O	O	CCNI	CM			TP-01, TP-07
											COF	CM			TP-07
	Valve Name:	**RCS Cold Leg Chrgng Line CV**													

Attachment 15

Chemical and Volume Control System (CVCS)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1-V-2435	8770 G 078-120B	C-6	1	C	2	CK	SA	A	C	O	CCNI	CM			TP-01, TP-07
											COF	CM			TP-07
	Valve Name:	**SE-02-2 Bypass Relief Valve**													
1-V-2443	8770 G 078-121B	F-4	2	C	3	CK	SA	A	C	O/C	CCL	CM			TP-07
											COF	CM			TP-07
	Valve Name:	**1B Boric Acid Makeup Pump Discharge Check Valve**													
1-V-2444	8770 G 078-121B	G-4	2	C	3	CK	SA	A	C	O/C	CCL	CM			TP-07
											COF	CM			TP-07
	Valve Name:	**1A Boric Acid Makeup Pump Discharge Check Valve**													
1-V-2501	8770 G 078-121A	E-5	2	B	4	GA	MO	A	O	O/C	PIT	Y2			
											ST-C	CS		CS-05	
											ST-O	CS		CS-05	
	Valve Name:	**Volume Control Tank Discharge Isolation Valve**													
1-V-2504	8770 G 078-121A	F-5	3	B	3	GA	MO	A	C	O/C	PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	**RWT to Charging Pump Suction Isolation Valve**													
1-V-2505	8770 G 078-121A	C-3	2	A	0.75	GL	AO	A	O	C	FSC	CS		CS-06	TP-03
											LT-J	App J			
											PIT	Y2			
											ST-C	CS		CS-06	
	Valve Name:	**RCP Seal Water Return Valve**													
1-V-2508	8770 G 078-121B	F-3	2	B	3	GA	MO	A	C	O	PIT	Y2			
											ST-O	M3			
	Valve Name:	**1B Boric Acid Tank Gravity Feed Iso Valve**													
1-V-2509	8770 G 078-121B	F-2	2	B	3	GA	MO	A	C	O	PIT	Y2			
											ST-O	M3			
	Valve Name:	**1A Boric Acid Tank Gravity Feed Iso Valve**													
1-V-2510	8770 G 078-121B	H-3	2	B	1	GL	AO	A	O	C	FSC	M3			TP-03
											PIT	Y2			
											ST-C	M3			
	Valve Name:	**1A Boric Acid Makeup Pump Recirc Control Valve**													

Attachment 15

Chemical and Volume Control System (CVCS)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1-V-2511	8770 G 078-121B	D-4	2	B	1	GL	AO	A	O	C	FSC	M3			TP-03
											PIT	Y2			
											ST-C	M3			
	Valve Name:	**1B Boric Acid Makeup Pump Recirc Control Valve**													
1-V-2514	8770 G 078-121B	H-5	2	B	3	GA	MO	A	C	O	PIT	Y2			
											ST-O	M3			
	Valve Name:	**Boric Acid Makeup Pump Disch to Chargin Pump Suction**													
1-V-2515	8770 G 078-120B	G-7	1	A	2	GL	AO	A	O	C	FSC	CS		CS-04	TP-03
											LT-J	App J			
											PIT	Y2			
											ST-C	CS		CS-04	
	Valve Name:	**Letdown Isolation Valve**													
1-V-2516	8770 G 078-120B	G-6	1	A	2	GL	AO	A	O	C	FSC	CS		CS-04	TP-03
											LT-J	App J			
											PIT	Y2			
											ST-C	CS		CS-04	
	Valve Name:	**Letdown Isolation Valve**													
1-V-2525	8770 G 078-121A	G-4	3	B	4	GA	MO	A	C	C	PIT	Y2			
											ST-C	M3			
	Valve Name:	**BAMT and RMW to Charging Pump Suction Iso Valve**													
1-V-2526	8770 G 078-121A	D-5	3	C	4	CK	SA	A	O	O	CC	CM			TP-01, TP-07
											CO	CM			TP-07
	Valve Name:	**Volume Control Tank Discharge Check Valve**													
1-V-2621	8770 G 078-121A	C-4	3	B	3	GA	M	A	O	C	ME	Y2			TP-04
	Valve Name:	**PMW/BAM Supply to VCT Check Valve**													

Attachment 15

Emergency Diesel Generator - Air (EDG-A)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1-FCV-59-1A1	8770 G 096-1C	H-2	3	B	1.5	GA	AO	A	C	O/C	ST-O	Y2			TP-09
	Valve Name:	1A EDG Starting Air Control Valve													
1-FCV-59-1B1	8770 G 096-2C	G-4	3	B	1.5	GA	AO	A	C	O/C	ST-O	Y2			TP-09
	Valve Name:	1B EDG Starting Air Control Valve													
1-FCV-59-2A1	8770 G 096-1C	H-4	3	B	1.5	GA	AO	A	C	O/C	ST-O	Y2			TP-09
	Valve Name:	1A EDG Starting Air Control Valve													
1-FCV-59-2B1	8770 G 096-2C	G-2	3	B	1.5	GA	AO	A	C	O/C	ST-O	Y2			TP-09
	Valve Name:	1B EDG Starting Air Control Valve													
1-FCV-59-3A1	8770 G 096-1C	G-4	3	B	1.5	GA	AO	A	C	O/C	ST-O	Y2			TP-09
	Valve Name:	1A EDG Starting Air Control Valve													
1-FCV-59-3B1	8770 G 096-2C	H-4	3	B	1.5	GA	AO	A	C	O/C	ST-O	Y2			TP-09
	Valve Name:	1B EDG Starting Air Control Valve													
1-FCV-59-4A1	8770 G 096-1C	G-2	3	B	1.5	GA	AO	A	C	O/C	ST-O	Y2			TP-09
	Valve Name:	1A EDG Starting Air Control Valve													
1-FCV-59-4B1	8770 G 096-2C	H-2	3	B	1.5	GA	AO	A	C	O/C	ST-O	Y2			TP-09
	Valve Name:	1B EDG Starting Air Control Valve													
1-SE-59-3A	8770 G 096-1C	G-2	3	B	0.5	GL	SO	A	C	O/C	ST-O	Y2			TP-09
	Valve Name:	1A EDG Starting Air Control Valve Pilot Valve													
1-SE-59-3B	8770 G 096-2C	H-2	3	B	0.5	GL	SO	A	C	O/C	ST-O	Y2			TP-09
	Valve Name:	1B EDG Starting Air Control Valve Pilot Valve													
1-SE-59-4A	8770 G 096-1C	F-2	3	B	0.5	GL	SO	A	C	O/C	ST-O	Y2			TP-09
	Valve Name:	1A EDG Starting Air Control Valve Pilot Valve													
1-SE-59-4B	8770 G 096-2C	F-2	3	B	0.5	GL	SO	A	C	O/C	ST-O	Y2			TP-09
	Valve Name:	1B EDG Starting Air Control Valve Pilot Valve													
1-SE-59-5A	8770 G 096-1C	G-4	3	B	0.5	GL	SO	A	C	O/C	ST-O	Y2			TP-09
	Valve Name:	1A EDG Starting Air Control Valve Pilot Valve													
1-SE-59-5B	8770 G 096-2C	G-4	3	B	0.5	GL	SO	A	C	O/C	ST-O	Y2			TP-09
	Valve Name:	1B EDG Starting Air Control Valve Pilot Valve													

Attachment 15

Emergency Diesel Generator - Air (EDG-A)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1-SE-59-6A	8770 G 096-1C	F-4	3	B	0.5	GL	SO	A	C	O/C	ST-O	Y2			TP-09
	Valve Name:	1A EDG Starting Air Control Valve Pilot Valve													
1-SE-59-6B	8770 G 096-2C	F-4	3	B	0.5	GL	SO	A	C	O/C	ST-O	Y2			TP-09
	Valve Name:	1B EDG Starting Air Control Valve Pilot Valve													
1-SH-59085	8770 G 096-1C	D-4	3	B	2	BAL	M	P	LO	O	PIT	Y2			
	Valve Name:	Diesel Starting Air Tank 1A4 Outlet Isolation Valve													
1-SH-59086	8770 G 096-1C	D-3	3	B	2	BAL	M	P	LO	O	PIT	Y2			
	Valve Name:	Diesel Starting Air Tank 1A3 Outlet Isolation Valve													
1-SH-59087	8770 G 096-1C	D-2	3	B	2	BAL	M	P	LO	O	PIT	Y2			
	Valve Name:	Diesel Starting Air Tank 1A2 Outlet Isolation Valve													
1-SH-59088	8770 G 096-1C	D-1	3	B	2	BAL	M	P	LO	O	PIT	Y2			
	Valve Name:	Diesel Starting Air Tank 1A1 Outlet Isolation Valve													
1-SH-59131	8770 G 096-2C	D-4	3	B	2	BAL	M	P	LO	O	PIT	Y2			
	Valve Name:	Diesel Starting Air Tank 1B4 Outlet Isolation Valve													
1-SH-59132	8770 G 096-2C	D-3	3	B	2	BAL	M	P	LO	O	PIT	Y2			
	Valve Name:	Diesel Starting Air Tank 1B3 Outlet Isolation Valve													
1-SH-59133	8770 G 096-2C	D-2	3	B	2	BAL	M	P	LO	O	PIT	Y2			
	Valve Name:	Diesel Starting Air Tank 1B2 Outlet Isolation Valve													
1-SH-59134	8770 G 096-2C	D-1	3	B	2	BAL	M	P	LO	O	PIT	Y2			
	Valve Name:	Diesel Starting Air Tank 1B1 Outlet Isolation Valve													
1-SR-59-3A	8770 G 096-1C	C-4	3	C	0.75	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name:	1A EDG Starting Air Receiver Relief Valve													
1-SR-59-3B	8770 G 096-2C	C-4	3	C	0.75	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name:	1B EDG Starting Air Receiver Relief Valve													
1-SR-59-4A	8770 G 096-1C	C-3	3	C	0.75	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name:	1A EDG Starting Air Receiver Relief Valve													
1-SR-59-4B	8770 G 096-2C	C-3	3	C	0.75	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name:	1B EDG Starting Air Receiver Relief Valve													

Attachment 15

Emergency Diesel Generator - Air (EDG-A)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1-SR-59-5A	8770 G 096-1C	C-2	3	C	0.75	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name:	1A EDG Starting Air Receiver Relief Valve													
1-SR-59-5B	8770 G 096-2C	C-2	3	C	0.75	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name:	1B EDG Starting Air Receiver Relief Valve													
1-SR-59-6A	8770 G 096-1C	C-1	3	C	0.75	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name:	1A EDG Starting Air Receiver Relief Valve													
1-SR-59-6B	8770 G 096-2C	C-1	3	C	0.75	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name:	1B EDG Starting Air Receiver Relief Valve													
1-V-59079	8770 G 096-1C	D-5	3	C	1	CK	SA	A	C	C	CC	M3			
											CO	OP			TP-05, TP-01
	Valve Name:	1A EDG Air Start Receiver Check Valve													
1-V-59125	8770 G 096-2C	D-5	3	C	1	CK	SA	A	C	C	CC	M3			
											CO	OP			TP-05, TP-01
	Valve Name:	1B EDG Air Start Receiver Check Valve													
1-V-59156	8770 G 096-1C	D-5	3	C	1	CK	SA	A	C	C	CC	M3			
											CO	OP			TP-05, TP-01
	Valve Name:	1A EDG Air Start Receiver Check Valve													
1-V-59158	8770 G 096-2C	D-5	3	C	1	CK	SA	A	C	C	CC	M3			
											CO	OP			TP-05, TP-01
	Valve Name:	1B EDG Air Start Receiver Check Valve													
1-V-59200	8770 G 096-1C	F-1	3	C	0.375	CK	SA	A	C	O/C	CC	Y2			TP-09
											CO	Y2			TP-09
	Valve Name:	Check Valve Assembly for D/G Engine Governor Air Boosters													
1-V-59201	8770 G 096-1C	F-5	3	C	0.375	CK	SA	A	C	O/C	CC	Y2			TP-09
											CO	Y2			TP-09
	Valve Name:	Check Valve Assembly for D/G Engine Governor Air Boosters													
1-V-59202	8770 G 096-2C	F-1	3	C	0.375	CK	SA	A	C	O/C	CC	Y2			TP-09
											CO	Y2			TP-09
	Valve Name:	Check Valve Assembly for D/G Engine Governor Air Boosters													

Attachment 15

Emergency Diesel Generator - Air (EDG-A)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1-V-59203	8770 G 096-2C	F-5	3	C	0.375	CK	SA	A	C	O/C	CC	Y2			TP-09
											CO	Y2			TP-09
	Valve Name:	**Check Valve Assembly for D/G Engine Governor Air Boosters**													

Attachment 15

Emergency Diesel Generator - Cooling Water (EDG-C)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1-SR-59-1A1	8770 G 096-1A	D-4	3	C	0.75	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name:	Safety Relief on the Radiator Expansion Tank of the EDG													
1-SR-59-1A2	8770 G 096-1B	D-5	3	C	0.75	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name:	Safety Relief on the Radiator Expansion Tank of the EDG													
1-SR-59-1B1	8770 G 096-2A	D-4	3	C	0.75	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name:	Safety Relief on the Radiator Expansion Tank of the EDG													
1-SR-59-1B2	8770 G 096-2B	D-5	3	C	0.75	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name:	Safety Relief on the Radiator Expansion Tank of the EDG													
1-TCV-59-1A1	8770 G 096-1A	D-2	3	B	4	3W	SA	A	C	O/C	TMP	M3			TP-09
	Valve Name:	EDG 1A1 Engine Water TCV													
1-TCV-59-1A2	8770 G 096-1B	E-6	3	B	4	3W	SA	A	C	O/C	TMP	M3			TP-09
	Valve Name:	EDG 1A2 Engine Water TCV													
1-TCV-59-1B1	8770 G 096-2A	D-2	3	B	4	3W	SA	A	C	O/C	TMP	M3			TP-09
	Valve Name:	EDG 1B1 Engine Water TCV													
1-TCV-59-1B2	8770 G 096-2B	E-6	3	B	4	3W	SA	A	C	O/C	TMP	M3			TP-09
	Valve Name:	EDG 1B2 Engine Water TCV													

Attachment 15

Emergency Diesel Generator - Fuel (EDG-F)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1-SE-59-1A	8770 G 096-1A	G-2	3	B	2	GL	SO	A	C	O/C	FSC	M3			TP-03, TP-09
											ST-C	M3			TP-09
											ST-O	M3			TP-09
	Valve Name:	A Fuel Oil Day Tank Inlet Isolation Valve													
1-SE-59-1B	8770 G 096-2A	G-2	3	B	2	GL	SO	A	C	O/C	FSC	M3			TP-03, TP-09
											ST-C	M3			TP-09
											ST-O	M3			TP-09
	Valve Name:	B Fuel Oil Day Tank Inlet Isolation Valve													
1-SH-59161	8770 G 096-1A	G-2	3	B	2	BAL	M	P	LO	O	PIT	Y2			
	Valve Name:	1A1 Fuel Oil Day Tank Inlet Isolation Valve													
1-SH-59164	8770 G 096-2A	G-2	3	B	2	BAL	M	P	LO	O	PIT	Y2			
	Valve Name:	1B1 Fuel Oil Day Tank Inlet Isolation Valve													
1-V-17204	8770 G 086-1	B-3	3	C	1.5	CK	SA	A	C	O	CC	CM			TP-01, TP-07
											CO	CM			TP-07
	Valve Name:	1A Diesel Fuel Oil Transfer Pump Discharge Check Valve													
1-V-17205	8770 G 086-1	B-3	3	B	1.5	GA	M	A	LO	O/C	ME	Y2			TP-04
	Valve Name:	Diesel Oil Transfer Pump 1A Discharge Isolation Valve													
1-V-17207	8770 G 086-1	B-3	3	B	2	GA	M	A	LC	O/C	ME	Y2			TP-04
	Valve Name:	Diesel Oil Transfer Header Cross-tie Valve													
1-V-17214	8770 G 086-1	D-3	3	C	1.5	CK	SA	A	C	O	CC	CM			TP-01, TP-07
											CO	CM			TP-07
	Valve Name:	1B Diesel Fuel Oil Transfer Pump Discharge Check Valves													
1-V-17215	8770 G 086-1	D-3	3	B	1.5	GA	M	A	LO	O/C	ME	Y2			TP-04
	Valve Name:	Diesel Oil Transfer Pump 1B Discharge Isolation Valve													
1-V-17217	8770 G 086-1	D-3	3	B	2	GA	M	A	LC	O/C	ME	Y2			TP-04
	Valve Name:	Diesel Oil Transfer Header Cross-tie Valve													
1-V-17218	8770 G 086-1	C-3	3	B	2	GA	M	A	LC	O/C	ME	Y2			TP-04
	Valve Name:	Isolation Valve for Diesel Oil to Unit 2 CrossTie													

Attachment 15

Emergency Diesel Generator - Lube (EDG-L)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1-V-59010	8770 G 096-1A	B-5	3	C	0.5	CK	SA	A	O	O/C	CC	M3			TP-09
											CO	M3			TP-09
	Valve Name:	**Soakback Lube Oil A/C Pump Discharge Check for Diesel 1A1**													
1-V-59011	8770 G 096-1A	B-4	3	C	0.5	CK	SA	A	C	O/C	CC	M3			TP-09
											CO	M3			TP-09
	Valve Name:	**Soakback Lube Oil D/C Pump Discharge Check for Diesel 1A1**													
1-V-59025	8770 G 096-1B	G-4	3	C	0.5	CK	SA	A	O	O/C	CC	M3			TP-09
											CO	M3			TP-09
	Valve Name:	**Soakback Lube Oil A/C Pump Discharge Check for Diesel 1A2**													
1-V-59026	8770 G 096-1B	F-4	3	C	0.5	CK	SA	A	C	O/C	CC	M3			TP-09
											CO	M3			TP-09
	Valve Name:	**Soakback Lube Oil D/C Pump Discharge Check for Diesel 1A2**													
1-V-59040	8770 G 096-2A	B-4	3	C	1	CK	SA	A	O	O/C	CC	M3			TP-09
											CO	M3			TP-09
	Valve Name:	**Soakback Lube Oil A/C Pump Discharge Check for Diesel 1B1**													
1-V-59041	8770 G 096-2A	B-4	3	C	0.5	CK	SA	A	C	O/C	CC	M3			TP-09
											CO	M3			TP-09
	Valve Name:	**Soakback Lube Oil D/C Pump Discharge Check for Diesel 1B1**													
1-V-59055	8770 G 096-2B	F-4	3	C	0.5	CK	SA	A	C	O/C	CC	M3			TP-09
											CO	M3			TP-09
	Valve Name:	**Soakback Lube Oil D/C Pump Discharge Check for Diesel 1B2**													
1-V-59056	8770 G 096-2B	G-4	3	C	1	CK	SA	A	O	O/C	CC	M3			TP-09
											CO	M3			TP-09
	Valve Name:	**Soakback Lube Oil A/C Pump Discharge Check for Diesel 1B2**													

Attachment 15

Fuel Pool Cooling and Make-up (FP)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1-SR-07276	8770 G 083-2	E-4	2	A/C	0.75	RV	SA	A	C	O/C	LT-J	App J			
											RVT	Y10			TP-08
	Valve Name:	Refueling Cavity Containment Penetration Relief Valve													
1-SR-07277	8770 G 083-2	E-4	2	A/C	0.75	RV	SA	A	C	O/C	LT-J	App J			
											RVT	Y10			TP-08
	Valve Name:	Refueling Cavity Containment Penetration Relief Valve													
1-V-07170	8770 G 083-2	F-3	2	A	3	GA	M	P	LC	C	LT-J	App J			
	Valve Name:	Refueling Cavity Containment Isolation Valve													
1-V-07188	8770 G 083-2	F-4	2	A	3	GA	M	P	LC	C	LT-J	App J			
	Valve Name:	Refueling Cavity Containment Isolation Valve													
1-V-07189	8770 G 083-2	E-5	2	A	3	GA	M	P	LC	C	LT-J	App J			
	Valve Name:	Refueling Cavity Containment Isolation Valve													
1-V-07206	8770 G 083-2	E-3	2	A	3	GA	M	P	LC	C	LT-J	App J			
	Valve Name:	Refueling Cavity Containment Isolation Valve													

Attachment 15

Feedwater (FW)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1-HCV-09-7	8770 G 080-3	B-5	2	B	20	GA	AO	A	O	C	PIT	Y2			
											ST-C	CS		CS-12	
	Valve Name:	1-A Main Feedwater Isolation Valves													
1-HCV-09-8	8770 G 080-3	C-6	2	B	20	GA	AO	A	O	C	PIT	Y2			
											ST-C	CS		CS-12	
	Valve Name:	1B Main Feedwater Isolation Valves													
1-MV-09-1	8770 G 080-3	G-3	NC	B	20	GA	MO	A	O	C	PIT	Y2			
											ST-C	CS		CS-11	
	Valve Name:	1A Main Feedwater Pump Discharge Valve													
1-MV-09-10	8770 G 080-4	B-6	3	B	4	GL	MO	A	C	O/C	PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	1B AFW Pump Flow Control Valve													
1-MV-09-11	8770 G 080-4	H-6	3	B	4	GL	MO	A	C	O/C	PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	1C AFW Pump to 1A Steam Generator Flow Control Valve													
1-MV-09-12	8770 G 080-4	F-6	3	B	4	GL	MO	A	C	O/C	PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	1C AFW Pump to 1B Steam Generator Flow Control Valve													
1-MV-09-13	8770 G 080-4	D-5	3	B	2.5	GL	MO	P	C	C	PIT	Y2			
	Valve Name:	AFW Pumps Discharge Header Cross Connection Valve													
1-MV-09-14	8770 G 080-4	C-5	3	B	2.5	GL	MO	P	C	C	PIT	Y2			
	Valve Name:	AFW Pumps Discharge Header Cross Connection Valve													
1-MV-09-2	8770 G 080-3	G-5	NC	B	20	GA	MO	A	O	C	PIT	Y2			
											ST-C	CS		CS-11	
	Valve Name:	1B Main Feedwater Pump Discharge Valve													
1-MV-09-9	8770 G 080-4	E-6	3	B	4	GL	MO	A	C	O/C	PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	1A AFW Pump Flow Control Valve													

Attachment 15

Feedwater (FW)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1-SR-09-841	8770 G 080-5	D-3	3	C	1	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name:	MFIV N2 Accumulator 1A Relief Valve													
1-SR-09-868	8770 G 080-5	H-3	3	C	1	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name:	MFIV N2 Accumulator 1B Relief Valve													
1-V-09107	8770 G 080-4	E-4	3	C	4	CK	SA	A	C	O	CCF	CM			TP-01, TP-07
											COF	CM			TP-07
	Valve Name:	1A AFW Pump Discharge Check Valve													
1-V-09119	8770 G 080-4	E-7	2	C	4	CK	SA	A	C	O	CCL	CM			TP-01, TP-07
											COF	CM			TP-07
	Valve Name:	1A AFW Supply Header Check Valve													
1-V-09120	8770 G 080-4	E-7	2	B	4	GA	M	A	LO	C	ME	Y2			TP-04
	Valve Name:	Manual Auxiliary Feedwater Isolation Valve													
1-V-09123	8770 G 080-4	B-4	3	C	4	CK	SA	A	C	O	CCF	CM			TP-01, TP-07
											COF	CM			TP-07
	Valve Name:	1B AFW Pump Discharge Check Valve													
1-V-09135	8770 G 080-4	B-7	2	C	4	CK	SA	A	C	O	CCL	CM			TP-01, TP-07
											COF	CM			TP-07
	Valve Name:	1B AFW Supply Header Check Valve													
1-V-09136	8770 G 080-4	B-7	2	B	4	GA	M	A	LO	C	ME	Y2			TP-04
	Valve Name:	Manual Auxiliary Feedwater Isolation Valve													
1-V-09139	8770 G 080-4	F-4	3	C	6	CK	SA	A	C	O	CCL	CM			TP-01, TP-07
											COF	CM			TP-07
	Valve Name:	1C AFW Pump Discharge Check Valve													
1-V-09151	8770 G 080-4	H-7	2	C	4	CK	SA	A	C	O	CCF	CM			TP-01, TP-07
											COL	CM			TP-07
	Valve Name:	1C AFW Supply to 1A Header Check Valve													
1-V-09152	8770 G 080-4	H-7	2	B	4	GA	M	A	LO	C	ME	Y2			TP-04
	Valve Name:	Manual Auxiliary Feedwater Isolation Valve													
1-V-09157	8770 G 080-4	F-7	2	C	4	CK	SA	A	C	O	CCF	CM			TP-01, TP-07
											COL	CM			TP-07
	Valve Name:	1C AFW Supply to 1B Header Check Valve													

Attachment 15

Feedwater (FW)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1-V-09158	8770 G 080-4	F-7	2	B	4	GA	M	A	LO	C	ME	Y2			TP-04
	Valve Name:	**Manual Auxiliary Feedwater Isolation Valve**													
1-V-09248	8770 G 080-3	B-5	2	C	20	CK	SA	A	O	C	CCD	CM			TP-07
											COD	CM			TP-01, TP-07
	Valve Name:	**1A Steam Generator Outboard Feedwater Check Valve**													
1-V-09252	8770 G 080-3	B-7	2	C	18	CK	SA	A	O	O	CCD	CM			TP-01, TP-07
											COF	CM			TP-07
	Valve Name:	**1A Steam Generator Inboard Feedwater Check Valve**													
1-V-09280	8770 G 080-3	C-5	2	C	20	CK	SA	A	O	C	CCD	CM			TP-07
											COD	CM			TP-01, TP-07
	Valve Name:	**1B Steam Generator Outboard Feedwater Check Valve**													
1-V-09294	8770 G 080-3	C-7	2	C	18	CK	SA	A	O	O	CCD	CM			TP-01, TP-07
											COF	CM			TP-07
	Valve Name:	**1B Steam Generator Inboard Feedwater Check Valve**													
1-V-09303	8770 G 080-4	E-3	3	C	2	CK	SA	A	C	O	CCU	CM			TP-01, TP-07
											COU	CM			TP-07
	Valve Name:	**1C AFW Pump Minimum Flow Check Valve**													
1-V-09304	8770 G 080-4	C-3	3	C	2	CK	SA	A	C	O	CCU	CM			TP-01, TP-07
											COU	CM			TP-07
	Valve Name:	**1B AFW Pump Minimum Flow Check Valve**													
1-V-09305	8770 G 080-4	D-3	3	C	2	CK	SA	A	C	O	CCU	CM			TP-01, TP-07
											COU	CM			TP-07
	Valve Name:	**1A AFW Pump Minimum Flow Check Valve**													
1-V-09824	8770 G 080-4	A-6	3	C	0.375	CK	SA	A	C	C	CCL	CM			TP-07
											COF	CM			TP-01, TP-07
	Valve Name:	**AFWF 1B to SG 1B Chemical Addition Check Valves**													
1-V-09825	8770 G 080-4	D-6	3	C	0.375	CK	SA	A	C	C	CCL	CM			TP-07
											COF	CM			TP-01, TP-07
	Valve Name:	**AFWF 1A to SG 1A Chemical Addition Check Valves**													
1-V-09826	8770 G 080-4	G-6	3	C	0.375	CK	SA	A	C	C	CCL	CM			TP-07
											COF	CM			TP-01, TP-07
	Valve Name:	**AFWF 1C to SG 1B Chemical Addition Check Valves**													

Attachment 15

Feedwater (FW)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1-V-09827	8770 G 080-4	E-6	3	C	0.375	CK	SA	A	C	C	CCL	CM			TP-07
											COF	CM			TP-01, TP-07
	Valve Name:	AFWF 1C to SG 1A Chemical Addition Check Valves													
1-V-09828	8770 G 080-5	D-3	3	C	0.5	CK	SA	A	C	C	CO	CM			TP-01, TP-07
	Valve Name:	MFIV Accumulator 1A Outboard Inlet Ck Vlv													
1-V-09829	8770 G 080-5	D-3	3	C	0.5	CK	SA	A	C	C	CC	CM			TP-07
											CO	CM			TP-01, TP-07
	Valve Name:	MFIV Accumulator 1A Inboard Inlet Ck Vlv													
1-V-09831	8770 G 080-5	B-2	3	B	1	3W	AO	A	Vent	Flow	SE	CS			TP-09
	Valve Name:	HCV-09-7 Actuator "A" Train Open Pilot Vlv													
1-V-09832	8770 G 080-5	B-3	3	B	1	3W	AO	A	Vent	Flow	SE	CS			TP-09
	Valve Name:	HCV-09-7 Actuator "B" Train Open Pilot Vlv													
1-V-09833	8770 G 080-5	B-4	3	B	1	3W	AO	A	Vent	Flow	SE	CS			TP-09
	Valve Name:	HCV-09-7 Actuator "A" Train Close Pilot Vlv													
1-V-09834	8770 G 080-5	B-4	3	B	1	3W	AO	A	Vent	Flow	SE	CS			TP-09
	Valve Name:	HCV-09-7 Actuator "B" Train Close Pilot Vlv													
1-V-09855	8770 G 080-5	H-3	3	C	0.5	CK	SA	A	C	C	CC	CM			TP-07
											CO	CM			TP-01, TP-07
	Valve Name:	MFIV Accumulator 1B Outboard Inlet Ck Vlv													
1-V-09856	8770 G 080-5	H-3	3	C	0.5	CK	SA	A	C	C	CC	CM			TP-07
											CO	CM			TP-01, TP-07
	Valve Name:	MFIV Accumulator 1B Inboard Inlet Ck Vlv													
1-V-09861	8770 G 080-5	F-2	3	B	1	3W	AO	A	Vent	Flow	SE	CS			TP-09
	Valve Name:	HCV-09-8 Actuator "A" Train Open Pilot Vlv													
1-V-09862	8770 G 080-5	F-3	3	B	1	3W	AO	A	Vent	Flow	SE	CS			TP-09
	Valve Name:	HCV-09-8 Actuator "B" Train Open Pilot Vlv													
1-V-09863	8770 G 080-5	F-4	3	B	1	3W	AO	A	Vent	Flow	SE	CS			TP-09
	Valve Name:	HCV-09-8 Actuator "A" Train Close Pilot Vlv													
1-V-09864	8770 G 080-5	F-4	3	B	1	3W	AO	A	Vent	Flow	SE	CS			TP-09
	Valve Name:	HCV-09-8 Actuator "B" Train Close Pilot Vlv													

Attachment 15

Feedwater (FW)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1-V-12174	8770 G 080-4	C-2	3	C	8	CK	SA	A	C	O	CCD	CM.			TP-01, TP-07
											COD	CM			TP-07
	Valve Name:	1C AFW Pump Suction Check Valve From CST													
1-V-12175	8770 G 080-4	B-2	3	B	8	GA	M	A	LC	O/C	ME	Y2			TP-04
	Valve Name:	Unit 1/2 CST/AFW Suction Cross Connect Valves													
1-V-12177	8770 G 080-4	B-2	3	B	8	GA	M	A	LC	O/C	ME	Y2			TP-04
	Valve Name:	Unit 1/2 CST/AFW Suction Cross Connect Valves													
1-V-12497	8770 G 080-4	C-1	3	B	8	GL	M	A	LO	O/C	ME	Y2			TP-04
	Valve Name:	Condensate Storage Tank Outlet Isolation Valve													
1-V-12506	8770 G 080-4	C-1	3	B	8	GL	M	A	LO	O/C	ME	Y2			TP-04
	Valve Name:	Condensate Storage Tank Outlet Isolation Valve													

Attachment 15

Heating, Ventilation and Air Conditioning (HVAC)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1-FCV-25-1	8770 G 878	C-2	2	B	48	BTF	PO	A	C	C	FSC	M3			TP-03, TP-10
											PIT	Y2			
											ST-C	M3			TP-10
	Valve Name:	**Containment Purge Isolation Valve**													
1-FCV-25-11	8770 G 879	H-14	2	B	24	BTF	MO	A	C	O/C	PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	**A SBVS Cooling Air Isolation Valves**													
1-FCV-25-12	8770 G 879	J-14	2	B	24	BTF	MO	A	C	O/C	PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	**B SBVS Cooling Air Isolation Valves**													
1-FCV-25-13	8770 G 879	I-16	2	B	12	BTF	MO	A	O	O	PIT	Y2			
											ST-O	M3			
	Valve Name:	**SBVS Cross Connect Valve**													
1-FCV-25-14	8770 G 879	E-11	3	B	12	BTF	MO	A	O	O/C	PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	**Control Room Outside Air Intake Isolation Valve**													
1-FCV-25-15	8770 G 879	E-11	3	B	12	BTF	MO	A	O	O/C	PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	**Control Room Outside Air Intake Isolation Valve**													
1-FCV-25-16	8770 G 879	E-10	3	B	12	BTF	MO	A	O	O/C	PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	**Control Room Outside Air Intake Isolation Valve**													
1-FCV-25-17	8770 G 879	E-11	3	B	12	BTF	MO	A	O	O/C	PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	**Control Room Outside Air Intake Isolation Valve**													

Attachment 15

Heating, Ventilation and Air Conditioning (HVAC)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1-FCV-25-18	8770 G 879	A-10	3	B	6	BTF	MO	A	O	C	PIT	Y2			
											ST-C	M3			
	Valve Name:	**Toilet Room Ventilation Isolation Valve**													
1-FCV-25-19	8770 G 879	A-11	3	B	6	BTF	MO	A	O	C	PIT	Y2			
											ST-C	M3			
	Valve Name:	**Toilet Room Ventilation Isolation Valve**													
1-FCV-25-2	8770 G 878	C-3	2	A	48	BTF	PO	A	LC	C	FSC	M3			TP-03, TP-10
											LT-J	App J			
											PIT	Y2			
											ST-C	M3			TP-10
	Valve Name:	**Isolation Valve (Pen 11) for H&V Containment Purge Supply**													
1-FCV-25-24	8770 G 879	B-10	3	B	8	BTF	MO	A	O	C	PIT	Y2			
											ST-C	M3			
	Valve Name:	**Kitchen Ventilation Isolation Valve**													
1-FCV-25-25	8770 G 879	B-11	3	B	8	BTF	MO	A	O	C	PIT	Y2			
											ST-C	M3			
	Valve Name:	**Kitchen Ventilation Isolation Valve**													
1-FCV-25-3	8770 G 878	C-3	2	A	48	BTF	PO	A	LC	C	FSC	M3			TP-03, TP-10
											LT-J	App J			
											PIT	Y2			
											ST-C	M3			TP-10
	Valve Name:	**Isolation Valve (Pen 11 for H&V Containment Purge Supply**													
1-FCV-25-4	8770 G 878	C-6	2	A	48	BTF	PO	A	LC	C	FSC	M3			TP-03, TP-10
											LT-J	App J			
											PIT	Y2			
											ST-C	M3			TP-10
	Valve Name:	**Isolation Valve (Pen 10 for H&V Containment Purge Exhaust**													
1-FCV-25-5	8770 G 878	C-7	2	A	48	BTF	PO	A	LC	C	FSC	M3			TP-03, TP-10
											LT-J	App J			
											PIT	Y2			
											ST-C	M3			TP-10
	Valve Name:	**Isolation Valve (Pen 10 for H&V Containment Purge Exhaust**													

Attachment 15

Heating, Ventilation and Air Conditioning (HVAC)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1-FCV-25-6	8770 G 878	C-8	2	B	48	BTF	PO	A	LC	C	FSC	M3			TP-03, TP-10
											PIT	Y2			
											ST-C	M3			TP-10
	Valve Name:	**Containment Purge Isolation Valve**													
1-FCV-25-7	8770 G 878	C-15	2	A	24	BTF	AO	A	C	O/C	FSC	M3			TP-03
											LT-J	App J			
											PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	**Containment Vacuum Relief Isolation Valve**													
1-FCV-25-8	8770 G 878	C-15	2	A	24	BTF	AO	A	C	O/C	FSC	M3			TP-03
											LT-J	App J			
											PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	**Containment Vacuum Relief Isolation Valve**													
1-V-25011	8770 G 878	N-7	2	A	3	GA	M	P	LC	C	LT-J	App J			
	Valve Name:	**Isolation for Containment H2 Purge Make up Air (Pen P 56)**													
1-V-25013	8770 G 878	K-7	2	A	3	GA	M	P	LC	C	LT-J	App J			
	Valve Name:	**Isolation for Containment H2 Purge Exhaust Thru HVE 7 (P 57)**													
1-V-25015	8770 G 878	N-7	2	A	3	GA	M	P	LC	C	LT-J	App J			
	Valve Name:	**Isolation for Cntmnt H2 Purge Exhaust Bypass HVE 7 (P 58)**													
1-V-25-12	8770 G 878	N-8	2	A	3	GA	M	P	LC	C	LT-J	App J			
	Valve Name:	**Containment Isolation Valve for H2 Purge Make up. (Pen P 56)**													
1-V-25-14	8770 G 878	K-8	2	A	3	GA	M	P	LC	C	LT-J	App J			
	Valve Name:	**Containment Isolation Valve for H2 Purge Exhaust. (Pen P 57)**													
1-V-25-16	8770 G 878	M-8	2	A	3	GA	M	P	LC	C	LT-J	App J			
	Valve Name:	**Containment Isolation Valve for H2 Purge Exhaust Bypass. (P 58)**													
1-V-25-20	8770 G 878	C-14	2	A/C	24	CK	SA	A	C	O	CC	CM			TP-01, TP-07
											CO	CM			TP-07
											LT-J	App J			
											VAC	CM			TP-07
	Valve Name:	**Containment Vacuum Relief Check Valve**													

Attachment 15

Heating, Ventilation and Air Conditioning (HVAC)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1-V-25-21	8770 G 878	C-14	2	A/C	24	CK	SA	A	C	O	CC	CM			TP-01, TP-07
											CO	CM			TP-07
											LT-J	App J			
											VAC	CM			TP-07
	Valve Name:	**Containment Vacuum Relief Check Valve**													
1-V-25-23	8770 G 879	J-14	2	C	24	CK	SA	A	C	O/C	CCD	CM			TP-07
											COF	CM			TP-07
	Valve Name:	**1B SBVS Cooling Air Check Valve**													
1-V-25-24	8770 G 879	H-14	2	C	24	CK	SA	A	C	O/C	CCD	CM			TP-07
											COF	CM			TP-07
	Valve Name:	**1A SBVS Cooling Air Check Valve**													

Attachment 15

Instrument Air (IA)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1-MV-18-1	8770 G 085-2C	H-2	2	A	2	GA	MO	A	O	C	LT-J PIT ST-C	App J Y2 M3			
	Valve Name:	**Isolation Valve for Pen 9 (Instrument Air Supply to RCB)**													
1-SR-18-6A	8770 G 085-2A	D-2	2	C	3/4x1	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name:	**Shield Building Hatch Door Seal A Relief Valve**													
1-SR-18-6B	8770 G 085-2A	D-1	2	C	3/4x1	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name:	**Shield Building Hatch Door Seal B Relief Valve**													
1-V-18099	8770 G 085-3	B-5	3	C	1	CK	SA	A	O	C	CCL COF	CM CM			TP-07 TP-01, TP-07
	Valve Name:	**Check Valve for Instrument Air Supply to MSIV Accumulators**													
1-V-18195	8770 G 085-2A	E-6	2	A/C	2	CK	SA	A	C	C	CCL COF LT-J	CM CM App J			TP-07 TP-01, TP-07
	Valve Name:	**Isolation Check Valve for Instrument Air Supply to RCB (Pen P 9)**													
1-V-18279	8770 G 085-2A	B-2	2	C	0.5	CK	SA	A	C	C	CCL COF	CM CM			TP-07 TP-01, TP-07
	Valve Name:	**Shield Bldg Hatch Door Seal A Accumulator Check Valves**													
1-V-18283	8770 G 085-2A	A-3	2	C	0.5	CK	SA	A	C	C	CCL COF	CM CM			TP-07 TP-01, TP-07
	Valve Name:	**Shield Bldg Hatch Door Seal B Accumulator Check Valves**													
1-V-18290	8770 G 085-2A	H-2	2	C	0.75	CK	SA	A	C	C	CCL COF	CM CM			TP-07 TP-01, TP-07
	Valve Name:	**Ck Vlv for Inst Air to Air Accumulator for Vacuum Relief FCV-25-7**													
1-V-18291	8770 G 085-2A	H-2	2	C	0.75	CK	SA	A	C	C	CCL COF	CM CM			TP-07 TP-01, TP-07
	Valve Name:	**Ck Vlv for Inst Air to Air Accumulator for Vacuum Relief FCV-25-7**													
1-V-18294	8770 G 085-2A	G-2	2	C	0.75	CK	SA	A	C	C	CCL COF	CM CM			TP-07 TP-01, TP-07
	Valve Name:	**Ck Vlv for Inst Air to Air Accumulator for Vacuum Relief FCV-25-8**													

Attachment 15

Instrument Air (IA)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1-V-18295	8770 G 085-2A	G-2	2	C	0.75	CK	SA	A	C	C	CCL	CM			TP-07
											COF	CM			TP-01, TP-07
	Valve Name:	**Ck Vlv for Inst Air to Air Accumulator for Vacuum Relief FCV-25-8**													
1-V-18695	8770 G 085-3	B-2	3	C	1	CK	SA	A	O	C	CCL	CM			TP-07
											COF	CM			TP-01, TP-07
	Valve Name:	**Check Valve for Instrument Air Supply to MSIV Accumulators**													
1-V-18696	8770 G 085-3	B-2	3	C	1	CK	SA	A	O	C	CCL	CM			TP-07
											COF	CM			TP-01, TP-07
	Valve Name:	**Check Valve for Instrument Air Supply to MSIV Accumulators**													
1-V-18699	8770 G 085-3	B-5	3	C	1	CK	SA	A	O	C	CCL	CM			TP-07
											COF	CM			TP-01, TP-07
	Valve Name:	**Check Valve for Instrument Air Supply to MSIV Accumulators**													

Attachment 15

Intake Cooling Water (ICW)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1-HCV-21-7A	8770 G 082-2	E-4	3	B	6	GL	PO	A	C	C	FSC	M3			TP-03
											PIT	Y2			
											ST-C	M3			
	Valve Name:	SS-21-1A Debris Discharge Isolation													
1-HCV-21-7B	8770 G 082-2	E-7	3	B	6	GL	PO	A	C	C	FSC	M3			TP-03
											PIT	Y2			
											ST-C	M3			
	Valve Name:	SS-21-1B Debris Discharge Isolation													
1-MV-21-2	8770 G 082-2	F-4	3	B	24	BTF	MO	A	O	C	PIT	Y2			
											ST-C	M3			
	Valve Name:	1B Turbine Cooling Water Header Isolation Valve													
1-MV-21-3	8770 G 082-2	G-4	3	B	24	BTF	MO	A	O	C	PIT	Y2			
											ST-C	M3			
	Valve Name:	1A Turbine Cooling Water Header Isolation Valve													
1-SB-21385	8770 G 082-2	C-3	3	B	3	BTF	M	A	C	O	ME	Y2			TP-04
	Valve Name:	Isol. Valve for Emergency Make up to Fuel Pool from SS 21 1A													
1-SB-21386	8770 G 082-2	C-8	3	B	3	BTF	M	A	C	O	ME	Y2			TP-04
	Valve Name:	Isol. Valve for Emergency Make up to Fuel Pool from SS 21 1B													
1-SB-37-1	8770 G 093	C-6	3	B	54	BTF	AO	A	C	O	FSO	M3			TP-03
											PIT	Y2			
											ST-O	M3			
	Valve Name:	Ultimate Heat Sink (UHS Valve)													
1-SB-37-2	8770 G 093	C-7	3	B	54	BTF	AO	A	C	O	FSO	M3			TP-03
											PIT	Y2			
											ST-O	M3			
	Valve Name:	Ultimate Heat Sink (UHS Valve													
1-SE-37-1	8770 G 093	A-6	3	B	0.5	3W	SO	A	O	C	SD	M3			TP-09
	Valve Name:	UHS Valve SB-37-1 Air Control Valve													
1-SE-37-2	8770 G 093	A-6	3	B	0.5	3W	SO	A	O	C	SD	M3			TP-09
	Valve Name:	UHS Valve SB-37-2 Air Control Valve													

Attachment 15

Intake Cooling Water (ICW)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1-TCV-14-4A	8770 G 082-2	A-5	3	B	30	BTF	PO	A	O	O	FSO	M3			TP-03
											ST-O	M3			
	Valve Name:	1A CCW Heat Exchanger Temperature Control Valve													
1-TCV-14-4B	8770 G 082-2	A-6	3	B	30	BTF	PO	A	O	O	FSO	M3			TP-03
											ST-O	M3			
	Valve Name:	1B CCW Heat Exchanger Temperature Control Valve													
1-V-21162	8770 G 082-2	G-5	3	C	30	CK	SA	A	O	O/C	CC	M3			
											CO	M3			
	Valve Name:	1A ICW Pump Discharge Check Valve													
1-V-21205	8770 G 082-2	G-6	3	C	30	CK	SA	A	O	O/C	CC	M3			
											CO	M3			
	Valve Name:	1C ICW Pump Discharge Check Valve													
1-V-21208	8770 G 082-2	G-7	3	C	30	CK	SA	A	O	O/C	CC	M3			
											CO	M3			
	Valve Name:	1B ICW Pump Discharge Check Valve													
1-V-21402	8770 G 082-2	D-4	3	C	2	CK	SA	A	O	O	CC	CM			TP-01, TP-07
											CO	CM			TP-07
	Valve Name:	Check Valves for Vacuum Breaker on the 1A CCW Hx													
1-V-21403	8770 G 082-2	D-8	3	C	2	CK	SA	A	O	O	CC	CM			TP-01, TP-07
											CO	CM			TP-07
	Valve Name:	Check Valves for Vacuum Breaker on the 1B CCW Hx													

Attachment 15

Integrated Leak Rate Penetrations (ILRT)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1-V-00101	8770 G 091-1	B-4	2	A	8	GA	M	P	LC	C	LT-J	App J			
	Valve Name:	**Isolation for Cntmnt ILRT Press & De Pressurizing (Pen P 54)**													
1-V-00139	8770 G 091-1	D-4	2	A	0.375	GL	M	P	LC	C	LT-J	App J			
	Valve Name:	**Isolation for Cntmnt ILRT Pressure Sensing (Pen P 52)**													
1-V-00140	8770 G 091-1	E-4	2	A	1	GL	M	P	LC	C	LT-J	App J			
	Valve Name:	**Isolation for Cntmnt ILRT Controlled Leakage (Pen P 52D)**													
1-V-00143	8770 G 091-1	E-4	2	A	1	GL	M	P	LC	C	LT-J	App J			
	Valve Name:	**Isolation for Cntmnt ILRT Controlled Leakage (Pen P 52D)**													
1-V-00144	8770 G 091-1	D-4	2	A	0.375	GL	M	P	LC	C	LT-J	App J			
	Valve Name:	**Isolation for Containment ILRT Pressure Sensing (Pen P 52E)**													

Attachment 15

Main Steam (MS)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1-HCV-08-1A	8770 G 079-1	B-6	2	B/C	34	PCHECK	AO	A	O	C	PIT	Y2			
											ST-C	CS		CS-09	
	Valve Name:	1A Main Steam Isolation Valve (MSIV)													
1-HCV-08-1B	8770 G 079-1	E-6	2	B/C	34	PCHECK	AO	A	O	C	PIT	Y2			
											ST-C	CS		CS-09	
	Valve Name:	1B Main Steam Isolation Valve (MSIV)													
1-HCV-08-2A	8770 G 079-1	B-4	2	B	6	ANG	AO	A	C	C	FSC	M3			TP-03
											PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	1A Main Steamline Atmospheric Dump Valve													
1-HCV-08-2B	8770 G 079-1	E-4	2	B	6	ANG	AO	A	C	C	FSC	M3			TP-03
											PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	1B Main Steamline Atmospheric Dump Valve													
1-MV-08-13	8770 G 079-1	H-4	2	B	3	GA	MO	A	C	O/C	PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	AFW Pump Turbine Steam Supply Valve from 1A S/G													
1-MV-08-14	8770 G 079-1	H-3	2	B	3	GA	MO	A	C	O/C	PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	AFW Pump Turbine Steam Supply Valve from 1B S/G													
1-MV-08-1A	8770 G 079-1	B-6	2	B	3	GL	MO	A	C	C	PIT	Y2			
											ST-C	M3			
	Valve Name:	1A MSIV Bypass Valve													
1-MV-08-1B	8770 G 079-1	E-6	2	B	3	GL	MO	A	C	C	PIT	Y2			
											ST-C	M3			
	Valve Name:	1B MSIV Bypass Valve													
1-MV-08-3	8770 G 079-1	G-6	2	B	4	GA	MO	A	C	O	PIT	Y2			TP-09
											ST-O	M3			TP-09
	Valve Name:	1C AFW Turbine Trip Throttle Valve													

Main Steam (MS)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1-RD-08-1A1	8770 G 079-7	D-3	3	C	2	RPD	SA	A	C	O	DT	Y5			
	Valve Name:	**MSIV Pneumatic Operating System Rupture Disc**													
1-RD-08-1A2	8770 G 079-7	D-2	3	C	2	RPD	SA	A	C	O	DT	Y5			
	Valve Name:	**MSIV Pneumatic Operating System Rupture Disc**													
1-RD-08-1A3	8770 G 079-7	D-2	3	C	2	RPD	SA	A	C	O	DT	Y5			
	Valve Name:	**MSIV Pneumatic Operating System Rupture Disc**													
1-RD-08-1B1	8770 G 079-7	G-3	3	C	2	RPD	SA	A	C	O	DT	Y5			
	Valve Name:	**MSIV Pneumatic Operating System Rupture Disc**													
1-RD-08-1B2	8770 G 079-7	H-2	3	C	2	RPD	SA	A	C	O	DT	Y5			
	Valve Name:	**MSIV Pneumatic Operating System Rupture Disc**													
1-RD-08-1B3	8770 G 079-7	H-2	3	C	2	RPD	SA	A	C	O	DT	Y5			
	Valve Name:	**MSIV Pneumatic Operating System Rupture Disc**													
1-SE-08-1A1	8770 G 079-7	C-4	3	B	1	3W	SO	A	Flow	Vent	FSV	CS			TP-03, TP-09
											SD	CS			TP-09
	Valve Name:	**MSIV HCV-08-1A Open Control Valve**													
1-SE-08-1A2	8770 G 079-7	D-4	3	B	1	3W	SO	A	Flow	Vent	FSV	CS			TP-03, TP-09
											SD	CS			TP-09
	Valve Name:	**MSIV HCV-08-1A Open Control Valve**													
1-SE-08-1A3	8770 G 079-7	A-4	3	B	1	3W	SO	A	Vent	Flow	FSS	CS			TP-03, TP-09
											SD	CS			TP-09
	Valve Name:	**MSIV HCV-08-1A Close Control Valve**													
1-SE-08-1A4	8770 G 079-7	B-5	3	B	1	3W	SO	A	Vent	Flow	FSS	CS			TP-03, TP-09
											SD	CS			TP-09
	Valve Name:	**MSIV HCV-08-1A Close Control Valve**													
1-SE-08-1B1	8770 G 079-7	G-4	3	B	1	3W	SO	A	Flow	Vent	FSV	CS			TP-03, TP-09
											SD	CS			TP-09
	Valve Name:	**MSIV HCV-08-1B Open Control Valve**													
1-SE-08-1B2	8770 G 079-7	G-4	3	B	1	3W	SO	A	Flow	Vent	FSV	CS			TP-03, TP-09
											SD	CS			TP-09
	Valve Name:	**MSIV HCV-08-1B Open Control Valve**													

Main Steam (MS)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1-SE-08-1B3	8770 G 079-7	E-4	3	B	1	3W	SO	A	Vent	Flow	FSS	CS			TP-03, TP-09
											SD	CS			TP-09
	Valve Name:	MSIV HCV-08-1B Close Control Valve													
1-SE-08-1B4	8770 G 079-7	F-5	3	B	1	3W	SO	A	Vent	Flow	FSS	CS			TP-03, TP-09
											SD	CS			TP-09
	Valve Name:	MSIV HCV-08-1B Close Control Valve													
1-V-08113	8770 G 079-1	C-4	2	B	4	GA	M	A	LO	O/C	ME	Y2			TP-04
	Valve Name:	MSL A to Aux FW Turb Iso Valve													
1-V-08114	8770 G 079-1	B-4	2	B	8	GA	M	A	O	C	ME	Y2			TP-04
	Valve Name:	MS Atm Dump 2A Suction Iso Valves													
1-V-08117	8770 G 079-1	B-6	2	C	34	CK	SA	A	O	C	CCD	CM			TP-07
											COD	CM			TP-01, TP-07
	Valve Name:	Main Steam Isolation Check Valve													
1-V-08130	8770 G 079-1	G-4	2	C	4	CK	SA	A	C	O/C	CCD	CM			TP-07
											COD	CM			TP-07
	Valve Name:	AFW Steam Supply from Steam Generator 1A Check Valve													
1-V-08144	8770 G 079-1	E-4	2	B	4	GA	M	A	LO	O/C	ME	Y2			TP-04
	Valve Name:	MSL B to Aux FW Turb Iso Valve													
1-V-08145	8770 G 079-1	E-4	2	B	8	GA	M	A	O	C	ME	Y2			TP-04
	Valve Name:	MS Atm Dump 2B Suction Iso Valves													
1-V-08148	8770 G 079-1	E-6	2	C	34	CK	SA	A	O	C	CCD	CM			TP-07
											COD	CM			TP-01, TP-07
	Valve Name:	Main Steam Isolation Check Valve													
1-V-08163	8770 G 079-1	G-4	2	C	4	CK	SA	A	C	O/C	CCD	CM			TP-07
											COD	CM			TP-07
	Valve Name:	AFW Steam Supply from Steam Generator 1B Check Valve													
1-V-08372	8770 G 079-1	H-4	2	C	0.75	CK	SA	A	O	C	CCL	CM			TP-07
											COF	CM			TP-01, TP-07
	Valve Name:	AFW Steam Supply Bypass Check Valve for MV-08-14													

Attachment 15

Main Steam (MS)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1-V-08373	8770 G 079-1	F-4	2	C	0.75	CK	SA	A	O	C	CCL	CM			TP-07
											COF	CM			TP-01, TP-07
	Valve Name:	AFW Steam Supply Bypass Check Valve for MV-08-13													
1-V-08384	8770 G 079-1	H-4	2	B	0.75	GL	M	A	O	C	ME	Y2			TP-04
	Valve Name:	1C AFW Pump Steam Supply Valve MV-08 14 Bypass													
1-V-08387	8770 G 079-1	F-4	2	B	0.75	GL	M	A	O	C	ME	Y2			TP-04
	Valve Name:	1C AFW Pump Steam Supply Valve MV-08 13 Bypass													
1-V-8201	8770 G 079-1	B-5	2	C	6	SV	SA	A	C	O/C	RVT	Y5			
	Valve Name:	Main Steam Safety/Relief Valve													
1-V-8202	8770 G 079-1	B-5	2	C	6	SV	SA	A	C	O/C	RVT	Y5			
	Valve Name:	Main Steam Safety/Relief Valve													
1-V-8203	8770 G 079-1	B-5	2	C	6	SV	SA	A	C	O/C	RVT	Y5			
	Valve Name:	Main Steam Safety/Relief Valve													
1-V-8204	8770 G 079-1	B-5	2	C	6	SV	SA	A	C	O/C	RVT	Y5			
	Valve Name:	Main Steam Safety/Relief Valve													
1-V-8205	8770 G 079-1	E-5	2	C	6	SV	SA	A	C	O/C	RVT	Y5			
	Valve Name:	Main Steam Safety/Relief Valve													
1-V-8206	8770 G 079-1	D-5	2	C	6	SV	SA	A	C	O/C	RVT	Y5			
	Valve Name:	Main Steam Safety/Relief Valve													
1-V-8207	8770 G 079-1	E-5	2	C	6	SV	SA	A	C	O/C	RVT	Y5			
	Valve Name:	Main Steam Safety/Relief Valve													
1-V-8208	8770 G 079-1	D-5	2	C	6	SV	SA	A	C	O/C	RVT	Y5			
	Valve Name:	Main Steam Safety/Relief Valve													
1-V-8209	8770 G 079-1	B-5	2	C	6	SV	SA	A	C	O/C	RVT	Y5			
	Valve Name:	Main Steam Safety/Relief Valve													
1-V-8210	8770 G 079-1	B-6	2	C	6	SV	SA	A	C	O/C	RVT	Y5			
	Valve Name:	Main Steam Safety/Relief Valve													
1-V-8211	8770 G 079-1	B-6	2	C	6	SV	SA	A	C	O/C	RVT	Y5			
	Valve Name:	Main Steam Safety/Relief Valve													

Attachment 15

Main Steam (MS)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1-V-8212	8770 G 079-1	B-6	2	C	6	SV	SA	A	C	O/C	RVT	Y5			
	Valve Name:	Main Steam Safety/Relief Valve													
1-V-8213	8770 G 079-1	E-5	2	C	6	SV	SA	A	C	O/C	RVT	Y5			
	Valve Name:	Main Steam Safety/Relief Valve													
1-V-8214	8770 G 079-1	D-6	2	C	6	SV	SA	A	C	O/C	RVT	Y5			
	Valve Name:	Main Steam Safety/Relief Valve													
1-V-8215	8770 G 079-1	E-6	2	C	6	SV	SA	A	C	O/C	RVT	Y5			
	Valve Name:	Main Steam Safety/Relief Valve													
1-V-8216	8770 G 079-1	D-6	2	C	6	SV	SA	A	C	O/C	RVT	Y5			
	Valve Name:	Main Steam Safety/Relief Valve													

Attachment 15

Miscellaneous Sampling (M-SAM)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1-FCV-26-1	8770 G 092-1	B-2	2	A	1	GL	AO	A	O	C	FSC	M3			TP-03
											LT-J	App J			
											PIT	Y2			
											ST-C	M3			
	Valve Name:	**Containment Isolation Valve for Pen 52A**													
1-FCV-26-2	8770 G 092-1	B-2	2	A	1	GL	AO	A	O	C	FSC	M3			TP-03
											LT-J	App J			
											PIT	Y2			
											ST-C	M3			
	Valve Name:	**Containment Isolation Valve for Pen 52A**													
1-FCV-26-3	8770 G 092-1	B-3	2	A	1	GL	AO	A	O	C	FSC	CS			TP-03
											LT-J	App J			
											PIT	Y2			
											ST-C	M3			
	Valve Name:	**Containment Isolation Valve for Pen 52B**													
1-FCV-26-4	8770 G 092-1	B-3	2	A	1	GL	AO	A	O	C	FSC	M3			TP-03
											LT-J	App J			
											PIT	Y2			
											ST-C	M3			
	Valve Name:	**Containment Isolation Valve for Pen 52B**													
1-FCV-26-5	8770 G 092-1	B-3	2	A	1	GL	AO	A	O	C	FSC	M3			TP-03
											LT-J	App J			
											PIT	Y2			
											ST-C	M3			
	Valve Name:	**Containment Isolation Valve Pen 52C**													
1-FCV-26-6	8770 G 092-1	B-3	2	A	1	GL	AO	A	O	C	FSC	M3			TP-03
											LT-J	App J			
											PIT	Y2			
											ST-C	M3			
	Valve Name:	**Containment Isolation Valve for Pen 52C**													

Attachment 15

Miscellaneous Sampling (M-SAM)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1-FSE-27-1	8770 G 092-1	A-6	2	A	0.375	GL	SO	A	C	O/C	FSC	M3			TP-03
											LT-J	App J			
											PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	H2 Analyzer A Dome Sample Solenoid Vlv													
1-FSE-27-10	8770 G 092-1	B-6	2	A	0.375	GL	SO	A	C	O/C	FSC	M3			TP-03
											LT-J	App J			
											PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	H2 Analyzer B Outlet CIV Solenoid Vlv													
1-FSE-27-11	8770 G 092-1	B-6	2	A	0.375	GL	SO	A	C	O/C	FSC	M3			TP-03
											LT-J	App J			
											PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	H2 Analyzer A Outlet CIV Solenoid Vlv													
1-FSE-27-2	8770 G 092-1	A-6	2	A	0.375	GL	SO	A	C	O/C	FSC	M3			TP-03
											LT-J	App J			
											PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	H2 Analyzer A Pzr Sample Solenoid Vlv													
1-FSE-27-3	8770 G 092-1	A-6	2	A	0.375	GL	SO	A	C	O/C	FSC	M3			TP-03
											LT-J	App J			
											PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	H2 Analyzer A RCP 1A1 Sample Solenoid Vlv													
1-FSE-27-4	8770 G 092-1	B-6	2	A	0.375	GL	SO	A	C	O/C	FSC	M3			TP-03
											LT-J	App J			
											PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	H2 Analyzer A RCP 1A2 Sample Solenoid Vlv													

Attachment 15

Miscellaneous Sampling (M-SAM)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1-FSE-27-5	8770 G 092-1	B-7	2	A	0.375	GL	SO	A	C	O/C	FSC	M3			TP-03
											LT-J	App J			
											PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	H2 Analyzer B Dome Sample Solenoid Vlv													
1-FSE-27-6	8770 G 092-1	A-7	2	A	0.375	GL	SO	A	C	O/C	FSC	M3			TP-03
											LT-J	App J			
											PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	H2 Analyzer B RCP 1B2 Sample Solenoid Vlv													
1-FSE-27-7	8770 G 092-1	A-7	2	A	0.375	GL	SO	A	C	O/C	FSC	M3			TP-03
											LT-J	App J			
											PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	H2 Analyzer B RCP 1B1 Sample Solenoid Vlv													
1-FSE-27-8	8770 G 092-1	B-6	2	A	0.375	GL	SO	A	C	O/C	FSC	M3			TP-03
											LT-J	App J			
											PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	H2 Analyzer A Inlet CIV Solenoid Vlv													
1-FSE-27-9	8770 G 092-1	B-6	2	A	0.375	GL	SO	A	C	O/C	FSC	M3			TP-03
											LT-J	App J			
											PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	H2 Analyzer B Inlet CIV Solenoid Vlv													
1-V-27101	8770 G 092-1	B-6	2	A/C	0.375	CK	SA	A	C	O/C	CC	CM			TP-07
											CO	CM			TP-07
											LT-J	App J			
	Valve Name:	Containment Isolation Check Valve for the 1A Hydrogen Analyzer													

Attachment 15

Miscellaneous Sampling (M-SAM)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1-V-27102	8770 G 092-1	B-6	2	A/C	0.375	CK	SA	A	C	O/C	CC	CM			TP-07
											CO	CM			TP-07
											LT-J	App J			
	Valve Name:	**Containment Isolation Check Valve for the 1B Hydrogen Analyzer**													
1-V-27105	8770 G 092-1	C-6	2	C	0.375	CK	SA	A	C	O	CC	CM			TP-01, TP-07
											CO	CM			TP-07
	Valve Name:	**Check Valve for the 1A Hydrogen Analyzer**													
1-V-27110	8770 G 092-1	C-6	2	C	0.375	CK	SA	A	C	O	CC	CM			TP-01, TP-07
											CO	CM			TP-07
	Valve Name:	**Check Valve for the 1B Hydrogen Analyzer**													
1-V-29213	8770 G 092-1	F-5	2	B	0.25	CK	SA	A	C	O	CC	CM			TP-01, TP-07
											CO	CM			TP-07
	Valve Name:	**H2 Analyzer B Reagent Supply Check Vlv**													
1-V-29217	8770 G 092-1	E-5	2	B	0.25	CK	SA	A	C	O	CC	CM			TP-01, TP-07
											CO	CM			TP-07
	Valve Name:	**H2 Analyzer A Reagent Supply Check Vlv**													

Attachment 15

Make-up Water (MUW)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1-MV-15-1	8770 G 084-1C	D-6	2	A	2	GA	MO	A	C	C	LT-J	App J			
											PIT	Y2			
											ST-C	M3			
	Valve Name:	**Isol. Valve for Pen 7 (Primary Make up Water Supply to RCB)**													
1-V-15328	8770 G 084-1C	D-5	2	A/C	2	CK	SA	A	C	C	CC	CM			TP-07
											CO	CM			TP-01, TP-07
											LT-J	App J			
	Valve Name:	**Check Valve for PMW Service to Containment Bldg (P 7)**													

Attachment 15

Reactor Coolant System (RCS)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1-PCV-1100E	8770 G 078-110A	F-7	1	B	3	ANG	AO	A	C	C	FSC	CS		CS-01	TP-03
											PIT	Y2			
											ST-C	CS		CS-01	
	Valve Name:	Pressurizer Spray Valve													
1-PCV-1100F	8770 G 078-110A	G-7	1	B	3	ANG	AO	A	C	C	FSC	CS		CS-01	TP-03
											PIT	Y2			
											ST-C	CS		CS-01	
	Valve Name:	Pressurizer Spray Valve													
1-V-1200	8770 G 078-110A	C-4	1	C	3	RV	SA	A	C	O/C	RVT	Y5			
	Valve Name:	Pressurizer Safety/Relief Valve													
1-V-1201	8770 G 078-110A	C-4	1	C	3	RV	SA	A	C	O/C	RVT	Y5			
	Valve Name:	Pressurizer Safety/Relief Valve													
1-V-1202	8770 G 078-110A	C-5	1	C	3	RV	SA	A	C	O/C	RVT	Y5			
	Valve Name:	Pressurizer Safety/Relief Valve													
1-V-1402	8770 G 078-110A	C-2	1	B	2.5x4.0	GL	SO	A	C	O	FSC	RR			TP-03
											PIT	Y2			
											ST-O	RR			TP-11
	Valve Name:	Pressurizer Power Operated Relief Valve (PORV)													
1-V-1403	8770 G 078-110A	B-3	1	B	2.5	GA	MO	A	O	O/C	PIT	Y2			
											ST-C	M3			TP-11
	Valve Name:	PORV Block Valve													
1-V-1404	8770 G 078-110A	B-2	1	B	2.5x4.0	GL	SO	A	C	O	FSC	RR			TP-03
											PIT	Y2			
											ST-O	RR			TP-11
	Valve Name:	Pressurizer Power Operated Relief Valve (PORV)													
1-V-1405	8770 G 078-110A	C-3	1	B	2.5	GA	MO	A	O	O/C	PIT	Y2			
											ST-C	M3			TP-11
	Valve Name:	PORV Block Valve													
1-V-1441	8770 G 078-110A	F-1	2	B	1	GL	SO	A	LC	O/C	FSC	CS		CS-02	TP-03
											PIT	Y2			
											ST-C	CS		CS-02	
											ST-O	CS		CS-02	
	Valve Name:	Reactor Coolant Gas Vent Valve													

Attachment 15

Reactor Coolant System (RCS)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1-V-1442	8770 G 078-110A	G-1	2	B	1	GL	SO	A	LC	O/C	FSC	CS		CS-02	TP-03
											PIT	Y2			
											ST-C	CS		CS-02	
											ST-O	CS		CS-02	
	Valve Name:	Reactor Coolant Gas Vent Valve													
1-V-1443	8770 G 078-110A	D-2	2	B	1	GL	SO	A	LC	O/C	FSC	CS		CS-02	TP-03
											PIT	Y2			
											ST-C	CS		CS-02	
											ST-O	CS		CS-02	
	Valve Name:	Reactor Coolant Gas Vent Valve													
1-V-1444	8770 G 078-110A	D-2	2	B	1	GL	SO	A	LC	O/C	FSC	CS		CS-02	TP-03
											PIT	Y2			
											ST-C	CS		CS-02	
											ST-O	CS		CS-02	
	Valve Name:	Reactor Coolant Gas Vent Valve													
1-V-1445	8770 G 078-110A	E-1	2	B	1	GL	SO	A	LC	O/C	FSC	CS		CS-02	TP-03
											PIT	Y2			
											ST-C	CS		CS-02	
											ST-O	CS		CS-02	
	Valve Name:	Reactor Coolant Gas Vent Valve													
1-V-1446	8770 G 078-110A	E-1	2	B	1	GL	SO	A	LC	O/C	FSC	CS		CS-02	TP-03
											PIT	Y2			
											ST-C	CS		CS-02	
											ST-O	CS		CS-02	
	Valve Name:	Reactor Coolant Gas Vent Valve													
1-V-1449	8770 G 078-110A	G-2	2	B	1	GL	SO	A	LC	O/C	FSC	CS		CS-02	TP-03
											PIT	Y2			
											ST-C	CS		CS-02	
											ST-O	CS		CS-02	
	Valve Name:	Reactor Coolant Gas Vent Valve													

Attachment 15

Service Air (SA)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1-SH-18797	8770 G 085-1A	F-2	2	A	1	BAL	M	P	LC	C	LT-J	App J			
	Valve Name:	Containment Isolation Valve (Inner) for Service Air Supply to RCB													
1-SH-18798	8770 G 085-1A	E-2	2	A	1	BAL	M	P	LC	C	LT-J	App J			
	Valve Name:	Containment Isolation Valve (Outer) for Service Air Supply to RCB													
1-V-18794	8770 G 085-1A	F-4	2	A	2	GL	M	P	LC	C	LT-J	App J			
	Valve Name:	Isolation Valve (Outer) for Service Air Supply to RCB (Pen P 8)													
1-V-18796	8770 G 085-1A	F-4	2	A	2	GL	M	P	LC	C	LT-J	App J			
	Valve Name:	Isolation Valve (Inner) for Service Air Supply to RCB (Pen P 8)													

Attachment 15

Sampling System (SAM)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1-V-5200	8770 G 078-150	B-2	2	A	0.375	GL	AO	A	C	C	FSC	M3			TP-03
											LT-J	App J			
											PIT	Y2			
											ST-C	M3			
	Valve Name:	**Isolation Valve from RCS Hot Leg Loop A to the Sample System**													
1-V-5201	8770 G 078-150	C-2	2	A	0.375	GL	AO	A	C	C	FSC	M3			TP-03
											LT-J	App J			
											PIT	Y2			
											ST-C	M3			
	Valve Name:	**Isolation from the Pressurizer Surge Line to the Sample System**													
1-V-5202	8770 G 078-150	D-2	2	A	0.375	GL	AO	A	C	C	FSC	M3			TP-03
											LT-J	App J			
											PIT	Y2			
											ST-C	M3			
	Valve Name:	**Isolation from the Pzr Steam Space to the Sample System**													
1-V-5203	8770 G 078-150	B-2	2	A	0.375	GL	AO	A	C	C	FSC	M3			TP-03
											LT-J	App J			
											PIT	Y2			
											ST-C	M3			
	Valve Name:	**Isolation Valve from RCS Hot Leg Loop A to the Sample System**													
1-V-5204	8770 G 078-150	C-2	2	A	0.375	GL	AO	A	C	C	FSC	M3			TP-03
											LT-J	App J			
											PIT	Y2			
											ST-C	M3			
	Valve Name:	**Isolation from the Pressurizer Surge Line to the Sample System**													
1-V-5205	8770 G 078-150	D-2	2	A	0.375	GL	AO	A	C	C	FSC	M3			TP-03
											LT-J	App J			
											PIT	Y2			
											ST-C	M3			
	Valve Name:	**Isolation Valve from the Pressurizer Steam Space to the Sample**													

Attachment 15

Steam Generator Blowdown (SGBD)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1-FCV-23-3	8770 G 086-1	C-6	2	B	2	GL	AO	A	O	C	FSC	M3			TP-03
											PIT	Y2			
											ST-C	M3			
	Valve Name:	1A Steam Generator Blowdown Isolation													
1-FCV-23-5	8770 G 086-1	C-6	2	B	2	GL	AO	A	O	C	FSC	M3			TP-03
											PIT	Y2			
											ST-C	M3			
	Valve Name:	1B Steam Generator Blowdown Isolation													
1-FCV-23-7	8770 G 086-1	C-7	2	B	0.5	GL	AO	A	O	C	FSC	M3			TP-03
											PIT	Y2			
											ST-C	M3			
	Valve Name:	1A Steam Generator Blowdown Isolation													
1-FCV-23-9	8770 G 086-1	C-7	2	B	0.5	GL	AO	A	O	C	FSC	M3			TP-03
											PIT	Y2			
											ST-C	M3			
	Valve Name:	1B Steam Generator Blowdown Isolation													

Attachment 15

Safety Injection (SI)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1-FCV-03-1E	8770 G 078-131A	G-4	2	A	0.375	NEEDLE	SO	A	C	C	FSC	M3			TP-03
											LT-J	App J			
											PIT	Y2			
											ST-C	M3			
	Valve Name:	SI Tank Sample Header Isolation Valve													
1-FCV-03-1F	8770 G 078-131A	G-4	2	A	0.375	NEEDLE	SO	A	C	C	FSC	M3			TP-03
											LT-J	App J			
											PIT	Y2			
											ST-C	M3			
	Valve Name:	SI Tank Sample Header Isolation Valve													
1-FCV-3306	8770 G 078-130B	G-5	2	B	10	GL	AO	A	LO	O/C	PIT	Y2			
											ST-C	M3			TP-11
	Valve Name:	LPSI Header Temperature Control Valve													
1-HCV-3615	8770 G 078-131A	A-2	2	B	6	GL	MO	A	C	O/C	PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	1A2 LPSI Cold Leg Injection Isolation Valve													
1-HCV-3616	8770 G 078-131A	B-2	2	B	2	GL	MO	A	C	O/C	PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	1B HPSI 1A2 Cold Leg Injection Isolation Valve													
1-HCV-3617	8770 G 078-131A	B-2	2	B	2	GL	MO	A	C	O/C	PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	1A HPSI 1A2 Cold Leg Injection Isolation Valve													
1-HCV-3618	8770 G 078-131B	D-5	1	B	1	GL	AO	A	C	C	FSC	M3			TP-03
											PIT	Y2			
											ST-C	M3			
	Valve Name:	SI Check Valve Leakage Test Isolation Valve													
1-HCV-3625	8770 G 078-131A	C-2	2	B	6	GL	MO	A	C	O/C	PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	1A1 LPSI Cold Leg Injection Isolation Valve													

Attachment 15

Safety Injection (SI)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1-HCV-3626	8770 G 078-131A	C-2	2	B	2	GL	MO	A	C	O/C	PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	1B HPSI 1A1 Cold Leg Injection Isolation Valve													
1-HCV-3627	8770 G 078-131A	D-2	2	B	2	GL	MO	A	C	O/C	PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	1A HPSI 1A1 Cold Leg Injection Isolation Valve													
1-HCV-3628	8770 G 078-131B	D-2	1	B	1	GL	AO	A	C	C	FSC	M3			TP-03
											PIT	Y2			
											ST-C	M3			
	Valve Name:	SI Check Valve Leakage Test Isolation Valve													
1-HCV-3635	8770 G 078-131A	E-2	2	B	6	GL	MO	A	C	O/C	PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	1B2 LPSI Cold Leg Injection Isolation Valve													
1-HCV-3636	8770 G 078-131A	F-2	2	B	2	GL	MO	A	C	O/C	PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	1B HPSI 1B1 Cold Leg Injection Isolation Valve													
1-HCV-3637	8770 G 078-131A	F-2	2	B	2	GL	MO	A	C	O/C	PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	1A HPSI 1B1 Cold Leg Injection Isolation Valve													
1-HCV-3638	8770 G 078-131B	H-2	1	B	1	GL	AO	A	C	C	FSC	M3			TP-03
											PIT	Y2			
											ST-C	M3			
	Valve Name:	SI Check Valve Leakage Test Isolation Valve													
1-HCV-3645	8770 G 078-131A	G-2	2	B	6	GL	MO	A	C	O/C	PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	1B2 LPSI Cold Leg Injection Isolation Valve													

Attachment 15

Safety Injection (SI)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1-HCV-3646	8770 G 078-131A	H-2	2	B	2	GL	MO	A	C	O/C	PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	1B HPSI 1B2 Cold Leg Injection Isolation Valve													
1-HCV-3647	8770 G 078-131A	H-2	2	B	2	GL	MO	A	C	O/C	PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	1A HPSI 1B2 Cold Leg Injection Isolation Valve													
1-HCV-3648	8770 G 078-131B	H-5	1	B	1	GL	AO	A	C	C	FSC	M3			TP-03
											PIT	Y2			
											ST-C	M3			
	Valve Name:	SI Check Valve Leakage Test Isolation Valve													
1-HCV-3657	8770 G 078-130B	F-6	2	B	10	GL	AO	A	LC	O/C	PIT	Y2			
											ST-O	M3			TP-11
	Valve Name:	Shutdown Cooling to LPSI Injection Header Control Valve													
1-MV-03-1A	8770 G 078-131A	C-2	2	B	2	GL	MO	A	LC	O/C	PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	A Train Shutdown Cooling Warm up Valve													
1-MV-03-1B	8770 G 078-131A	E-3	2	B	2	GL	MO	A	LC	O/C	PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	B Train Shutdown Cooling Warm up Valve													
1-MV-03-2	8770 G 078-130B	H-5	2	B	10	GL	MO	A	LO	O/C	PIT	Y2			
											ST-C	M3			TP-11
	Valve Name:	LPSI Header Flow Control Valve Bypass													
1-MV-07-2A	8770 G 088-2	G-3	2	B	24	BTF	MO	A	C	O/C	PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	'A' Train SI Pump Containment Sump Suction Valve													

Attachment 15

Safety Injection (SI)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1-MV-07-2B	8770 G 088-2	H-3	2	B	24	BTF	MO	A	C	O/C	PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	'B' Train SI Pump Containment Sump Suction Valve													
1-SR-07-1A	8770 G 078-130B	F-2	2	C	1.5x2.5	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name:	A Train Safety Injection Pumps Suction Header Relief Valve													
1-SR-07-1B	8770 G 078-130B	G-2	2	C	1.5x2.5	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name:	B Train Safety Injection Pumps Suction Header Relief Valve													
1-V-03920	8770 G 078-130B	B-4	3	B	2	GL	M	A	C	O/C	ME	Y2			TP-04
	Valve Name:	Isolation Valve For SIT Outlet Drain to VCT													
1-V-07000	8770 G 078-130B	F-2	2	C	14	CK	SA	A	C	O	CC	CM			TP-01, TP-07
											CO	CM			TP-07
	Valve Name:	1A LPSI Pump Suction Check Valve													
1-V-07001	8770 G 078-130B	G-2	2	C	14	CK	SA	A	C	O	CC	CM			TP-01, TP-07
											CO	CM			TP-07
	Valve Name:	1B LPSI Pump Suction Check Valves													
1-V-07009	8770 G 078-130B	A-4	2	A	2	GA	M	A	LC	O/C	LT-J	App J			
											ME	Y2			TP-04
	Valve Name:	SI Tank Drain/Test Line to RWT (P 41)													
1-V-07172	8770 G 088-2	H-2	2	C	24	CK	SA	A	C	O/C	CC	CM			TP-01, TP-07
											CO	CM			TP-07
	Valve Name:	1B SI Pump Containment Sump Suction Check Valve													
1-V-07174	8770 G 088-2	G-2	2	C	24	CK	SA	A	C	O/C	CC	CM			TP-01, TP-07
											CO	CM			TP-07
	Valve Name:	1A SI Pump Containment Sump Suction Check Valve													
1-V-3101	8770 G 078-130A	B-4	2	C	2	CK	SA	A	C	O	CC	CM			TP-01, TP-07
											CO	CM			TP-07
	Valve Name:	1A HPSI Minimum Flow CV													
1-V-3103	8770 G 078-130A	F-4	2	C	2	CK	SA	A	C	O	CC	CM			TP-01, TP-07
											CO	CM			TP-07
	Valve Name:	1B HPSI Minimum Flow CV													

Attachment 15

Safety Injection (SI)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1-V-3104	8770 G 078-130B	F-4	2	C	2	CK	SA	A	C	O/C	CC	CM			TP-07
											CO	CM			TP-07
	Valve Name:	**1A LPSI Minimum Flow Check Valve**													
1-V-3105	8770 G 078-130B	F-4	2	C	2	CK	SA	A	C	O/C	CC	CM			TP-07
											CO	CM			TP-07
	Valve Name:	**1B LPSI Minimum Flow Check Valve**													
1-V-3106	8770 G 078-130B	F-4	2	C	10	CK	SA	A	C	O/C	CC	CM			TP-07
											CO	CM			TP-07
	Valve Name:	**1A LPSI Pump Discharge Check Valve**													
1-V-3107	8770 G 078-130B	G-4	2	C	10	CK	SA	A	C	O/C	CC	CM			TP-07
											CO	CM			TP-07
	Valve Name:	**1B LPSI Pump Discharge Check Valve**													
1-V-3113	8770 G 078-131A	B-3	1	A/C	2	CK	SA	A	C	O/C	CC	CM			TP-07
											CO	CM			TP-07
											LT-S	Y2			
	Valve Name:	**HPSI 1A2 Cold Leg Injection Check Valve**													
1-V-3114	8770 G 078-131A	A-3	1	A/C	6	CK	SA	A	C	O/C	CC	CM			TP-07
											CO	CM			TP-07
											LT-S	Y2			
	Valve Name:	**LPSI 1A2 Cold Leg Injection Check Valve**													
1-V-3123	8770 G 078-131A	C-3	1	A/C	2	CK	SA	A	C	O/C	CC	CM			TP-07
											CO	CM			TP-07
											LT-S	Y2			
	Valve Name:	**HPSI 1A1 Cold Leg Injection Check Valve**													
1-V-3124	8770 G 078-131A	C-3	1	A/C	6	CK	SA	A	C	O/C	CC	CM			TP-07
											CO	CM			TP-07
											LT-S	Y2			
	Valve Name:	**LPSI 1A1 Cold Leg Injection Check Valve**													
1-V-3133	8770 G 078-131A	F-3	1	A/C	2	CK	SA	A	C	O/C	CC	CM			TP-07
											CO	CM			TP-07
											LT-S	Y2			
	Valve Name:	**HPSI 1B1 Cold Leg Injection Check Valve**													

Attachment 15

Safety Injection (SI)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1-V-3134	8770 G 078-131A	E-3	1	A/C	6	CK	SA	A	C	O/C	CC	CM			TP-07
											CO	CM			TP-07
											LT-S	Y2			
	Valve Name:	**LPSI 1B1 Cold Leg Injection Check Valve**													
1-V-3143	8770 G 078-131A	H-3	1	A/C	2	CK	SA	A	C	O/C	CC	CM			TP-07
											CO	CM			TP-07
											LT-S	Y2			
	Valve Name:	**HPSI 1B2 Cold Leg Injection Check Valve**													
1-V-3144	8770 G 078-131A	G-3	1	A/C	6	CK	SA	A	C	O/C	CC	CM			TP-07
											CO	CM			TP-07
											LT-S	Y2			
	Valve Name:	**LPSI 1B2 Cold Leg Injection Check Valve**													
1-V-3206	8770 G 078-130B	F-4	2	B	10	GA	MO	A	LO	O/C	PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	**1A LPSI Pump Discharge Valve**													
1-V-3207	8770 G 078-130B	G-4	2	B	10	GA	MO	A	LO	O/C	PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	**1B LPSI Pump Discharge Valve**													
1-V-3211	8770 G 078-131B	A-6	2	C	1x1	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name:	**1A2 Safety Injection Tank Relief Valve**													
1-V-3215	8770 G 078-131B	C-6	2	A/C	12	CK	SA	A	C	O/C	CC	CM			TP-07
											CO	CM			TP-07
											LT-S	Y2			
	Valve Name:	**1A2 Safety Injection Tank Discharge Check Valve**													
1-V-3217	8770 G 078-131B	E-7	1	A/C	12	CK	SA	A	C	O/C	CC	CM			TP-07
											CO	CM			TP-07
											LT-S	Y2			
	Valve Name:	**1A2 SI Header Inboard Check Valve**													
1-V-3221	8770 G 078-131B	A-3	2	C	1x1	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name:	**1A1 Safety Injection Tank Relief Valve**													

Attachment 15

Safety Injection (SI)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1-V-3225	8770 G 078-131B	C-3	2	A/C	12	CK	SA	A	C	O/C	CC	CM			TP-07
											CO	CM			TP-07
											LT-S	Y2			
	Valve Name:	1A1 Safety Injection Tank Discharge Check Valve													
1-V-3227	8770 G 078-131B	D-4	1	A/C	12	CK	SA	A	C	O/C	CC	CM			TP-07
											CO	CM			TP-07
											LT-S	Y2			
	Valve Name:	1A1 SI Header Inboard Check Valve													
1-V-3231	8770 G 078-131B	E-3	2	C	1x1	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name:	1B1 Safety Injection Tank Relief Valve													
1-V-3235	8770 G 078-131B	G-3	2	A/C	12	CK	SA	A	C	O/C	CC	CM			TP-07
											CO	CM			TP-07
											LT-S	Y2			
	Valve Name:	1B1 Safety Injection Tank Discharge Check Valve													
1-V-3237	8770 G 078-131B	H-4	1	A/C	12	CK	SA	A	C	O/C	CC	CM			TP-07
											CO	CM			TP-07
											LT-S	Y2			
	Valve Name:	1B1 SI Header Inboard Check Valve													
1-V-3241	8770 G 078-131B	E-6	2	C	1x1	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name:	1B2 Safety Injection Tank Relief Valve													
1-V-3245	8770 G 078-131B	G-6	2	A/C	12	CK	SA	A	C	O/C	CC	CM			TP-07
											CO	CM			TP-07
											LT-S	Y2			
	Valve Name:	1B2 Safety Injection Tank Discharge Check Valve													
1-V-3247	8770 G 078-131B	H-7	1	A/C	12	CK	SA	A	C	O/C	CC	CM			TP-07
											CO	CM			TP-07
											LT-S	Y2			
	Valve Name:	1B2 SI Header Inboard Check Valve													
1-V-3401	8770 G 078-130A	C-2	2	C	6	CK	SA	A	C	O	CC	CM			TP-01, TP-07
											CO	CM			TP-07
	Valve Name:	1A HPSI Pump Suction Check Valve													
1-V-3407	8770 G 078-130B	A-4	3	C	0.5x1	RV	SA	A	C	O/C	RVT	Y10			TP-08
	Valve Name:	Safety Injection Tank Recirculation Relief Valve													

Attachment 15

Safety Injection (SI)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1-V-3410	8770 G 078-130A	G-2	2	C	8	CK	SA	A	C	O	CC	CM			TP-01, TP-07
											CO	CM			TP-07
	Valve Name:	**1B HPSI Pump Suction Check Valve**													
1-V-3412	8770 G 078-130A	F-6	2	C	1	RV	SA	A	C	O/C	RVT	Y10			TP-08
	Valve Name:	**HPSI Relief Valve**													
1-V-3414	8770 G 078-130A	G-4	2	C	3	CK	SA	A	C	O/C	CC	CM			TP-07
											CO	CM			TP-07
	Valve Name:	**1B HPSI Pump Discharge Stop Check Valve**													
1-V-3417	8770 G 078-130A	C-6	2	C	1	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name:	**HPSI Relief Valves**													
1-V-3427	8770 G 078-130A	C-4	2	C	3	CK	SA	A	C	O/C	CC	CM			TP-07
											CO	CM			TP-07
	Valve Name:	**1A HPSI Pump Discharge Stop Check Valve**													
1-V-3430	8770 G 078-130A	F-2	2	C	1	RV	SA	A	C	O/C	RVT	Y10			TP-08
	Valve Name:	**1B Shutdown Cooling Heat Exchanger Relief Valve**													
1-V-3431	8770 G 078-130A	B-2	2	C	1	RV	SA	A	C	O/C	RVT	Y10			TP-08
	Valve Name:	**1A Shutdown Cooling Heat Exchanger Relief Valve**													
1-V-3432	8770 G 078-130B	G-2	2	B	14	GA	MO	A	LO	O/C	PIT	Y2			
											ST-C	M3			TP-11
	Valve Name:	**1B LPSI Pump Suction Isolation Valve**													
1-V-3439	8770 G 078-130B	H-7	2	C	1x2	RV	SA	A	C	O/C	RVT	Y10			TP-08
	Valve Name:	**Low Pressure Safety Injection Header Relief Valve**													
1-V-3444	8770 G 078-130B	F-2	2	B	14	GA	MO	A	LO	O/C	PIT	Y2			
											ST-C	M3			TP-11
	Valve Name:	**1A LPSI Pump Suction Isolation Valve**													
1-V-3452	8770 G 078-130B	C-2	2	B	12	GA	MO	A	LC	O/C	PIT	Y2			
											ST-O	M3			TP-11
	Valve Name:	**1A LPSI Pumps Discharge to Shutdown Cooling Valve**													
1-V-3453	8770 G 078-130B	D-2	2	B	12	GA	MO	A	LC	O/C	PIT	Y2			
											ST-O	M3			TP-11
	Valve Name:	**1B LPSI Pumps Discharge to Shutdown Cooling Valve**													

Attachment 15

Safety Injection (SI)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1-V-3456	8770 G 078-130B	D-7	2	B	10	GA	MO	A	LC	O/C	PIT	Y2			
											ST-O	M3			TP-11
	Valve Name:	**1A Shutdown Cooling to LPSI Injection Header Valve**													
1-V-3457	8770 G 078-130B	E-7	2	B	10	GA	MO	A	LC	O/C	PIT	Y2			
											ST-O	M3			TP-11
	Valve Name:	**1B Shutdown Cooling to LPSI Injection Header Valve**													
1-V-3463	8770 G 078-130B	A-4	2	A	2	GA	M	A	LC	O/C	LT-J	App J			
											ME	Y2			TP-04
	Valve Name:	**SI Tank Drain/Test Line to RWT (P 41)**													
1-V-3466	8770 G 078-130B	A-3	3	C	2x3	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name:	**SI Check Valve Leakage Test Line Relief Valve**													
1-V-3468	8770 G 078-131A	D-2	2	C	2x3	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name:	**1B Shutdown Cooling Suction Relief Valve**													
1-V-3469	8770 G 078-131A	D-6	1	C	1x1	RV	SA	A	C	O/C	RVT	Y5			
	Valve Name:	**1B Shutdown Cooling Suction Isolation Valve Relief Valve**													
1-V-3480	8770 G 078-131A	D-7	1	A	10	GA	MO	A	LC	O/C	LT-S	Y2			
											PIT	Y2			
											ST-C	CS		CS-08	
											ST-O	CS		CS-08	
	Valve Name:	**1A Shutdown Cooling Suction Isolation Valve**													
1-V-3481	8770 G 078-131A	D-5	1	A	10	GA	MO	A	LC	O/C	LT-S	Y2			
											PIT	Y2			
											ST-C	CS		CS-08	
											ST-O	CS		CS-08	
	Valve Name:	**1A Shutdown Cooling Suction Isolation Valve**													
1-V-3482	8770 G 078-131A	D-6	1	C	1x1	RV	SA	A	C	O/C	RVT	Y5			
	Valve Name:	**1A Shutdown Cooling Suction Isolation Valve Relief Valve**													
1-V-3483	8770 G 078-131A	D-2	2	C	2x3	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name:	**1A Shutdown Cooling Suction Relief Valve**													

Attachment 15

Safety Injection (SI)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1-V-3611	8770 G 078-131B	C-6	2	B	1	GL	AO	A	C	O/C	FSC	M3			TP-03
											PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	1A2 SI Tank Drain/Fill Valve													
1-V-3612	8770 G 078-131B	B-6	2	B	0.5	GL	AO	P	C	C	PIT	Y2			
	Valve Name:	1A2 SI Tank Nitrogen Supply Valve													
1-V-3613	8770 G 078-131B	B-5	2	B	0.5	GL	AO	P	C	C	PIT	Y2			
	Valve Name:	1A2 SI Tank Nitrogen Vent Valve													
1-V-3614	8770 G 078-131B	C-6	1	B	12	GA	MO	P	LO	O	PIT	Y2			
	Valve Name:	1A2 SI Tank Outlet Isolation Valve													
1-V-3621	8770 G 078-131B	C-3	2	B	1	GL	AO	A	C	O/C	FSC	M3			TP-03
											PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	1A1 SI Tank Drain/Fill Valve													
1-V-3622	8770 G 078-131B	B-3	2	B	0.5	GL	AO	P	C	C	PIT	Y2			
	Valve Name:	1A1 SI Tank Nitrogen Supply Valve													
1-V-3623	8770 G 078-131B	B-2	2	B	0.5	GL	AO	P	C	C	PIT	Y2			
	Valve Name:	1A1 SI Tank Nitrogen Vent Valve													
1-V-3624	8770 G 078-131B	C-3	1	B	12	GA	MO	P	LO	O	PIT	Y2			
	Valve Name:	1A1 SI Tank Outlet Isolation Valve													
1-V-3631	8770 G 078-131B	G-3	2	B	1	GL	AO	A	C	O/C	FSC	M3			TP-03
											PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	1B1 SI Tank Drain/Fill Valve													
1-V-3632	8770 G 078-131B	F-3	2	B	0.5	GL	AO	P	C	C	PIT	Y2			
	Valve Name:	1B1 SI Tank Nitrogen Supply Valve													
1-V-3633	8770 G 078-131B	F-2	2	B	0.5	GL	AO	P	C	C	PIT	Y2			
	Valve Name:	1B1 SI Tank Nitrogen Vent Valve													

Attachment 15

Safety Injection (SI)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1-V-3634	8770 G 078-131B	G-3	1	B	12	GA	MO	P	LO	O	PIT	Y2			
	Valve Name:	1B1 SI Tank Outlet Isolation Valve													
1-V-3641	8770 G 078-131B	G-6	2	B	1	GL	AO	A	C	O/C	FSC	M3			TP-03
											PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	1B2 SI Tank Drain/Fill Valve													
1-V-3642	8770 G 078-131B	F-6	2	B	0.5	GL	AO	P	C	C	PIT	Y2			
	Valve Name:	1B2 SI Tank Nitrogen Supply Valve													
1-V-3643	8770 G 078-131B	F-5	2	B	0.5	GL	AO	P	C	C	PIT	Y2			
	Valve Name:	1B2 SI Tank Nitrogen Vent Valve													
1-V-3644	8770 G 078-131B	G-6	1	B	12	GA	MO	P	LO	O	PIT	Y2			
	Valve Name:	1B2 SI Tank Outlet Isolation Valve													
1-V-3651	8770 G 078-131A	E-5	1	A	10	GA	MO	A	LC	O/C	LT-S	Y2			
											PIT	Y2			
											ST-C	CS		CS-08	
											ST-O	CS		CS-08	
	Valve Name:	1B Shutdown Cooling Suction Isolation Valve													
1-V-3652	8770 G 078-131A	E-7	1	A	10	GA	MO	A	LC	O/C	LT-S	Y2			
											PIT	Y2			
											ST-C	CS		CS-08	
											ST-O	CS		CS-08	
	Valve Name:	1B Shutdown Cooling Suction Isolation Valve													
1-V-3654	8770 G 078-130A	G-5	2	B	6	GA	MO	P	LO	O	PIT	Y2			
	Valve Name:	1B HPSI Pump Discharge Valve													
1-V-3656	8770 G 078-130A	D-5	2	B	6	GA	MO	A	LO	O/C	PIT	Y2			
											ST-C	M3			TP-11
	Valve Name:	1A HPSI Pump Discharge Valve													
1-V-3659	8770 G 078-130B	A-7	2	B	3	GA	MO	A	O	O/C	PIT	Y2			
											ST-C	CS		CS-07	TP-11
	Valve Name:	Isolation Valve for SI Pump Mini Flow Recirc to RWT													

Attachment 15

Safety Injection (SI)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1-V-3660	8770 G 078-130B	B-7	2	B	3	GA	MO	A	O	O/C	PIT	Y2			
											ST-C	CS		CS-07	TP-11
	Valve Name:	**Isolation Valve for SI Pump Mini Flow Recirc to RWT**													
1-V-3661	8770 G 078-130B	B-3	3	B	1	GA	AO	P	C	C	PIT	Y2			
	Valve Name:	**SI Tank Drain/Test Line to Containment Drain Header**													
1-V-3662	8770 G 078-130A	F-2	2	B	4	GA	MO	A	C	O/C	PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	**Containment Spray to B HPSI Suction Cross Tie**													
1-V-3663	8770 G 078-130A	B-2	2	B	4	GA	MO	A	C	O/C	PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	**Containment Spray to A HPSI Suction Cross Tie**													

Attachment 15

Waste Management (W-MAN)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1-LCV-07-11A	8770 G 088-2	G-2	2	A	2	GL	AO	A	C	C	FSC LT-J PIT ST-C	M3 App J Y2 M3			TP-03
	Valve Name:	**Containment Sump Pump Discharge Valve**													
1-LCV-07-11B	8770 G 088-2	G-3	2	A	2	GL	AO	A	C	C	FSC LT-J PIT ST-C	M3 App J Y2 M3			TP-03
	Valve Name:	**Containment Sump Pump Discharge Valve**													
1-SR-07278	8770 G 088-2	F-4	NC	C	0.75	RV	SA	A	C	O	RVT	Y10			TP-08
	Valve Name:	**Cntmnt Sump Pump Discharge Cntmnt Pen Relief Valve**													
1-V-6301	8770 G 078-160A	G-4	2	A	3	DIA	AO	A	O	C	FSC LT-J PIT ST-C	M3 App J Y2 M3			TP-03
	Valve Name:	**Cntmnt Isolation for Rx Drain Tank Pump Suction (Pen P 43)**													
1-V-6302	8770 G 078-160A	G-5	2	A	3	DIA	AO	A	O	C	FSC LT-J PIT ST-C	M3 App J Y2 M3			TP-03
	Valve Name:	**Cntmnt Isolation Valve for Rx Drain Tank Pump Suction (P 43)**													
1-V-6554	8770 G 078-163A	B-6	2	A	1	DIA	AO	A	O	C	FSC LT-J PIT ST-C	M3 App J Y2 M3			TP-03
	Valve Name:	**Cntmnt Isolation for QT / RDT Vent to Gas Surge Tank (P 31)**													
1-V-6555	8770 G 078-163A	B-5	2	A	1	DIA	AO	A	O	C	FSC LT-J PIT ST-C	M3 App J Y2 M3			TP-03
	Valve Name:	**Cntmnt Isolation for QT / RDT Vent to Gas Surge Tank (P 31)**													

Attachment 15

Waste Management (W-MAN)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
1-V-6741	8770 G 078-163B	F-5	2	A	1	GL	AO	A	C	C	FSC	M3			TP-03
											LT-J	App J			
											PIT	Y2			
											ST-C	M3			
	Valve Name:	**Containment Isolation Valve for Nitrogen Supply to the RCB**													
1-V-6779	8770 G 078-163B	F-4	2	A/C	1	CK	SA	A	C	C	CC	CM			TP-07
											CO	CM			TP-01, TP-07
											LT-J	App J			
	Valve Name:	**Cntmnt Isolation Check Valve for N2 Supply to the RCB (P 14)**													

Attachment 15

Component Cooling Water (CCW)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2-HCV-14-1	2998 G 083-2	D-6	2	A	8	BTF	AO	A	O	C	FSC	CS		CS-13	TP-03
											LT-J	App J			
											PIT	Y2			
											ST-C	CS		CS-13	
	Valve Name:	RCP Cooling Water Containment Isolation Valve													
2-HCV-14-10	2998 G 083-1	F-6	3	B	16	BTF	PO	A	O	C	FSC	M3			TP-03
											PIT	Y2			
											ST-C	M3			
	Valve Name:	Nonessential Header Isolation Valve													
2-HCV-14-2	2998 G 083-2	C-1	2	A	8	BTF	AO	A	O	C	FSC	CS		CS-13	TP-03
											LT-J	App J			
											PIT	Y2			
											ST-C	CS		CS-13	
	Valve Name:	RCP Cooling Water Containment Isolation Valve													
2-HCV-14-3A	2998 G 083-1	H-1	3	B	14	BTF	AO	A	C	O	FSO	M3			TP-03
											PIT	Y2			
											ST-O	M3			
	Valve Name:	2A Shutdown Heat Exchanger Cooling Water Return Valve													
2-HCV-14-3B	2998 G 083-1	H-2	3	B	14	BTF	AO	A	C	O	FSO	M3			TP-03
											PIT	Y2			
											ST-O	M3			
	Valve Name:	2A Shutdown Heat Exchanger Cooling Water Return Valve													
2-HCV-14-6	2998 G 083-2	D-2	2	A	8	BTF	AO	A	O	C	FSC	CS		CS-13	TP-03
											LT-J	App J			
											PIT	Y2			
											ST-C	CS		CS-13	
	Valve Name:	RCP Cooling Water Containment Isolation Valve													
2-HCV-14-7	2998 G 083-2	D-6	2	A	8	BTF	AO	A	O	C	FSC	CS		CS-13	TP-03
											LT-J	App J			
											PIT	Y2			
											ST-C	CS		CS-13	
	Valve Name:	RCP Cooling Water Containment Isolation Valve													

Attachment 15

Component Cooling Water (CCW)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2-HCV-14-8A	2998 G 083-1	E-5	3	B	16	BTF	PO	A	O	C	FSC	M3			TP-03
											PIT	Y2			
											ST-C	M3			
	Valve Name:	Nonessential Header Isolation Valve													
2-HCV-14-8B	2998 G 083-1	E-5	3	B	16	BTF	PO	A	O	C	FSC	M3			TP-03
											PIT	Y2			
											ST-C	M3			
	Valve Name:	Nonessential Header Isolation Valve													
2-HCV-14-9	2998 G 083-1	F-6	3	B	16	BTF	PO	A	O	C	FSC	M3			TP-03
											PIT	Y2			
											ST-C	M3			
	Valve Name:	Nonessential Header Isolation Valve													
2-MV-14-1	2998 G 083-1	D-6	3	B	24	BTF	MO	P	O	C	PIT	Y2			
	Valve Name:	2C CCW Pump Discharge Stop Valve													
2-MV-14-10	2998 G 083-1	B-2	2	B	8	BTF	MO	P	O	O	PIT	Y2			
	Valve Name:	2A Containment Cooling Units CCW Isolation Valve													
2-MV-14-11	2998 G 083-1	B-4	2	B	8	BTF	MO	P	O	O	PIT	Y2			
	Valve Name:	2B Containment Cooling Units CCW Isolation Valve													
2-MV-14-12	2998 G 083-1	B-3	2	B	8	BTF	MO	P	O	O	PIT	Y2			
	Valve Name:	2B Containment Cooling Units CCW Isolation Valve													
2-MV-14-13	2998 G 083-1	B-1	2	B	8	BTF	MO	P	O	O	PIT	Y2			
	Valve Name:	2C Containment Cooling Units CCW Isolation Valve													
2-MV-14-14	2998 G 083-1	B-1	2	B	8	BTF	MO	P	O	O	PIT	Y2			
	Valve Name:	2C Containment Cooling Units CCW Isolation Valve													
2-MV-14-15	2998 G 083-1	B-2	2	B	8	BTF	MO	P	O	O	PIT	Y2			
	Valve Name:	2D Containment Cooling Units CCW Isolation Valve													
2-MV-14-16	2998 G 083-1	B-2	2	B	8	BTF	MO	P	O	O	PIT	Y2			
	Valve Name:	2D Containment Cooling Units CCW Isolation Valve													
2-MV-14-17	2998 G 083-1	E-4	3	B	12	BTF	MO	A	SYS	C	PIT	Y2			
											ST-C	M3			
	Valve Name:	CCW to Fuel Pool Heat Exchangers Inlet Isolation													

Attachment 15

Component Cooling Water (CCW)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2-MV-14-18	2998 G 083-1	E-4	3	B	12	BTF	MO	A	SYS	C	PIT	Y2			
											ST-C	M3			
	Valve Name:	**CCW to Fuel Pool Heat Exchangers Inlet Isolation**													
2-MV-14-2	2998 G 083-1	D-6	3	B	24	BTF	MO	P	C	C	PIT	Y2			
	Valve Name:	**2C CCW Pump Discharge Stop Valve**													
2-MV-14-3	2998 G 083-1	F-6	3	B	24	BTF	MO	P	O	C	PIT	Y2			
	Valve Name:	**2C CCW Pump Suction Stop Valve**													
2-MV-14-4	2998 G 083-1	F-6	3	B	24	BTF	MO	P	C	C	PIT	Y2			
	Valve Name:	**2C CCW Pump Suction Stop Valve**													
2-MV-14-9	2998 G 083-1	B-3	2	B	8	BTF	MO	P	O	O	PIT	Y2			
	Valve Name:	**2A Containment Cooling Units CCW Isolation Valve**													
2-SE-26-1	2998 G 083-1	C-7	3	B	1	GL	SO	A	O	C	FSC	M3			TP-03
											PIT	Y2			
											ST-C	M3			
	Valve Name:	**Solenoid valve for CCW to Radiation Monitor**													
2-SE-26-2	2998 G 083-1	D-7	3	B	1	GL	SO	A	O	C	FSC	M3			TP-03
											PIT	Y2			
											ST-C	M3			
	Valve Name:	**Solenoid valve for CCW to Radiation Monitor**													
2-SR-14307	2998 G 083-1	A-3	2	C	1x1.5	RV	SA	A	C	O/C	RVT	Y10			TP-08
	Valve Name:	**2A Containment Cooling Unit CCW Relief Valve**													
2-SR-14318	2998 G 083-1	A-3	2	C	1x1.5	RV	SA	A	C	O/C	RVT	Y10			TP-08
	Valve Name:	**2B Containment Cooling Unit CCW Relief Valve**													
2-SR-14329	2998 G 083-1	A-1	2	C	1x1.5	RV	SA	A	C	O/C	RVT	Y10			TP-08
	Valve Name:	**2C Containment Cooling Unit CCW Relief Valve**													
2-SR-14342	2998 G 083-1	A-2	2	C	1x1.5	RV	SA	A	C	O/C	RVT	Y10			TP-08
	Valve Name:	**2D Containment Cooling Unit CCW Relief Valve**													
2-SR-14350	2998 G 083-1	G-1	3	C	1x1.5	RV	SA	A	C	O/C	RVT	Y10			TP-08
	Valve Name:	**2A Shutdown Heat Exchanger CCW Shell Side Relief Valve**													

Attachment 15

Component Cooling Water (CCW)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2-SR-14359	2998 G 083-1	G-2	3	C	1x1.5	RV	SA	A	C	O/C	RVT	Y10			TP-08
	Valve Name:	**2B Shutdown Heat Exchanger CCW Shell Side Relief Valve**													
2-SR-14636	2998 G 083-2	D-6	2	A/C	0.75	RV	SA	A	C	O/C	LT-J	App J			
											RVT	Y10			TP-08
	Valve Name:	**Component Cooling Water Header Supply Thermal Relief Valve**													
2-SR-14637	2998 G 083-2	D-2	2	A/C	0.75	RV	SA	A	C	O/C	LT-J	App J			
											RVT	Y10			TP-08
	Valve Name:	**Component Cooling Water Header Return Thermal Relief Valve**													
2-V-14143	2998 G 083-1	D-6	3	C	20	CK	SA	A	O	O/C	CC	M3			
											CO	M3			
	Valve Name:	**2A CCW Pump Discharge Check Valve**													
2-V-14147	2998 G 083-1	D-7	3	C	20	CK	SA	A	O	O/C	CC	M3			
											CO	M3			
	Valve Name:	**2B CCW Pump Discharge Check Valve**													
2-V-14151	2998 G 083-1	D-6	3	C	20	CK	SA	A	O	O/C	CC	M3			
											CO	M3			
	Valve Name:	**2C CCW Pump Discharge Check Valve**													
2-V-14601	2998 G 083-1	F-7	3	C	1	CK	SA	A	O	C	CC	M3			
											CO	M3			TP-01
	Valve Name:	**Check Valve for RS 26 2 for the CCW Pump**													
2-V-14602	2998 G 083-1	F-7	3	C	1	CK	SA	A	O	C	CC	M3			
											CO	M3			TP-01
	Valve Name:	**Check Valve for RS 26 1 for the CCW Pump**													

Attachment 15

Containment Spray (CS)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2-FCV-07-1A	2998 G 088-2	C-3	2	B	12	BTF	AO	A	C	O	FSO	M3			TP-03
											PIT	Y2			
											ST-O	M3			
	Valve Name:	**Containment Spray Discharge Header Control Valve**													
2-FCV-07-1B	2998 G 088-2	D-3	2	B	12	BTF	AO	A	C	O	FSO	M3			TP-03
											PIT	Y2			
											ST-O	M3			
	Valve Name:	**Containment Spray Discharge Header Control Valve**													
2-MV-07-1A	2998 G 088-1	E-5	2	B	24	BTF	MO	A	O	O/C	PIT	Y2			
											ST-C	M3			TP-11
	Valve Name:	**RWT Outlet Stop Valve**													
2-MV-07-1B	2998 G 088-1	E-5	2	B	24	BTF	MO	A	O	O/C	PIT	Y2			
											ST-C	M3			TP-11
	Valve Name:	**RWT Outlet Stop Valve**													
2-MV-07-3	2998 G 088-2	C-2	2	B	12	GA	MO	A	O	O	PIT	Y2			
											ST-C	M3			
	Valve Name:	**Containment Spray Discharge Header Stop Valve**													
2-MV-07-4	2998 G 088-2	D-2	2	B	12	GA	MO	A	O	O	PIT	Y2			
											ST-C	M3			
	Valve Name:	**Containment Spray Discharge Header Stop Valve**													
2-SE-07-3A	2998 G 088-1	G-3	2	B	0.5	GL	SO	A	C	O	FSO	M3			TP-03
											PIT	Y2			
											ST-O	M3			
	Valve Name:	**Hydrazine Injection Isolation Valve**													
2-SE-07-3B	2998 G 088-1	H-3	2	B	0.5	GL	SO	A	C	O	FSO	M3			TP-03
											PIT	Y2			
											ST-O	M3			
	Valve Name:	**Hydrazine Injection Isolation Valve**													
2-SR-07-1C	2998 G 088-1	E-2	2	C	1x1	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name:	**Hydrazine Storage Tank Safety/Relief Valve**													
2-SR-07-2A	2998 G 088-1	F-3	2	C	0.5x0.5	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name:	**Hydrazine Injection Header Safety/Relief Valve**													

Attachment 15

Containment Spray (CS)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2-SR-07-2B	2998 G 088-1	G-3	2	C	0.5x0.5	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name:	**Hydrazine Injection Header Safety/Relief Valve**													
2-V-07119	2998 G 088-1	E-6	2	C	24	CK	SA	A	C	O/C	CCL	CM			TP-07
											COF	CM			TP-07
	Valve Name:	**RWT Outlet Check Valve**													
2-V-07120	2998 G 088-1	E-6	2	C	24	CK	SA	A	C	O/C	CCL	CM			TP-07
											COF	CM			TP-07
	Valve Name:	**RWT Outlet Check Valve**													
2-V-07129	2998 G 088-1	H-6	2	C	12	CK	SA	A	C	O	CCL	CM			TP-01, TP-07
											COF	CM			TP-07
	Valve Name:	**2B Containment Spray Pump Discharge Check Valve**													
2-V-07130	2998 G 088-1	H-6	2	B	12	GA	M	A	LO	O/C	ME	Y2			TP-04
	Valve Name:	**2B Containment Spray Pump Discharge Isolation Valve**													
2-V-07143	2998 G 088-1	G-6	2	C	12	CK	SA	A	C	O	CCL	CM			TP-01, TP-07
											COF	CM			TP-07
	Valve Name:	**2A Containment Spray Pump Discharge Check Valve**													
2-V-07145	2998 G 088-1	G-6	2	B	12	GA	M	A	LO	O/C	ME	Y2			TP-04
	Valve Name:	**2A Containment Spray Pump Discharge Isolation Valve**													
2-V-07192	2998 G 088-2	C-4	2	C	10	CK	SA	A	C	O	CCD	CM			TP-01, TP-07
											COD	CM			TP-07
	Valve Name:	**2B Containment Spray Discharge Header Check Valve**													
2-V-07193	2998 G 088-2	C-4	2	C	10	CK	SA	A	C	O	CCD	CM			TP-01, TP-07
											COD	CM			TP-07
	Valve Name:	**2A Containment Spray Discharge Header Check Valve**													
2-V-07231	2998 G 088-1	E-2	2	C	2	CK	SA	A	C	O	CC	M3			TP-01
											CO	M3			
	Valve Name:	**Hydrazine Storage Tank Vacuum Breaker**													
2-V-07232	2998 G 088-1	E-2	2	C	2	CK	SA	A	C	O	CC	M3			TP-01
											CO	M3			
	Valve Name:	**Hydrazine Storage Tank Vacuum Breaker**													

Attachment 15

Containment Spray (CS)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2-V-07256	2998 G 088-1	G-3	2	C	0.5	CK	SA	A	C	O/C	CC	CM			TP-07
											CO	CM			TP-07
	Valve Name:	**2A Hydrazine Injection Check Valve**													
2-V-07258	2998 G 088-1	H-3	2	C	0.5	CK	SA	A	C	O/C	CC	CM			TP-07
											CO	CM			TP-07
	Valve Name:	**2B Hydrazine Injection Check Valve**													
2-V-07412	2998 G 088-1	F-3	2	C	0.5	CK	SA	A	C	O	CC	M3			TP-01
											CO	M3			
	Valve Name:	**Hydrazine Pump Recirculation Line Check Valve**													
2-V-29431	2998 G 088-1	D-2	2	C	1	CK	SA	A	C	C	CCR	CM			TP-07
											COF	CM			TP-01, TP-07
	Valve Name:	**Hydrazine Storage Tank Nitrogen Check Valve**													
2-V-29432	2998 G 088-1	D-1	2	C	1	CK	SA	A	C	C	CCR	CM			TP-07
											COF	CM			TP-01, TP-07
	Valve Name:	**Hydrazine Storage Tank Nitrogen Check Valve**													

Attachment 15

Chemical and Volume Control System (CVCS)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2-FCV-2210Y	2998 G 078-121B	F-6	2	B	1	GL	AO	A	C	C	FSC	M3			TP-03
											PIT	Y2			
											ST-C	M3			
	Valve Name:	Boric Acid Makeup Pumps Disch. to VCT Stop Valve													
2-SE-02-1	2998 G 078-122	D-6	1	B	2	GL	SO	A	O	O/C	FSO	M3			TP-03
											PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	Charging To RCS Cold Legs Stop Valve													
2-SE-02-2	2998 G 078-122	C-6	1	B	2	GL	SO	A	O	O/C	FSO	M3			TP-03
											PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	Charging to RCS Cold Legs Stop Valve													
2-SE-02-3	2998 G 078-122	E-6	1	B	2	GL	SO	A	C	O/C	FSC	CS		CS-03	TP-03
											PIT	Y2			
											ST-C	CS		CS-03	
											ST-O	CS		CS-03	
	Valve Name:	Auxiliary Pressurizer Spray Isolation Valve													
2-SE-02-4	2998 G 078-122	E-6	1	B	2	GL	SO	A	C	O/C	FSC	CS		CS-03	TP-03
											PIT	Y2			
											ST-C	CS		CS-03	
											ST-O	CS		CS-03	
	Valve Name:	Auxiliary Pressurizer Spray Isolation Valve													
2-SR-02123	2998 G 078-121A	C-2	2	A/C	1	RV	SA	A	C	O/C	LT-J	App J			
											RVT	Y10			TP-08
	Valve Name:	CVCS Reactor Coolant Pump Bleed-off Thermal Relief Valve													
2-V-2115	2998 G 078-121A	E-4	3	C	4x6	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name:	VCT Safety / Relief Valve													
2-V-2118	2998 G 078-121A	E-5	2	C	4	CK	SA	A	O	O/C	CC	CM			TP-07
											CO	CM			TP-07
	Valve Name:	VCT Discharge Header Check Valve													

Attachment 15

Chemical and Volume Control System (CVCS)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2-V-2167	2998 G 078-122	C-3	2	C	2	CK	SA	A	SYS	O/C	CC	M3			
											CO	M3			
	Valve Name:	2C Charging Pump Discharge CV													
2-V-2168	2998 G 078-122	E-3	2	C	2	CK	SA	A	SYS	O/C	CC	M3			
											CO	M3			
	Valve Name:	2B Charging Pump Discharge CV													
2-V-2169	2998 G 078-122	G-3	2	C	2	CK	SA	A	SYS	O/C	CC	M3			
											CO	M3			
	Valve Name:	2A Charging Pump Discharge CV													
2-V-2177	2998 G 078-121B	H-5	2	C	3	CK	SA	A	C	O	COF	CM			TP-07
											NI	CM			TP-01, TP-07
	Valve Name:	Boric Acid Makeup Pump Disch. to Charging Pump Suction													
2-V-2190	2998 G 078-121B	G-2	2	C	3	CK	SA	A	C	O	CC	CM			TP-01, TP-07
											CO	CM			TP-07
	Valve Name:	Boric Acid Gravity Feed Check Valve													
2-V-2191	2998 G 078-121A	E-6	2	C	3	CK	SA	A	C	O/C	CC	CM			TP-07
											CO	CM			TP-07
	Valve Name:	RWT to Charging Pump Suction Check Valve													
2-V-2311	2998 G 078-121A	F-5	2	C	0.5	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name:	Chg Pump Common Suction Hdr. Relief Valve													
2-V-2318	2998 G 078-122	D-2	2	C	0.5X1.5	RV	SA	A	C	O/C	RVT	Y10			TP-08
	Valve Name:	2B Charging Pump Suction Safety/Relief Valve													
2-V-2321	2998 G 078-122	F-2	2	C	0.5X1.5	RV	SA	A	C	O/C	RVT	Y10			TP-08
	Valve Name:	2A Charging Pump Suction Safety/Relief Valve													
2-V-2324	2998 G 078-122	F-3	2	C	1.5	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name:	2A Charging Pump Discharge Safety/Relief Valve													
2-V-2325	2998 G 078-122	D-2	2	C	1.5	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name:	2B Charging Pump Discharge Safety/Relief Valve													
2-V-2326	2998 G 078-122	B-2	2	C	1.5	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name:	2C Charging Pump Discharge Safety/Relief Valve													

Attachment 15

Chemical and Volume Control System (CVCS)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2-V-2338	2998 G 078-122	C-3	2	B	2	GA	M	A	LO	O/C	ME	Y2			TP-04
	Valve Name:	CVCS to HPSI Auxiliary Header Isolation Valve													
2-V-2340	2998 G 078-122	A-3	2	B	2	GA	M	A	C	O/C	ME	Y2			TP-04
	Valve Name:	Charging Pump Discharge To Aux HPSI Isolation Valve													
2-V-2429	2998 G 078-122	B-4	2	B	2	GA	M	A	LO	O/C	ME	Y2			TP-04
	Valve Name:	Charging Line Isolation Valve													
2-V-2431	2998 G 078-122	E-6	1	C	2	CK	SA	A	C	O	CCNI	CM			TP-01, TP-07
											COF	CM			TP-07
	Valve Name:	Auxiliary Pressurizer Spray Check Valve													
2-V-2432	2998 G 078-122	D-6	1	C	2	CK	SA	A	O	O	CCNI	CM			TP-01, TP-07
											COF	CM			TP-07
	Valve Name:	Charging To 2B1 RCS Cold Leg Check Valve													
2-V-2433	2998 G 078-122	C-6	1	C	2	CK	SA	A	O	O	CCNI	CM			TP-01, TP-07
											COF	CM			TP-07
	Valve Name:	Charging to 2A2 RCS Cold Leg Check Valve													
2-V-2435	2998 G 078-122	C-6	1	C	2	CK	SA	A	C	O	CCNI	CM			TP-01, TP-07
											COF	CM			TP-07
	Valve Name:	SE 02 02 Bypass Safety/Relief Valve													
2-V-2440	2998 G 078-122	A-3	2	C	2	CK	SA	A	C	O	CC	CM			TP-07
											CO	CM			TP-01, TP-07
	Valve Name:	Charging Line To Aux. HPSI Header Check Valve													
2-V-2443	2998 G 078-121B	G-4	2	C	3	CK	SA	A	C	O/C	CC	CM			TP-07
											CO	CM			TP-07
	Valve Name:	2B Boric Acid Makeup Pump Discharge Check Valve													
2-V-2444	2998 G 078-121B	F-4	2	C	3	CK	SA	A	C	O/C	CC	CM			TP-07
											CO	CM			TP-07
	Valve Name:	2A Boric Acid Makeup Pump Discharge Check Valve													
2-V-2462	2998 G 078-122	B-5	2	C	2	CK	SA	A	O	O	CC	CM			TP-01, TP-07
											CO	CM			TP-07
	Valve Name:	Charging Header Check Valve													

Attachment 15

Chemical and Volume Control System (CVCS)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2-V-2501	2998 G 078-121A	D-5	2	B	4	GA	MO	A	O	O/C	PIT	Y2			
											ST-C	CS		CS-05	
											ST-O	CS		CS-05	
	Valve Name:	VCT Discharge Isolation Valve													
2-V-2504	2998 G 078-121A	F-6	2	B	3	GA	MO	A	C	O/C	PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	RWT To Charging Pump Suction Isolation Valve													
2-V-2505	2998 G 078-121A	C-3	2	A	0.75	GL	AO	A	O	C	FSC	CS		CS-06	TP-03
											LT-J	App J			
											PIT	Y2			
											ST-C	CS		CS-06	
	Valve Name:	RCP Seal Water Return Valve													
2-V-2508	2998 G 078-121B	F-3	2	B	3	GA	MO	A	C	O	PIT	Y2			
											ST-O	M3			
	Valve Name:	Boric Acid Gravity Feed Isolation Valve													
2-V-2509	2998 G 078-121B	F-2	2	B	3	GA	MO	A	C	O	PIT	Y2			
											ST-O	M3			
	Valve Name:	Boric Acid Gravity Feed Isolation Valve													
2-V-2514	2998 G 078-121B	H-5	2	B	3	GA	MO	A	C	O	PIT	Y2			
											ST-O	M3			
	Valve Name:	Boric Acid Makeup Pump Disch. To Charging Pump Suction													
2-V-2515	2998 G 078-122	G-7	1	B	2	GL	AO	A	O	C	FSC	CS		CS-04	TP-03
											PIT	Y2			
											ST-C	CS		CS-04	
	Valve Name:	Letdown Isolation Valve													
2-V-2516	2998 G 078-122	G-6	1	A	2	GL	AO	A	O	C	FSC	CS		CS-04	TP-03
											LT-J	App J			
											PIT	Y2			
											ST-C	CS		CS-04	
	Valve Name:	Letdown Isolation Valve													

Attachment 15

Chemical and Volume Control System (CVCS)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2-V-2522	2998 G 078-120	C-2	2	A	2	GL	AO	A	O	C	FSC	CS		CS-04	TP-03
											LT-J	App J			
											PIT	Y2			
											ST-C	CS		CS-04	
	Valve Name:	Letdown Containment Isolation Valve													
2-V-2523	2998 G 078-122	B-5	2	B	2	GL	AO	A	LO	O/C	PIT	Y2			
											ST-C	CS		CS-04	TP-11
	Valve Name:	Charging Header Isolation Valve													
2-V-2524	2998 G 078-121A	C-2	2	A	0.75	GL	AO	A	O	C	FSC	CS		CS-06	TP-03
											LT-J	App J			
											PIT	Y2			
											ST-C	CS		CS-06	
	Valve Name:	RCP Seal Water Return Valve													
2-V-2525	2998 G 078-121A	F-4	3	B	4	GA	MO	A	C	C	PIT	Y2			
											ST-C	M3			
	Valve Name:	BAMT and PMW to Charging Pump Suction, Boron Load													
2-V-2526	2998 G 078-121A	E-6	2	C	4	CK	SA	A	C	O	COF	CM			TP-07
											NI	CM			TP-01, TP-07
	Valve Name:	Boric Acid Makeup Pumps Disch. to Charging Pumps													
2-V-2531	2998 G 078-120	C-6	3	C	2x3	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name:	Safety Relief Valve for Letdown to Hold up Tank													
2-V-2553	2998 G 078-122	C-3	2	B	2	GL	MO	A	O	C	PIT	Y2			
											ST-C	M3			
	Valve Name:	2C Charging Pump Recirculation Valve													
2-V-2554	2998 G 078-122	E-3	2	B	2	GL	MO	A	O	C	PIT	Y2			
											ST-C	M3			
	Valve Name:	2B Charging Pump Recirculation Valve													
2-V-2555	2998 G 078-122	H-3	2	B	2	GL	MO	A	O	C	PIT	Y2			
											ST-C	M3			
	Valve Name:	2A Charging Pump Recirculation Valve													
2-V-2588	2998 G 078-122	B-1	2	C	0.5X1.5	RV	SA	A	C	O/C	RVT	Y10			TP-08
	Valve Name:	2C Charging Pump Suction Safety/Relief Valve													

Attachment 15

Chemical and Volume Control System (CVCS)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2-V-2598	2998 G 078-122	D-5	2	N/A	2	GA	MO	N/A	O	N/A	PIT	Y2			
	Valve Name:	**Charging Header Isolation Valve**													
2-V-2621	2998 G 078-121A	C-4	3	B	3	GA	M	A	O	C	ME	Y2			TP-04
	Valve Name:	**PMW/BAM Supply to VCT Valve**													
2-V-2650	2998 G 078-121B	H-4	2	B	1	GL	AO	A	O	C	FSC	M3			TP-03
											PIT	Y2			
											ST-C	M3			
	Valve Name:	**2A Boric Acid Makeup Pump Recirc. Control Valve**													
2-V-2651	2998 G 078-121B	D-4	2	B	1	GL	AO	A	O	C	FSC	M3			TP-03
											PIT	Y2			
											ST-C	M3			
	Valve Name:	**2B Boric Acid Makeup Pump Recirc. Control Valve**													
2-V-2674	2998 G 078-121A	D-5	3	C	4	CK	SA	A	O	O	CC	CM			TP-01, TP-07
											CO	CM			TP-07
	Valve Name:	**VCT Outlet Check Valve**													

Attachment 15

Emergency Diesel Generator - Air (EDG-A)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2-FCV-59-1A1	2998 G 096-1C	H-2	3	B	1.5	GA	AO	A	C	O/C	ST-O	Y2			TP-09
	Valve Name:	2A EDG Starting Air Control Valve													
2-FCV-59-1B1	2998 G 096-2C	F-4	3	B	1.5	GA	AO	A	C	O/C	ST-O	Y2			TP-09
	Valve Name:	2B EDG Starting Air Control Valve													
2-FCV-59-2A1	2998 G 096-1C	H-4	3	B	1.5	GA	AO	A	C	O/C	ST-O	Y2			TP-09
	Valve Name:	2A EDG Starting Air Control Valve													
2-FCV-59-2B1	2998 G 096-2C	F-2	3	B	1.5	GA	AO	A	C	O/C	ST-O	Y2			TP-09
	Valve Name:	2B EDG Starting Air Control Valve													
2-FCV-59-3A1	2998 G 096-1C	F-4	3	B	1.5	GA	AO	A	C	O/C	ST-O	Y2			TP-09
	Valve Name:	2A EDG Starting Air Control Valve													
2-FCV-59-3B1	2998 G 096-2C	H-4	3	B	1.5	GA	AO	A	C	O/C	ST-O	Y2			TP-09
	Valve Name:	2B EDG Starting Air Control Valve													
2-FCV-59-4A1	2998 G 096-1C	F-2	3	B	1.5	GA	AO	A	C	O/C	ST-O	Y2			TP-09
	Valve Name:	2A EDG Starting Air Control Valve													
2-FCV-59-4B1	2998 G 096-2C	H-2	3	B	1.5	GA	AO	A	C	O/C	ST-O	Y2			TP-09
	Valve Name:	2B EDG Starting Air Control Valve													
2-SE-59-3A	2998 G 096-1C	G-3	3	B	0.5	GL	SO	A	C	O/C	ST-O	Y2			TP-09
	Valve Name:	2A EDG Starting Air Control Valve Pilot Valve													
2-SE-59-3B	2998 G 096-2C	G-3	3	B	0.5	GL	SO	A	C	O/C	ST-O	Y2			TP-09
	Valve Name:	2B EDG Starting Air Control Valve Pilot Valve													
2-SE-59-4A	2998 G 096-1C	E-3	3	B	0.5	GL	SO	A	C	O/C	ST-O	Y2			TP-09
	Valve Name:	2A EDG Starting Air Control Valve Pilot Valve													
2-SE-59-4B	2998 G 096-2C	E-3	3	B	0.5	GL	SO	A	C	O/C	ST-O	Y2			TP-09
	Valve Name:	2B EDG Starting Air Control Valve Pilot Valve													
2-SE-59-5A	2998 G 096-1C	G-4	3	B	0.5	GL	SO	A	C	O/C	ST-O	Y2			TP-09
	Valve Name:	2A EDG Starting Air Control Valve Pilot Valve													
2-SE-59-5B	2998 G 096-2C	G-4	3	B	0.5	GL	SO	A	C	O/C	ST-O	Y2			TP-09
	Valve Name:	2B EDG Starting Air Control Valve Pilot Valve													

Attachment 15

Emergency Diesel Generator - Air (EDG-A)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2-SE-59-6A	2998 G 096-1C	E-4	3	B	0.5	GL	SO	A	C	O/C	ST-O	Y2			TP-09
	Valve Name:	2A EDG Starting Air Control Valve Pilot Valve													
2-SE-59-6B	2998 G 096-2C	E-4	3	B	0.5	GL	SO	A	C	O/C	ST-O	Y2			TP-09
	Valve Name:	2B EDG Starting Air Control Valve Pilot Valve													
2-SR-59-3A	2998 G 096-1C	B-5	3	C	0.75	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name:	2A EDG Starting Air Receiver Relief Valve													
2-SR-59-3B	2998 G 096-2C	B-5	3	C	0.75	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name:	2B EDG Starting Air Receiver Relief Valve													
2-SR-59-4A	2998 G 096-1C	B-4	3	C	0.75	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name:	2A EDG Starting Air Receiver Relief Valve													
2-SR-59-4B	2998 G 096-2C	B-4	3	C	0.75	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name:	2B EDG Starting Air Receiver Relief Valve													
2-SR-59-5A	2998 G 096-1C	B-3	3	C	0.75	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name:	2A EDG Starting Air Receiver Relief Valve													
2-SR-59-5B	2998 G 096-2C	G-4	3	C	0.75	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name:	2B EDG Starting Air Receiver Relief Valve													
2-SR-59-6A	2998 G 096-1C	B-2	3	C	0.75	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name:	2A EDG Starting Air Receiver Relief Valve													
2-SR-59-6B	2998 G 096-2C	E-4	3	C	0.75	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name:	2B EDG Starting Air Receiver Relief Valve													
2-V-59156	2998 G 096-1C	B-5	3	C	1.25	CK	SA	A	C	C	CC	M3			
											CO	OP			TP-05, TP-01
	Valve Name:	2A EDG Air Start Receiver Check Valve													
2-V-59158	2998 G 096-1C	B-3	3	C	1.25	CK	SA	A	C	C	CC	M3			
											CO	OP			TP-05, TP-01
	Valve Name:	2A EDG Air Start Receiver Check Valve													
2-V-59159	2998 G 096-1C	B-2	3	C	1.25	CK	SA	A	C	C	CC	M3			
											CO	OP			TP-05, TP-01
	Valve Name:	2A EDG Air Start Receiver Check Valve													

Attachment 15

Emergency Diesel Generator - Air (EDG-A)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2-V-59183	2998 G 096-1C	G-2	3	C	0.25	CK	SA	A	C	C	CC	Y2			TP-09
	Valve Name:	EDG 2A1 North Air Start Sequencing Check Valve													
2-V-59187	2998 G 096-1C	E-2	3	C	0.25	CK	SA	A	C	C	CC	Y2			TP-09
	Valve Name:	EDG 2A1 South Air Start Sequencing Check Valve													
2-V-59191	2998 G 096-1C	G-4	3	C	0.25	CK	SA	A	C	C	CC	Y2			TP-09
	Valve Name:	EDG 2A2 North Air Start Sequencing Check Valve													
2-V-59192	2998 G 096-1C	E-2	3	C	0.25	CK	SA	A	C	O/C	CC	Y2			TP-09
											CO	Y2			TP-09
	Valve Name:	Check Valve for D/G Engine Governor Air Booster													
2-V-59193	2998 G 096-1C	E-2	3	C	0.25	CK	SA	A	C	O/C	CC	Y2			TP-09
											CO	Y2			TP-09
	Valve Name:	Check Valve for D/G Engine Governor Air Booster													
2-V-59197	2998 G 096-1C	E-4	3	C	0.25	CK	SA	A	C	C	CC	Y2			TP-09
	Valve Name:	EDG 2A2 South Air Start Sequencing Check Valve													
2-V-59198	2998 G 096-1C	E-5	3	C	0.25	CK	SA	A	C	O/C	CC	Y2			TP-09
											CO	Y2			TP-09
	Valve Name:	Check Valve for D/G Engine Governor Air Booster													
2-V-59199	2998 G 096-1C	E-5	3	C	0.25	CK	SA	A	C	O/C	CC	Y2			TP-09
											CO	Y2			TP-09
	Valve Name:	Check Valve for D/G Engine Governor Air Booster													
2-V-59203	2998 G 096-2C	B-5	3	C	1.25	CK	SA	A	C	C	CC	M3			
											CO	OP			TP-05, TP-01
	Valve Name:	2B EDG Air Start Receiver Check Valve													
2-V-59204	2998 G 096-2C	B-4	3	C	1.25	CK	SA	A	C	C	CC	M3			
											CO	OP			TP-05, TP-01
	Valve Name:	2B EDG Air Start Receiver Check Valve													
2-V-59205	2998 G 096-2C	B-3	3	C	1.25	CK	SA	A	C	C	CC	M3			
											CO	OP			TP-05, TP-01
	Valve Name:	2B EDG Air Start Receiver Check Valve													

Attachment 15

Emergency Diesel Generator - Air (EDG-A)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2-V-59206	2998 G 096-2C	B-2	3	C	1.25	CK	SA	A	C	C	CC	M3			
											CO	OP			TP-05, TP-01
	Valve Name:	2B EDG Air Start Receiver Check Valve													
2-V-59231	2998 G 096-2C	G-2	3	C	0.25	CK	SA	A	C	C	CC	Y2			TP-09
	Valve Name:	EDG 2B1 South Air Start Sequencing Check Valve													
2-V-59235	2998 G 096-2C	E-2	3	C	0.25	CK	SA	A	C	C	CC	Y2			TP-09
	Valve Name:	EDG 2B1 North Air Start Sequencing Check Valve													
2-V-59236	2998 G 096-1C	B-4	3	C	1.25	CK	SA	A	C	C	CC	M3			
											CO	OP			TP-05, TP-01
	Valve Name:	2A EDG Air Start Receiver Check Valve													
2-V-59239	2998 G 096-2C	G-4	3	C	0.25	CK	SA	A	C	C	CC	Y2			TP-09
	Valve Name:	EDG 2B2 North Air Start Sequencing Check Valve													
2-V-59240	2998 G 096-2C	E-2	3	C	0.25	CK	SA	A	C	O/C	CC	Y2			TP-09
											CO	Y2			TP-09
	Valve Name:	Check Valve for D/G Engine Governor Air Boosters													
2-V-59241	2998 G 096-2C	E-2	3	C	0.25	CK	SA	A	C	O/C	CC	Y2			TP-09
											CO	Y2			TP-09
	Valve Name:	Check Valve for D/G Engine Governor Air Boosters													
2-V-59245	2998 G 096-2C	E-4	3	C	0.25	CK	SA	A	C	C	CC	Y2			TP-09
	Valve Name:	EDG 2B2 South Air Start Sequencing Check Valve													
2-V-59246	2998 G 096-2C	E-5	3	C	0.25	CK	SA	A	C	O/C	CC	Y2			TP-09
											CO	Y2			TP-09
	Valve Name:	Check Valve for D/G Engine Governor Air Boosters													
2-V-59247	2998 G 096-2C	E-5	3	C	0.25	CK	SA	A	C	O/C	CC	Y2			TP-09
											CO	Y2			TP-09
	Valve Name:	Check Valve for D/G Engine Governor Air Boosters													

Attachment 15

Emergency Diesel Generator - Cooling Water (EDG-C)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2-SR-59-1A1	2998 G 096-1A	C-5	3	C	1.25	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name:	Safety Relief Valve for the D/G Radiator Expansion Tank													
2-SR-59-1A2	2998 G 096-1B	F-2	3	C	1.25	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name:	Safety Relief Valve for the D/G Radiator Expansion Tank													
2-SR-59-1B1	2998 G 096-2A	B-5	3	C	1.25	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name:	Safety Relief Valve for the D/G Radiator Expansion Tank													
2-SR-59-1B2	2998 G 096-2B	F-2	3	C	1.25	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name:	Safety Relief Valve for the D/G Radiator Expansion Tank													
2-TCV-59-1A1	2998 G 096-1A	E-6	3	C	4	3W	SA	A	C	O/C	TMP	M3			TP-09
	Valve Name:	EDG Engine Water TCV													
2-TCV-59-1A2	2998 G 096-1B	E-2	3	C	4	3W	SA	A	C	O/C	TMP	M3			TP-09
	Valve Name:	EDG Engine Water TCV													
2-TCV-59-1B1	2998 G 096-2A	E-6	3	C	4	3W	SA	A	C	O/C	TMP	M3			TP-09
	Valve Name:	EDG Engine Water TCV													
2-TCV-59-1B2	2998 G 096-2B	E-2	3	C	4	3W	SA	A	C	O/C	TMP	M3			TP-09
	Valve Name:	EDG Engine Water TCV													

Attachment 15

Emergency Diesel Generator - Fuel (EDG-F)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2-SE-59-1A1	2998 G 096-1A	B-5	3	B	1.5	GL	SO	A	C	O/C	FSC	M3			TP-03, TP-09
											ST-C	M3			TP-09
											ST-O	M3			TP-09
	Valve Name:	Fuel Oil Day Tank Inlet Isolation Valve													
2-SE-59-1A2	2998 G 096-1B	H-2	3	B	1.5	GL	SO	A	C	O/C	FSC	M3			TP-03, TP-09
											ST-C	M3			TP-09
											ST-O	M3			TP-09
	Valve Name:	Fuel Oil Day Tank Inlet Isolation Valve													
2-SE-59-1B1	2998 G 096-2A	B-5	3	B	1.5	GL	SO	A	C	O/C	FSC	M3			TP-03, TP-09
											ST-C	M3			TP-09
											ST-O	M3			TP-09
	Valve Name:	Fuel Oil Day Tank Inlet Isolation Valve													
2-SE-59-1B2	2998 G 096-2B	H-2	3	B	1.5	GL	SO	A	C	O/C	FSC	M3			TP-03, TP-09
											ST-C	M3			TP-09
											ST-O	M3			TP-09
	Valve Name:	Fuel Oil Day Tank Inlet Isolation Valve													
2-SR-17221	2998 G 086-1	B-3	3	C	0.75X1	RV	SA	A	C	O/C	RVT	Y10			TP-08
	Valve Name:	2A Diesel Oil Transfer Pump Relief Valve													
2-SR-17222	2998 G 086-1	C-3	3	C	0.75X1	RV	SA	A	C	O/C	RVT	Y10			TP-08
	Valve Name:	2B Diesel Oil Transfer Pump Relief Valve													
2-V-17204	2998 G 086-1	B-3	3	C	1.5	CK	SA	A	C	O	CC	CM			TP-01, TP-07
											CO	CM			TP-07
	Valve Name:	2A Diesel Fuel Oil Transfer Pump Discharge Check Valve													
2-V-17207	2998 G 086-1	B-3	3	B	2	GL	M	A	LC	O/C	ME	Y2			TP-04
	Valve Name:	Diesel Oil Transfer Pump Discharge Cross tie Isolation													
2-V-17214	2998 G 086-1	D-3	3	C	1.5	CK	SA	A	C	O	CC	CM			TP-01, TP-07
											CO	CM			TP-07
	Valve Name:	2B Diesel Oil Transfer Pump Discharge Check Valve													
2-V-17217	2998 G 086-1	D-3	3	B	2	GL	M	A	LC	O/C	ME	Y2			TP-04
	Valve Name:	Diesel Oil Transfer Pump Discharge Cross tie Isolation													
2-V-17218	2998 G 086-1	C-3	3	B	2	GL	M	A	LC	O	ME	Y2			TP-04
	Valve Name:	Unit1/2 Diesel Oil Transfer Pumps Discharge Cross tie													

Attachment 15

Emergency Diesel Generator - Fuel (EDG-F)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2-V-59002	2998 G 096-1A	B-4	3	C	1.5	CK	SA	A	C	O	CC	M3			TP-09
											CO	M3			TP-09
	Valve Name:	Check Valve for Diesel Oil from Day Tank													
2-V-59005	2998 G 096-1A	B-3	3	C	0.75	CK	SA	A	O	O	CO	M3			TP-09
	Valve Name:	Check Valve for Electric Motor Driven Diesel Oil Priming													
2-V-59062	2998 G 096-1B	G-4	3	C	1.5	CK	SA	A	C	O	CC	M3			TP-09
											CO	M3			TP-09
	Valve Name:	Check Valve for Diesel Oil from Day Tank													
2-V-59078	2998 G 096-2A	B-4	3	C	1.5	CK	SA	A	C	O	CC	M3			TP-09
											CO	M3			TP-09
	Valve Name:	Check Valve for Diesel Oil from Day Tank													
2-V-59081	2998 G 096-2A	B-3	3	C	0.75	CK	SA	A	O	O	CO	M3			TP-09
	Valve Name:	Check Valve for Electric Motor Driven Diesel Oil Priming													
2-V-59116	2998 G 096-2B	G-4	3	C	1.5	CK	SA	A	C	O	CC	M3			TP-09
											CO	M3			TP-09
	Valve Name:	Check Valve for Diesel Oil from Day Tank													
2-V-59119	2998 G 096-2B	H-5	3	C	0.75	CK	SA	A	O	O	CO	M3			TP-09
	Valve Name:	Check Valve for Electric Motor Driven Diesel Oil Priming													
2-V-59121	2998 G 096-1B	H-5	3	C	0.75	CK	SA	A	O	O	CO	M3			TP-09
	Valve Name:	Check Valve for Electric Motor-Driven Diesel Oil Priming													
2-V-59333	2998 G 096-1A	B-3	3	B	0.75	CK	SA	A	C	C	CC	M3			TP-09
	Valve Name:	Fuel Oil Priming Pump Relief Check Valve													
2-V-59334	2998 G 096-1B	F-5	3	B	0.75	CK	SA	A	C	C	CC	M3			TP-09
	Valve Name:	Fuel Oil Priming Pump Relief Check Valve													
2-V-59335	2998 G 096-2A	B-3	3	B	0.75	CK	SA	A	C	C	CC	M3			TP-09
	Valve Name:	Fuel Oil Priming Pump Relief Check Valve													
2-V-59336	2998 G 096-2B	F-5	3	B	0.75	CK	SA	A	C	C	CC	M3			TP-09
	Valve Name:	Fuel Oil Priming Pump Relief Check Valve													

Attachment 15

Emergency Diesel Generator - Lube (EDG-L)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2-V-59010	2998 G 096-1A	G-5	3	C	1	CK	SA	A	C	O/C	CC	M3			TP-09
											CO	M3			TP-09
	Valve Name:	**Soakback Lube Oil A/C Pump Discharge Check for Diesel 2A1**													
2-V-59011	2998 G 096-1A	G-5	3	C	1	CK	SA	A	C	O/C	CC	M3			TP-09
											CO	M3			TP-09
	Valve Name:	**Soakback Lube Oil D/C Pump Discharge Check for Diesel 2A1**													
2-V-59017	2998 G 096-1A	G-4	3	C	1	CK	SA	A	C	O/C	CC	M3			TP-09
											CO	M3			TP-09
	Valve Name:	**Turbo Lube Oil D/C Pump Discharge Check for Diesel 2A1**													
2-V-59021	2998 G 096-1A	G-3	3	C	1	CK	SA	A	C	O/C	CC	M3			TP-09
											CO	M3			TP-09
	Valve Name:	**Turbo Lube Oil A/C Pump Discharge Check for Diesel 2A1**													
2-V-59025	2998 G 096-1B	B-5	3	C	1	CK	SA	A	C	O/C	CC	M3			TP-09
											CO	M3			TP-09
	Valve Name:	**Soakback Lube Oil A/C Pump Discharge Check for Diesel 2A2**													
2-V-59026	2998 G 096-1B	B-4	3	C	1	CK	SA	A	C	O/C	CC	M3			TP-09
											CO	M3			TP-09
	Valve Name:	**Soakback Lube Oil D/C Pump Discharge Check for Diesel 2A2**													
2-V-59040	2998 G 096-2A	G-5	3	C	1	CK	SA	A	C	O/C	CC	M3			TP-09
											CO	M3			TP-09
	Valve Name:	**Soakback Lube Oil A/C Pump Discharge Check for Diesel 2B1**													
2-V-59041	2998 G 096-2A	G-5	3	C	1	CK	SA	A	C	O/C	CC	M3			TP-09
											CO	M3			TP-09
	Valve Name:	**Soakback Lube Oil D/C Pump Discharge Check for Diesel 2B1**													
2-V-59048	2998 G 096-1B	B-3	3	C	1	CK	SA	A	C	O/C	CC	M3			TP-09
											CO	M3			TP-09
	Valve Name:	**Turbo Lube Oil D/C Pump Discharge Check for Diesel 2A2**													
2-V-59051	2998 G 096-1B	B-3	3	C	1	CK	SA	A	C	O/C	CC	M3			TP-09
											CO	M3			TP-09
	Valve Name:	**Turbo Lube Oil A/C Pump Discharge Check for Diesel 2A2**													

Attachment 15

Emergency Diesel Generator - Lube (EDG-L)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2-V-59055	2998 G 096-2B	B-4	3	C	1	CK	SA	A	C	O/C	CC	M3			TP-09
											CO	M3			TP-09
	Valve Name:	**Soakback Lube Oil D/C Pump Discharge Check for Diesel 2B2**													
2-V-59056	2998 G 096-2B	B-5	3	C	1	CK	SA	A	C	O/C	CC	M3			TP-09
											CO	M3			TP-09
	Valve Name:	**Soakback Lube Oil A/C Pump Discharge Check for Diesel 2B2**													
2-V-59066	2998 G 096-1B	F-5	3	C	0.75	CK	SA	A	O	O/C	CC	M3			TP-09
											CO	M3			TP-09
	Valve Name:	**Check Valve for Standby Lube Oil to D/G Engine**													
2-V-59089	2998 G 096-2A	G-3	3	C	1	CK	SA	A	C	O/C	CC	M3			TP-09
											CO	M3			TP-09
	Valve Name:	**Turbo Lube Oil A/C Pump Discharge Check for Diesel 2B1**													
2-V-59127	2998 G 096-2B	B-3	3	C	1	CK	SA	A	C	O/C	CC	M3			TP-09
											CO	M3			TP-09
	Valve Name:	**Turbo Lube Oil A/C Pump Discharge Check for Diesel 2B2**													
2-V-59165	2998 G 096-2B	B-3	3	C	1	CK	SA	A	C	O/C	CC	M3			TP-09
											CO	M3			TP-09
	Valve Name:	**Turbo Lube Oil D/C Pump Discharge Check for Diesel 2B1**													
2-V-59194	2998 G 096-2B	F-5	3	C	0.75	CK	SA	A	O	O/C	CC	M3			TP-09
											CO	M3			TP-09
	Valve Name:	**Check Valve for Standby Lube Oil to D/G Engine**													
2-V-59213	2998 G 096-2A	C-3	3	C	0.75	CK	SA	A	O	O/C	CC	M3			TP-09
											CO	M3			TP-09
	Valve Name:	**Check Valve for Standby Lube Oil to D/G Engine**													
2-V-59219	2998 G 096-2A	G-4	3	C	1	CK	SA	A	C	O/C	CC	M3			TP-09
											CO	M3			TP-09
	Valve Name:	**Turbo Lube Oil D/C Pump Discharge Check for Diesel 2B2**													
2-V-59232	2998 G 096-1A	C-3	3	C	0.75	CK	SA	A	O	O/C	CC	M3			TP-09
											CO	M3			TP-09
	Valve Name:	**Check Valve for Standby Lube Oil to D/G Engine**													

Attachment 15

Fuel Pool Cooling and Make-up (FP)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2-SR-07475	2998 G 088-2	E-4	2	A/C	0.75	RV	SA	A	C	O/C	LT-J	App J			
											RVT	Y10			TP-08
	Valve Name:	**Containment Spray Rx Cavity Purification Supply Thermal Relief**													
2-SR-07476	2998 G 088-2	E-4	2	A/C	0.75	RV	SA	A	C	O/C	LT-J	App J			
											RVT	Y10			TP-08
	Valve Name:	**Containment Spray Rx Cavity Purification Supply Thermal Relief**													
2-V-07170	2998 G 088-2	E-3	2	A	3	GA	M	P	LC	C	LT-J	App J			
	Valve Name:	**Refueling Cavity Containment Isolation Valve (PEN P 47)**													
2-V-07188	2998 G 088-2	E-4	2	A	3	GA	M	P	LC	C	LT-J	App J			
	Valve Name:	**Refueling Cavity Containment Isolation Valve (PEN P 47)**													
2-V-07189	2998 G 088-2	E-4	2	A	3	GA	M	P	LC	C	LT-J	App J			
	Valve Name:	**Refueling Cavity Containment Isolation Valve (PEN P 47)**													
2-V-07206	2998 G 088-2	E-3	2	A	3	GA	M	P	LC	C	LT-J	App J			
	Valve Name:	**Refueling Cavity Containment Isolation Valve (PEN P 47)**													

Feedwater (FW)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2-CHKVLV-1A	2998 9695	F-3	NC	C	0.5	CK	SA	A	C	C	CCL	CM			TP-07
											COF	CM			TP-01, TP-07
	Valve Name:	MFW Header Isolation Valve HCV-09-1A Air Supply Check Valve													
2-CHKVLV-1B	2998 9695	F-3	NC	C	0.5	CK	SA	A	C	C	CCL	CM			TP-07
											COF	CM			TP-01, TP-07
	Valve Name:	MFW Header Isolation Valve HCV-09-1B Air Supply Check Valve													
2-CHKVLV-2A	2998 9695	F-3	NC	C	0.5	CK	SA	A	C	C	CCL	CM			TP-07
											COF	CM			TP-01, TP-07
	Valve Name:	MFW Header Isolation Valve HCV-09-2A Air Supply Check Valve													
2-CHKVLV-2B	2998 9695	F-3	NC	C	0.5	CK	SA	A	C	C	CCL	CM			TP-07
											COF	CM			TP-01, TP-07
	Valve Name:	MFW Header Isolation Valve HCV-09-2B Air Supply Check Valve													
2-HCV-09-1A	2998 G 080-2A	B-5	2	B	20	GA	PO	A	O	C	PIT	Y2			
											ST-C	CS		CS-12	
	Valve Name:	Main Feedwater Block Valve													
2-HCV-09-1B	2998 G 080-2A	B-5	2	B	20	GA	PO	A	O	C	PIT	Y2			
											ST-C	CS		CS-12	
	Valve Name:	Main Feedwater Block Valve													
2-HCV-09-2A	2998 G 080-2A	C-5	2	B	20	GA	PO	A	O	C	PIT	Y2			
											ST-C	CS		CS-12	
	Valve Name:	Main Feedwater Block Valve													
2-HCV-09-2B	2998 G 080-2A	C-5	2	B	20	GA	PO	A	O	C	PIT	Y2			
											ST-C	CS		CS-12	
	Valve Name:	Main Feedwater Block Valve													
2-MV-09-10	2998 G 080-2B	D-6	2	B	4	GL	MO	A	C	O/C	PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	2B AFW Flow Control Valve													
2-MV-09-11	2998 G 080-2B	F-6	2	B	4	GL	MO	A	C	O/C	PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	2C AFW Flow Control Valve													

Attachment 15

Feedwater (FW)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2-MV-09-12	2998 G 080-2B	G-6	2	B	4	GL	MO	A	C	O/C	PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	2C AFW Flow Control Valve													
2-MV-09-13	2998 G 080-2B	C-5	3	B	2.5	GA	MO	P	C	C	PIT	Y2			
	Valve Name:	AFW Pumps Discharge Header Cross Connection Valve													
2-MV-09-14	2998 G 080-2B	D-5	3	B	2.5	GA	MO	P	C	C	PIT	Y2			
	Valve Name:	AFW Pumps Discharge Header Cross Connection Valve													
2-MV-09-9	2998 G 080-2B	B-6	2	B	4	GL	MO	A	C	O/C	PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	2A AFW Flow Control Valve													
2-SE-09-2	2998 G 080-2B	B-5	3	B	4	GL	SO	A	C	O/C	FSC	M3			TP-03
											PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	AFW Pump Discharge Valve													
2-SE-09-3	2998 G 080-2B	D-5	3	B	4	GL	SO	A	C	O/C	FSC	M3			TP-03
											PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	AFW Pump Discharge Valve													
2-SE-09-4	2998 G 080-2B	F-5	3	B	4	GL	SO	A	C	O/C	FSC	M3			TP-03
											PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	AFW Pump Discharge Valve													
2-SE-09-5	2998 G 080-2B	G-5	3	B	4	GL	SO	A	C	O/C	FSC	M3			TP-03
											PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	AFW Pump Discharge Valve													

Attachment 15

Feedwater (FW)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2-V-09107	2998 G 080-2B	B-4	3	C	4	CK	SA	A	C	O	CCF	CM			TP-01, TP-07
											COF	CM			TP-07
	Valve Name:	2A AFW Pump Discharge Check Valve													
2-V-09119	2998 G 080-2B	B-6	2	C	4	CK	SA	A	C	O	CC	CM			TP-01, TP-07
											CO	CM			TP-07
	Valve Name:	2A AFW Supply Header Check Valve													
2-V-09120	2998 G 080-2B	B-7	2	B	4	GA	M	A	LO	O/C	ME	Y2			TP-04
	Valve Name:	Auxiliary Feedwater Manual Isolation Valve													
2-V-09123	2998 G 080-2B	D-4	3	C	4	CK	SA	A	C	O	CCF	CM			TP-01, TP-07
											COF	CM			TP-07
	Valve Name:	2B AFW Pump Discharge Check Valve													
2-V-09135	2998 G 080-2B	D-6	2	C	4	CK	SA	A	C	O	CC	CM			TP-01, TP-07
											CO	CM			TP-07
	Valve Name:	2B AFW Supply Header Check Valve													
2-V-09136	2998 G 080-2B	D-7	2	B	4	GA	M	A	LO	O/C	ME	Y2			TP-04
	Valve Name:	Auxiliary Feedwater Manual Isolation Valve													
2-V-09139	2998 G 080-2B	F-4	3	C	4	CK	SA	A	C	O	CCL	CM			TP-01, TP-07
											COF	CM			TP-07
	Valve Name:	2C AFW Pump Discharge Check Valve													
2-V-09151	2998 G 080-2B	F-6	2	C	4	CK	SA	A	C	O	CC	CM			TP-01, TP-07
											CO	CM			TP-07
	Valve Name:	2C AFW Supply Header Check Valve													
2-V-09152	2998 G 080-2B	F-7	2	B	4	GA	M	A	LO	O/C	ME	Y2			TP-04
	Valve Name:	Auxiliary Feedwater Manual Isolation Valve													
2-V-09157	2998 G 080-2B	G-6	2	C	4	CK	SA	A	C	O	CC	CM			TP-01, TP-07
											CO	CM			TP-07
	Valve Name:	2C AFW Supply Header Check Valve													
2-V-09158	2998 G 080-2B	G-7	2	B	4	GA	M	A	LO	O/C	ME	Y2			TP-04
	Valve Name:	Auxiliary Feedwater Manual Isolation Valve													

Attachment 15

Feedwater (FW)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2-V-09252	2998 G 080-2A	B-7	2	C	18	CK	SA	A	O	O	CCD	CM			TP-01, TP-07
											COF	CM			TP-07
	Valve Name:	2A Steam Generator Feedwater Check Valve													
2-V-09294	2998 G 080-2A	C-7	2	C	18	CK	SA	A	O	O	CCD	CM			TP-01, TP-07
											COF	CM			TP-07
	Valve Name:	2B Steam Generator Feedwater Check Valve													
2-V-09303	2998 G 080-2B	G-3	3	B	2	CK	SA	A	C	O	CCU	CM			TP-01, TP-07
											COU	CM			TP-07
	Valve Name:	2C AFW Pump Minimum Flow Check Valve													
2-V-09304	2998 G 080-2B	E-3	3	B	1.5	CK	SA	A	C	O	CCU	CM			TP-01, TP-07
											COU	CM			TP-07
	Valve Name:	2B AFW Pump Minimum Flow Check Valve													
2-V-09305	2998 G 080-2B	C-3	3	B	1.5	CK	SA	A	C	O	CCU	CM			TP-01, TP-07
											COU	CM			TP-07
	Valve Name:	2A AFW Pump Minimum Flow Check Valve													
2-V-09724	2998 G 080-2B	A-6	3	C	0.375	CK	SA	A	C	C	CCL	CM			TP-07
											COF	CM			TP-01, TP-07
	Valve Name:	Chemical Addition Check Valve													
2-V-09725	2998 G 080-2B	E-6	3	C	0.375	CK	SA	A	C	C	CCL	CM			TP-07
											COF	CM			TP-01, TP-07
	Valve Name:	Chemical Addition Check Valve													
2-V-09726	2998 G 080-2B	H-6	3	C	0.375	CK	SA	A	C	C	CCL	CM			TP-07
											COF	CM			TP-01, TP-07
	Valve Name:	Chemical Addition Check Valve													
2-V-09727	2998 G 080-2B	H-6	3	C	0.375	CK	SA	A	C	C	CCL	CM			TP-07
											COF	CM			TP-01, TP-07
	Valve Name:	Chemical Addition Check Valve													
2-V-12801	2998 G 080-2B	A-2	3	B	8	GA	M	A	LC	O/C	ME	Y2			TP-04
	Valve Name:	Unit 1/2 CST/AFW Suction Cross Connect Valve													
2-V-12802	2998 G 080-2B	A-2	3	B	8	GA	M	A	LC	O/C	ME	Y2			TP-04
	Valve Name:	Unit 1/2 CST/AFW Suction Cross Connect Valve													

Attachment 15

Feedwater (FW)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2-V-12803	2998 G 080-2B	A-2	3	B	8	GA	M	A	LC	O/C	ME	Y2			TP-04
	Valve Name:	**Isolation Valve for CST Inlet to/from Unit 1**													
2-V-12805	2998 G 080-2B	A-3	NC	B	8	GA	M	A	LC	O/C	ME	Y2			TP-04
	Valve Name:	**Isolation Valve for CST Inlet to/from Unit 1**													
2-V-12806	2998 G 080-2B	A-3	NC	C	8	CK	SA	A	C	O	CC	CM			TP-01, TP-07
											CO	CM			TP-07
	Valve Name:	**Unit 2 CST To Unit 1 Check Valve**													

Attachment 15

Heating, Ventilation and Air Conditioning (HVAC)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2-FCV-25-1	2998 G 878	C-2	2	B	48	BTF	PO	A	C	C	FSC	CS		CS-16	TP-03
											PIT	Y2			
											ST-C	CS		CS-16	
	Valve Name:	**Containment Purge Isolation Valve**													
2-FCV-25-11	2998 G 879-3	H-4	2	B	24	BTF	MO	A	C	O/C	PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	**Shield Building Ventilation System Cooling Air Isolation**													
2-FCV-25-12	2998 G 879-3	J-4	2	B	24	BTF	MO	A	C	O/C	PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	**Shield Building Ventilation System Cooling Air Isolation**													
2-FCV-25-13	2998 G 879-3	I-13	2	B	12	BTF	MO	A	O	O	PIT	Y2			
											ST-O	M3			
	Valve Name:	**SBVS Cross Connect Valve**													
2-FCV-25-14	2998 G 879-2	E-5	3	B	12	BTF	MO	A	O	O/C	PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	**Control Room Outside Air Intake Isolation Valve**													
2-FCV-25-15	2998 G 879-2	E-7	3	B	12	BTF	MO	A	O	O/C	PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	**Control Room Outside Air Intake Isolation Valve**													
2-FCV-25-16	2998 G 879-2	E-6	3	B	12	BTF	MO	A	O	O/C	PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	**Control Room Outside Air Intake Isolation Valve**													
2-FCV-25-17	2998 G 879-2	E-8	3	B	12	BTF	MO	A	O	O/C	PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	**Control Room Outside Air Intake Isolation Valve**													

Attachment 15

Heating, Ventilation and Air Conditioning (HVAC)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2-FCV-25-18	2998 G 879-2	C-17	3	B	6	BTF	MO	A	O	C	PIT	Y2			
											ST-C	M3			
	Valve Name:	Control Room Toilet Area Exhaust Isolation Valve													
2-FCV-25-19	2998 G 879-2	C-17	3	B	6	BTF	MO	A	O	C	PIT	Y2			
											ST-C	M3			
	Valve Name:	Control Room Toilet Area Exhaust Isolation Valve													
2-FCV-25-2	2998 G 878	C-3	2	A	48	BTF	PO	A	C	C	FSC	CS		CS-16	TP-03
											LT-J	App J			
											PIT	CS			
											ST-C	M3		CS-16	
	Valve Name:	Containment Purge Isolation Valve													
2-FCV-25-20	2998 G 879-3	M-1	2	A	8	BTF	PO	A	C	C	FSC	M3			TP-03
											LT-J	App J			
											PIT	Y2			
											ST-C	M3			
	Valve Name:	Containment/Hydrogen Purge Containment Isolation Valve													
2-FCV-25-21	2998 G 879-3	M-2	2	A	8	BTF	PO	A	C	C	FSC	M3			TP-03
											LT-J	App J			
											PIT	Y2			
											ST-C	M3			
	Valve Name:	Containment/Hydrogen Purge Containment Isolation Valve													
2-FCV-25-24	2998 G 879-2	A-17	3	B	10	BTF	MO	A	O	C	PIT	Y2			
											ST-C	M3			
	Valve Name:	Control Room Kitchen Exhaust Isolation Valve													
2-FCV-25-25	2998 G 879-2	A-17	3	B	10	BTF	MO	A	O	C	PIT	Y2			
											ST-C	M3			
	Valve Name:	Control Room Kitchen Exhaust Isolation Valve													
2-FCV-25-26	2998 G 879-3	N-2	2	A	8	BTF	PO	A	C	C	FSC	M3			TP-03
											LT-J	App J			
											PIT	Y2			
											ST-C	M3			
	Valve Name:	Containment/Hydrogen Purge Containment Isolation Valve													

Attachment 15

Heating, Ventilation and Air Conditioning (HVAC)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2-FCV-25-29	2998 G 879-3	K-3	2	B	4	BTF	MO	P	LC	N/A	PIT	Y2			
	Valve Name:	**Containment/Hydrogen Purge to SBVS Crosstie Isolation**													
2-FCV-25-3	2998 G 878	C-3	2	A	48	BTF	PO	A	C	C	FSC	CS		CS-16	TP-03
											LT-J	App J			
											PIT	CS			
											ST-C	M3		CS-16	
	Valve Name:	**Containment Purge Isolation Valve**													
2-FCV-25-30	2998 G 879-3	H-4	2	B	20	BTF	MO	A	O	O/C	PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	**Fuel Pool Exhaust to SBVS Crosstie Isolation**													
2-FCV-25-31	2998 G 879-3	J-4	2	B	20	BTF	MO	A	O	O/C	PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	**Fuel Pool Exhaust to SBVS Crosstie Isolation**													
2-FCV-25-32	2998 G 879-3	H-4	2	B	30	BTF	MO	A	C	O/C	PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	**SBVS Suction Isolation Valve**													
2-FCV-25-33	2998 G 879-3	J-4	2	B	30	BTF	MO	A	C	O/C	PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	**SBVS Suction Isolation Valve**													
2-FCV-25-34	2998 G 879-3	H-2	2	B	4	BTF	MO	P	LC	N/A	PIT	Y2			
	Valve Name:	**Containment/Hydrogen Purge to SBVS Crosstie Isolation**													
2-FCV-25-36	2998 G 879-3	N-1	2	A	8	BTF	PO	A	C	C	FSC	M3			TP-03
											LT-J	App J			
											PIT	Y2			
											ST-C	M3			
	Valve Name:	**Containment/Hydrogen Purge Containment Isolation Valve**													

Attachment 15

Heating, Ventilation and Air Conditioning (HVAC)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2-FCV-25-4	2998 G 878	C-6	2	A	48	BTF	PO	A	C	C	FSC	CS		CS-16	TP-03
											LT-J	App J			
											PIT	Y2			
											ST-C	CS		CS-16	
	Valve Name:	**Containment Purge Isolation Valve**													
2-FCV-25-5	2998 G 878	C-7	2	A	48	BTF	PO	A	C	C	FSC	CS		CS-16	TP-03
											LT-J	App J			
											PIT	Y2			
											ST-C	CS		CS-16	
	Valve Name:	**Containment Purge Isolation Valve**													
2-FCV-25-6	2998 G 878	C-8	2	B	48	BTF	PO	A	C	C	FSC	CS		CS-16	TP-03
											PIT	Y2			
											ST-C	CS		CS-16	
	Valve Name:	**Containment Purge Isolation Valve**													
2-FCV-25-7	2998 G 878	C-15	2	A/C	24	BTF	PO	A	C	O/C	FSC	M3			TP-03
											LT-J	App J			
											PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	**Containment Vacuum Relief Isolation Valve**													
2-FCV-25-8	2998 G 878	C-15	2	A/C	24	BTF	PO	A	C	O/C	FSC	M3			TP-03
											LT-J	App J			
											PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	**Containment Vacuum Relief Isolation Valve**													
2-V-25-20	2998 G 878	C-13	2	A/C	24	CK	SA	A	C	O/C	CC	CM			TP-07
											CO	CM			TP-07
											LT-J	App J			
											VAC	CM			TP-07
	Valve Name:	**Containment Vacuum Relief Check Valve**													

Attachment 15

Heating, Ventilation and Air Conditioning (HVAC)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2-V-25-21	2998 G 878	C-13	2	A/C	24	CK	SA	A	C	O/C	CC	CM			TP-07
											CO	CM			TP-07
											LT-J	App J			
											VAC	CM			TP-07
	Valve Name:	**Containment Vacuum Relief Check Valve**													
2-V-25-23	2998 G 879-3	J-4	2	C	24	CK	SA	A	C	O/C	CCD	CM			TP-07
											COF	CM			TP-07
	Valve Name:	**SBVS Cooling Air Check Valve**													
2-V-25-24	2998 G 879-3	H-4	2	C	24	CK	SA	A	C	O/C	CCD	CM			TP-07
											COF	CM			TP-07
	Valve Name:	**SBVS Cooling Air Check Valve**													

Attachment 15

Instrument Air (IA)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2-HCV-18-1	2998 G 085-2C	G-3	2	A	1	GL	AO	A	O	C	FSC	CS		CS-15	TP-03
											LT-J	App J			
											PIT	Y2			
											ST-C	CS		CS-15	
	Valve Name:	**Instrument Air Containment Isolation Valve (Pen P 9)**													
2-SR-18-6A	2998 G 085-2A	D-2	2	C	0.5x1	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name:	**Shield Building Hatch Door Seal Relief Valve**													
2-SR-18-6B	2998 G 085-2A	D-1	2	C	0.5x1	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name:	**Shield Building Hatch Door Seal Relief Valve**													
2-V-18195	2998 G 085-2A	E-6	2	A/C	2	CK	SA	A	O	C	CCL	CM			TP-07
											COF	CM			TP-01, TP-07
											LT-J	App J			
	Valve Name:	**Instrument Air Containment Isolation Valve (Pen P 9)**													
2-V-18279	2998 G 085-2A	B-2	2	C	0.5	CK	SA	A	C	C	CCL	CM			TP-07
											COF	CM			TP-01, TP-07
	Valve Name:	**Shield Bldg Hatch Door Seal Accumulator Check Valve**													
2-V-18283	2998 G 085-2A	A-3	2	C	0.5	CK	SA	A	C	C	CCL	CM			TP-07
											COF	CM			TP-01, TP-07
	Valve Name:	**Shield Bldg Hatch Door Seal Accumulator Check Valve**													
2-V-18290	2998 G 085-2A	G-2	2	C	0.75	CK	SA	A	C	C	CCL	CM			TP-07
											COF	CM			TP-01, TP-07
	Valve Name:	**Containment Vacuum Relief Accumulator Check Valve**													
2-V-18291	2998 G 085-2A	G-2	2	C	0.75	CK	SA	A	C	C	CCL	CM			TP-07
											COF	CM			TP-01, TP-07
	Valve Name:	**Containment Vacuum Relief Accumulator Check Valve**													
2-V-18294	2998 G 085-2A	H-2	2	C	0.75	CK	SA	A	C	C	CCL	CM			TP-07
											COF	CM			TP-01, TP-07
	Valve Name:	**Containment Vacuum Relief Accumulator Check Valve**													
2-V-18295	2998 G 085-2A	H-2	2	C	0.75	CK	SA	A	C	C	CCL	CM			TP-07
											COF	CM			TP-01, TP-07
	Valve Name:	**Containment Vacuum Relief Accumulator Check Valve**													

Attachment 15

Intake Cooling Water (ICW)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2-HCV-21-7A	2998 G 082-2	D-4	3	B	6	GL	PO	A	C	C	FSC	M3			
											PIT	Y2			
											ST-C	M3			
	Valve Name:	**SS-21-2A Debris Discharge Isolation**													
2-HCV-21-7B	2998 G 082-2	D-7	3	B	6	GL	PO	A	C	C	FSC	M3			
											PIT	Y2			
											ST-C	M3			
	Valve Name:	**SS-21-2B Debris Discharge Isolation**													
2-MV-21-2	2998 G 082-2	F-4	3	B	24	BTF	MO	A	O	C	PIT	Y2			
											ST-C	M3			
	Valve Name:	**Turbine Cooling Water Header Isolation Valve**													
2-MV-21-3	2998 G 082-2	G-4	3	B	24	BTF	MO	A	O	C	PIT	Y2			
											ST-C	M3			
	Valve Name:	**Turbine Cooling Water Header Isolation Valve**													
2-SB-21385	2998 G 082-2	B-3	3	B	3	BTF	M	A	C	O	ME	Y2			TP-04
	Valve Name:	**Emergency Make up to Fuel Pool from SS 21 1A, 1B Valve**													
2-SB-21386	2998 G 082-2	C-7	3	B	3	BTF	M	A	C	O	ME	Y2			TP-04
	Valve Name:	**Emergency Make up to Fuel Pool From SS 21 1A, 1B**													
2-SH-212023	2998 G 082-2	B-4	3	B	1	BAL	M	A	O	C	ME	Y2			TP-04
	Valve Name:	**Emerg Make up to SFP Train 2A Drain Valves**													
2-SH-212024	2998 G 082-2	C-7	3	B	1	BAL	M	A	O	C	ME	Y2			TP-04
	Valve Name:	**Emerg Make up to SFP Train 2B Drain Valves**													
2-TCV-14-4A	2998 G 082-2	A-5	3	B	30	BTF	PO	A	O	O	FSO	M3			TP-03
											ST-O	M3			
	Valve Name:	**CCW Heat Exchanger Temp. Control Valve**													
2-TCV-14-4B	2998 G 082-2	A-6	3	B	30	BTF	PO	A	O	O	FSO	M3			TP-03
											ST-O	M3			
	Valve Name:	**CCW Heat Exchanger Temp. Control Valve**													
2-V-21162	2998 G 082-2	G-5	3	C	30	CK	SA	A	O	O/C	CC	M3			
											CO	M3			
	Valve Name:	**2A ICW Pump Discharge Check Valve**													

Attachment 15

Intake Cooling Water (ICW)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2-V-21205	2998 G 082-2	G-6	3	C	30	CK	SA	A	O	O/C	CC	M3			
											CO	M3			
	Valve Name:	**2C ICW Pump Discharge Check Valve**													
2-V-21208	2998 G 082-2	G-7	3	C	30	CK	SA	A	O	O/C	CC	M3			
											CO	M3			
	Valve Name:	**2B ICW Pump Discharge Check Valve**													
2-V-21402	2998 G 082-2	D-4	3	C	2	CK	SA	A	O	O	CC	CM			TP-01, TP-07
											CO	CM			TP-07
	Valve Name:	**CCW Hx Outlet Vacuum Breaker Check Valve**													
2-V-21403	2998 G 082-2	D-7	3	C	2	CK	SA	A	O	O	CC	CM			TP-01, TP-07
											CO	CM			TP-07
	Valve Name:	**CCW Hx Outlet Vacuum Breaker Check Valve**													

Attachment 15

Integrated Leak Rate Penetrations (ILRT)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2-V-00101	2998 G 091-1	B-5	2	A	8	GA	M	P	LC	C	LT-J	App J			
	Valve Name:	Isolation Valve for Containment ILRT Press													
2-V-00139	2998 G 091-1	C-4	2	A	0.375	GL	M	P	LC	C	LT-J	App J			
	Valve Name:	Isolation Valve (Pen P 52E) for Containment ILRT Pressure													
2-V-00140	2998 G 091-1	D-4	2	A	1	GL	M	P	LC	C	LT-J	App J			
	Valve Name:	Isolation Valve (Pen P 52D) for Containment ILRT Controlled													
2-V-00143	2998 G 091-1	D-5	2	A	1	GL	M	P	LC	C	LT-J	App J			
	Valve Name:	Isolation Valve (Pen P 52D) for Containment ILRT Controlled													
2-V-00144	2998 G 091-1	C-5	2	A	0.375	GL	M	P	LC	C	LT-J	App J			
	Valve Name:	Containment ILRT Pressure Sensing Isolation Valve													

Attachment 15

Main Steam (MS)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2-HCV-08-1A	2998 G 079-1	C-6	2	B	34	GL	AO	A	O	C	PIT	Y2			
											ST-C	CS		CS-09	
	Valve Name:	Main Steam Isolation Valve (MSIV)													
2-HCV-08-1B	2998 G 079-1	E-6	2	B	34	GL	AO	A	O	C	PIT	Y2			
											ST-C	CS		CS-09	
	Valve Name:	Main Steam Isolation Valve (MSIV)													
2-MV-08-12	2998 G 079-1	G-4	2	B	4	GA	MO	A	C	O/C	PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	Auxiliary Feedwater Pump Turbine Steam Supply Valve													
2-MV-08-13	2998 G 079-1	G-4	2	B	4	GA	MO	A	C	O/C	PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	Auxiliary Feedwater Pump Turbine Steam Supply Valve													
2-MV-08-14	2998 G 079-1	B-4	2	B	8	GA	MO	P	LO	O/C	PIT	Y2			
											ST-C	M3			TP-11
	Valve Name:	Main Steamline Atmospheric Dump Block Valve													
2-MV-08-15	2998 G 079-1	B-4	2	B	8	GA	MO	P	LO	O/C	PIT	Y2			
											ST-C	M3			TP-11
	Valve Name:	Main Steamline Atmospheric Dump Block Valve													
2-MV-08-16	2998 G 079-1	E-4	2	B	8	GA	MO	P	LO	O/C	PIT	Y2			
											ST-C	M3			TP-11
	Valve Name:	Main Steamline Atmospheric Dump Block Valve													
2-MV-08-17	2998 G 079-1	E-4	2	B	8	GA	MO	P	LO	O/C	PIT	Y2			
											ST-C	M3			TP-11
	Valve Name:	Main Steamline Atmospheric Dump Block Valve													
2-MV-08-18A	2998 G 079-1	A-4	2	B	10	ANG	MO	A	C	O/C	PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	Main Steamline Atmospheric Dump Valve													

Attachment 15

Main Steam (MS)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2-MV-08-18B	2998 G 079-1	D-4	2	B	10	ANG	MO	A	C	O/C	PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	Main Steamline Atmospheric Dump Valve													
2-MV-08-19A	2998 G 079-1	A-4	2	B	10	ANG	MO	A	C	O/C	PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	Main Steamline Atmospheric Dump Valve													
2-MV-08-19B	2998 G 079-1	D-4	2	B	10	ANG	MO	A	C	O/C	PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	Main Steamline Atmospheric Dump Valve													
2-MV-08-1A	2998 G 079-1	C-6	2	B	3	GL	MO	A	C	C	PIT	Y2			
											ST-C	CS		CS-10	
	Valve Name:	2A Main Steam Isolation Valve Bypass Valve													
2-MV-08-1B	2998 G 079-1	E-6	2	B	3	GL	MO	A	C	C	PIT	Y2			
											ST-C	CS		CS-10	
	Valve Name:	2B Main Steam Isolation Valve Bypass Valve													
2-MV-08-3	2998 G 079-1	G-6	2	B	4	GL	MO	P	LO	O	PIT	Y2			
	Valve Name:	2C AFW Turbine Trip Throttle Valve													
2-SE-08-1	2998 G 079-1	H-3	2	B	0.75	GL	SO	A	O	O/C	PIT	Y2			
											ST-C	M3			TP-11
	Valve Name:	Auxiliary Feedwater Turbine Warm up Valve													
2-SE-08-2	2998 G 079-1	H-4	2	B	0.75	GL	SO	A	O	O/C	PIT	Y2			
											ST-C	M3			TP-11
	Valve Name:	Auxiliary Feedwater Turbine Warm up Valve													
2-SE-08-896	2998 G 079-7	C-2	2	B	0.375	3W	SO	A	Flow	Vent	ST-O	CS			TP-03, TP-09
	Valve Name:	MSIV Instrument Air Supply Valve													
2-SE-08-897	2998 G 079-7	C-5	2	B	0.375	3W	SO	A	Flow	Vent	ST-O	CS			TP-03, TP-09
	Valve Name:	MSIV Instrument Air Supply Valve													
2-SE-08-934	2998 G 079-7	F-2	2	B	0.375	3W	SO	A	Flow	Vent	ST-O	CS			TP-03, TP-09
	Valve Name:	MSIV Instrument Air Supply Valve													

Attachment 15

Main Steam (MS)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2-SE-08-935	2998 G 079-7	F-5	2	B	0.375	3W	SO	A	Flow	Vent	ST-O	CS			TP-03, TP-09
	Valve Name:	MSIV Instrument Air Supply Valve													
2-V-08130	2998 G 079-1	G-4	3	C	4	CK	SA	A	O	O/C	CCD	CM			TP-07
											COD	CM			TP-07
	Valve Name:	AFW Turbine Steam Supply Check Valve													
2-V-08163	2998 G 079-1	G-4	3	C	4	CK	SA	A	O	O/C	CCD	CM			TP-07
											COD	CM			TP-07
	Valve Name:	AFW Turbine Steam Supply Check Valve													
2-V-08887	2998 G 079-7	C-2	2	B	1	3W	AO	A	Flow	Vent	FSV	CS			TP-03, TP-09
											ST-O	CS			TP-09
	Valve Name:	MSIV 1A Control Valve 2													
2-V-08888	2998 G 079-7	C-3	2	B	1	3W	AO	A	Flow	Vent	FSV	CS			TP-03, TP-09
											ST-O	CS			TP-09
	Valve Name:	MSIV 1A Control Valve 3													
2-V-08889	2998 G 079-7	C-4	2	B	1	3W	AO	A	Flow	Vent	FSV	CS			TP-03, TP-09
											ST-O	CS			TP-09
	Valve Name:	MSIV 1A Control Valve 4													
2-V-08890	2998 G 079-7	C-5	2	B	1	3W	AO	A	Flow	Vent	FSV	CS			TP-03, TP-09
											ST-O	CS			TP-09
	Valve Name:	MSIV 1A Control Valve 5													
2-V-08925	2998 G 079-7	G-2	2	B	1	3W	AO	A	Flow	Vent	FSV	CS			TP-03, TP-09
											ST-O	CS			TP-09
	Valve Name:	MSIV 1B Control Valve 2													
2-V-08926	2998 G 079-7	G-3	2	B	1	3W	AO	A	Flow	Vent	FSV	CS			TP-03, TP-09
											ST-O	CS			TP-09
	Valve Name:	MSIV 1B Control Valve 3													
2-V-08927	2998 G 079-7	G-4	2	B	1	3W	AO	A	Flow	Vent	FSV	CS			TP-03, TP-09
											ST-O	CS			TP-09
	Valve Name:	MSIV 1B Control Valve 4													
2-V-08928	2998 G 079-7	G-5	2	B	1	3W	AO	A	Flow	Vent	FSV	CS			TP-03, TP-09
											ST-O	CS			TP-09
	Valve Name:	MSIV 1B Control Valve 5													

Attachment 15

Main Steam (MS)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2-V-08965	2998 G 079-7	A-3	2	B		CK	SA	A	C	O	CO	CS			TP-09
	Valve Name:	MSIV 1A Actuator Vacuum Breaker Check Valve													
2-V-08966	2998 G 079-7	E-3	2	B		CK	SA	A	C	O	CO	CS			TP-09
	Valve Name:	MSIV 1B Actuator Vacuum Breaker Check Valve													
2-V-8201	2998 G 079-1	B-5	2	C	6x10	SV	SA	A	C	O/C	RVT	Y5			
	Valve Name:	Main Steam Safety Valve													
2-V-8202	2998 G 079-1	B-5	2	C	6x10	SV	SA	A	C	O/C	RVT	Y5			
	Valve Name:	Main Steam Safety Valve													
2-V-8203	2998 G 079-1	B-5	2	C	6x10	SV	SA	A	C	O/C	RVT	Y5			
	Valve Name:	Main Steam Safety Valve													
2-V-8204	2998 G 079-1	B-5	2	C	6x10	SV	SA	A	C	O/C	RVT	Y5			
	Valve Name:	Main Steam Safety Valve													
2-V-8205	2998 G 079-1	E-5	2	C	6x10	SV	SA	A	C	O/C	RVT	Y5			
	Valve Name:	Main Steam Safety Valve													
2-V-8206	2998 G 079-1	D-5	2	C	6x10	SV	SA	A	C	O/C	RVT	Y5			
	Valve Name:	Main Steam Safety Valve													
2-V-8207	2998 G 079-1	E-5	2	C	6x10	SV	SA	A	C	O/C	RVT	Y5			
	Valve Name:	Main Steam Safety Valve													
2-V-8208	2998 G 079-1	D-5	2	C	6x10	SV	SA	A	C	O/C	RVT	Y5			
	Valve Name:	Main Steam Safety Valve													
2-V-8209	2998 G 079-1	B-6	2	C	6x10	SV	SA	A	C	O/C	RVT	Y5			
	Valve Name:	Main Steam Safety Valve													
2-V-8210	2998 G 079-1	B-6	2	C	6x10	SV	SA	A	C	O/C	RVT	Y5			
	Valve Name:	Main Steam Safety Valve													
2-V-8211	2998 G 079-1	B-6	2	C	6x10	SV	SA	A	C	O/C	RVT	Y5			
	Valve Name:	Main Steam Safety Valve													
2-V-8212	2998 G 079-1	B-6	2	C	6x10	SV	SA	A	C	O/C	RVT	Y5			
	Valve Name:	Main Steam Safety Valve													

Attachment 15

Main Steam (MS)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2-V-8213	2998 G 079-1	E-6	2	C	6x10	SV	SA	A	C	O/C	RVT	Y5			
	Valve Name:	Main Steam Safety Valve													
2-V-8214	2998 G 079-1	D-6	2	C	6x10	SV	SA	A	C	O/C	RVT	Y5			
	Valve Name:	Main Steam Safety Valve													
2-V-8215	2998 G 079-1	E-6	2	C	6x10	SV	SA	A	C	O/C	RVT	Y5			
	Valve Name:	Main Steam Safety Valve													
2-V-8216	2998 G 079-1	D-6	2	C	6x10	SV	SA	A	C	O/C	RVT	Y5			
	Valve Name:	Main Steam Safety Valve													

Attachment 15

Miscellaneous Sampling (M-SAM)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2-FCV-26-1	2998 G 092-1	B-2	2	A	1	GL	AO	A	O	C	FSC	M3			TP-03
											LT-J	App J			
											PIT	Y2			
											ST-C	M3			
	Valve Name:	Containment Air Radiation Monitors Containment Isolation													
2-FCV-26-2	2998 G 092-1	B-2	2	A	1	GL	AO	A	O	C	FSC	M3			TP-03
											LT-J	App J			
											PIT	Y2			
											ST-C	M3			
	Valve Name:	Containment Air Radiation Monitors Containment Isolation													
2-FCV-26-3	2998 G 092-1	B-3	2	A	1	GL	AO	A	O	C	FSC	M3			TP-03
											LT-J	App J			
											PIT	Y2			
											ST-C	M3			
	Valve Name:	Containment Air Radiation Monitors Containment Isolation													
2-FCV-26-4	2998 G 092-1	B-3	2	A	1	GL	AO	A	O	C	FSC	M3			TP-03
											LT-J	App J			
											PIT	Y2			
											ST-C	M3			
	Valve Name:	Containment Air Radiation Monitors Containment Isolation													
2-FCV-26-5	2998 G 092-1	B-3	2	A	1	GL	AO	A	O	C	FSC	M3			TP-03
											LT-J	App J			
											PIT	Y2			
											ST-C	M3			
	Valve Name:	Containment Air Radiation Monitors Containment Isolation													
2-FCV-26-6	2998 G 092-1	B-3	2	A	1	GL	AO	A	O	C	FSC	M3			TP-03
											LT-J	App J			
											PIT	Y2			
											ST-C	M3			
	Valve Name:	Containment Air Radiation Monitors Containment Isolation													

Attachment 15

Miscellaneous Sampling (M-SAM)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2-FSE-27-10	2998 G 092-1	A-5	2	A	0.375	GL	SO	A	C	O/C	FSC	M3			TP-03
											LT-J	App J			
											PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	Hydrogen Sample Isolation Valve													
2-FSE-27-11	2998 G 092-1	B-5	2	A	0.375	GL	SO	A	C	O/C	FSC	M3			TP-03
											LT-J	App J			
											PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	Hydrogen Sample Isolation Valve													
2-FSE-27-12	2998 G 092-1	B-6	2	A	0.375	GL	SO	A	C	O/C	FSC	M3			TP-03
											LT-J	App J			
											PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	Hydrogen Sample Isolation Valve													
2-FSE-27-13	2998 G 092-1	A-6	2	A	0.375	GL	SO	A	C	O/C	FSC	M3			TP-03
											LT-J	App J			
											PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	Hydrogen Sample Isolation Valve													
2-FSE-27-14	2998 G 092-1	A-6	2	A	0.375	GL	SO	A	C	O/C	FSC	M3			TP-03
											LT-J	App J			
											PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	Hydrogen Sample Isolation Valve													
2-FSE-27-15	2998 G 092-1	B-6	2	A	0.375	GL	SO	A	C	O/C	FSC	M3			TP-03
											LT-J	App J			
											PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	Hydrogen Sample Isolation Valve													

Attachment 15

Miscellaneous Sampling (M-SAM)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2-FSE-27-16	2998 G 092-1	B-6	2	A	0.375	GL	SO	A	C	O/C	FSC	M3			TP-03
											LT-J	App J			
											PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	Hydrogen Sample Isolation Valve													
2-FSE-27-17	2998 G 092-1	B-6	2	A	0.375	GL	SO	A	C	O/C	FSC	M3			TP-03
											LT-J	App J			
											PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	Hydrogen Sample Isolation Valve													
2-FSE-27-18	2998 G 092-1	B-6	2	A	0.375	GL	SO	A	C	O/C	FSC	M3			TP-03
											LT-J	App J			
											PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	Hydrogen Sample Isolation Valve													
2-FSE-27-8	2998 G 092-1	A-5	2	A	0.375	GL	SO	A	C	O/C	FSC	M3			TP-03
											LT-J	App J			
											PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	Hydrogen Sample Isolation Valve													
2-FSE-27-9	2998 G 092-1	A-5	2	A	0.375	GL	SO	A	C	O/C	FSC	M3			TP-03
											LT-J	App J			
											PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	Hydrogen Sample Isolation Valve													
2-SE-07-5A	2998 G 088-2	C-6	2	B	0.375	GL	SO	P	O	O	PIT	Y2			TP-11
	Valve Name:	Solenoid Valve for Pen P 55													
2-SE-07-5B	2998 G 088-2	D-6	2	B	0.375	GL	SO	P	O	O	PIT	Y2			TP-11
	Valve Name:	Solenoid Valve for Pen P 72													

Attachment 15

Miscellaneous Sampling (M-SAM)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2-SE-07-5C	2998 G 088-2	D-6	2	B	0.375	GL	SO	P	O	O	PIT	Y2			TP-11
	Valve Name:	**Solenoid Valve for Pen P 58**													
2-SE-07-5D	2998 G 088-2	D-6	2	B	0.375	GL	SO	P	O	O	PIT	Y2			TP-11
	Valve Name:	**Solenoid Valve for Pen P 71**													
2-V-27101	2998 G 092-1	B-6	2	A/C	0.375	CK	SA	A	C	O/C	CC	CM			TP-07
											CO	CM			TP-07
											LT-J	App J			
	Valve Name:	**Hydrogen Sample Check Valve**													
2-V-27102	2998 G 092-1	B-6	2	A/C	0.375	CK	SA	A	C	O/C	CC	CM			TP-07
											CO	CM			TP-07
											LT-J	App J			
	Valve Name:	**Hydrogen Sample Check Valve**													
2-V-29455	2998 G 092-1	F-5	2	C	0.5	CK	SA	A	C	O	CC	CM			TP-01, TP-07
											CO	CM			TP-07
	Valve Name:	**Check Valve for Oxygen to Hydrogen Analyzers 2A**													
2-V-29456	2998 G 092-1	F-5	2	C	0.5	CK	SA	A	C	O	CC	CM			TP-01, TP-07
											CO	CM			TP-07
	Valve Name:	**Check Valve for Oxygen to Hydrogen Analyzers 2B**													

Attachment 15

Make-up Water (MUW)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2-HCV-15-1	2998 G 084-1	D-6	2	A	2	GL	AO	A	O	C	FSC	M3			TP-03
											LT-J	App J			
											PIT	Y2			
											ST-C	M3			
	Valve Name:	**Primary Make Up Water Containment Isolation Valve**													
2-SR-15925	2998 G 084-1	D-5	NC	C	0.75	RV	SA	A	C	O/C	RVT	Y10			TP-08
	Valve Name:	**Service and Primary Water Makeup Thermal Relief Valve**													
2-V-15328	2998 G 084-1	D-5	2	A/C	2	CK	SA	A	C	C	CC	CM			TP-07
											CO	CM			TP-01, TP-07
											LT-J	App J			
	Valve Name:	**Primary Make Up Water Containment Isolation Check Valve**													

Attachment 15

Reactor Coolant System (RCS)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2-V-1200	2998 G 078-109	C-4	1	C	3	SV	SA	A	C	O/C	RVT	Y5			
	Valve Name:	**Pressurizer Safety/Relief Valve**													
2-V-1201	2998 G 078-109	C-4	1	C	3	SV	SA	A	C	O/C	RVT	Y5			
	Valve Name:	**Pressurizer Safety/Relief Valve**													
2-V-1202	2998 G 078-109	C-4	1	C	3	SV	SA	A	C	O/C	RVT	Y5			
	Valve Name:	**Pressurizer Safety/Relief Valve**													
2-V-1460	2998 G 078-107	C-5	2	B	1	GL	SO	A	LC	O/C	FSC	CS		CS-02	TP-03
											PIT	Y2			
											ST-C	CS		CS-02	
											ST-O	CS		CS-02	
	Valve Name:	**Reactor Coolant Gas Vent Valve**													
2-V-1461	2998 G 078-107	D-5	2	B	1	GL	SO	A	LC	O/C	FSC	CS		CS-02	TP-03
											PIT	Y2			
											ST-C	CS		CS-02	
											ST-O	CS		CS-02	
	Valve Name:	**Reactor Coolant Gas Vent Valve**													
2-V-1462	2998 G 078-107	D-5	2	B	1	GL	SO	A	LC	O/C	FSC	CS		CS-02	TP-03
											PIT	Y2			
											ST-C	CS		CS-02	
											ST-O	CS		CS-02	
	Valve Name:	**Reactor Coolant Gas Vent Valve**													
2-V-1463	2998 G 078-107	E-5	2	B	1	GL	SO	A	LC	O/C	FSC	CS		CS-02	TP-03
											PIT	Y2			
											ST-C	CS		CS-02	
											ST-O	CS		CS-02	
	Valve Name:	**Reactor Coolant Gas Vent Valve**													
2-V-1464	2998 G 078-107	D-6	2	B	1	GL	SO	A	LC	O/C	FSC	CS		CS-02	TP-03
											PIT	Y2			
											ST-C	CS		CS-02	
											ST-O	CS		CS-02	
	Valve Name:	**Reactor Coolant Gas Vent Valve**													

Attachment 15

Reactor Coolant System (RCS)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2-V-1465	2998 G 078-107	D-6	2	B	1	GL	SO	A	LC	O/C	FSC	CS		CS-02	TP-03
											PIT	Y2			
											ST-C	CS		CS-02	
											ST-O	CS		CS-02	
	Valve Name:	**Reactor Coolant Gas Vent Valve**													
2-V-1466	2998 G 078-107	E-6	2	B	1	GL	SO	A	LC	O/C	FSC	CS		CS-02	TP-03
											PIT	Y2			
											ST-C	CS		CS-02	
											ST-O	CS		CS-02	
	Valve Name:	**Reactor Coolant Gas Vent Valve**													
2-V-1474	2998 G 078-108	D-4	1	B	3	GL	SO	A	C	O/C	FSC	RR			TP-03
											PIT	Y2			
											ST-O	RR			TP-11
	Valve Name:	**Pressurizer Power Operated Relief Valve (PORV)**													
2-V-1475	2998 G 078-108	F-4	1	B	3	GL	SO	A	C	O/C	FSC	RR			TP-03
											PIT	Y2			
											ST-O	RR			TP-11
	Valve Name:	**Pressurizer Power Operated Relief Valve (PORV)**													
2-V-1476	2998 G 078-108	D-5	1	B	3	GA	MO	A	O	O/C	PIT	Y2			
											ST-C	M3			TP-11
	Valve Name:	**PORV Block Valve**													
2-V-1477	2998 G 078-108	F-5	1	B	3	GA	MO	A	O	O/C	PIT	Y2			
											ST-C	M3			TP-11
	Valve Name:	**PORV Block Valve**													

Attachment 15

Service Air (SA)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2-HCV-18-2	2998 G 085-1	F-6	2	A	2	GL	AO	A	C	C	FSC	M3			TP-03
											LT-J	App J			
											PIT	Y2			
											ST-C	M3			
	Valve Name:	Service Air Containment Isolation Valve(Pen P 8)													
2-SH-18797	2998 G 085-1	F-3	2	A	1	BAL	M	P	LC	C	LT-J	App J			
	Valve Name:	Service Air To Construction Hatch Isolation Valve (Pen P 8)													
2-V-181270	2998 G 085-1	E-5	2	A/C	2	CK	SA	A	C	C	CC	CM			TP-07
											CO	CM			TP-01, TP-07
											LT-J	App J			
	Valve Name:	Containment Isolation Valve for Service Air (Pen P 8)													

Attachment 15

Sampling System (SAM)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2-SE-05-1A	2998 G 078-153	B-2	2	A	0.375	GL	SO	A	C	C	FSC LT-J PIT ST-C	M3 App J Y2 M3			TP-03
	Valve Name:	**Isolation Valve for 2A1 SIT Sampling (Pen P 28A)**													
2-SE-05-1B	2998 G 078-153	C-2	2	A	0.375	GL	SO	A	C	C	FSC LT-J PIT ST-C	M3 App J Y2 M3			TP-03
	Valve Name:	**Isolation Valve for 2A2 SIT Sampling (Pen P 28A)**													
2-SE-05-1C	2998 G 078-153	E-2	2	A	0.375	GL	SO	A	C	C	FSC LT-J PIT ST-C	M3 App J Y2 M3			TP-03
	Valve Name:	**Isolation Valve for 2B1 SIT Sampling (Pen P 28A)**													
2-SE-05-1D	2998 G 078-153	G-2	2	A	0.375	GL	SO	A	C	C	FSC LT-J PIT ST-C	M3 App J Y2 M3			TP-03
	Valve Name:	**Isolation Valve for 2B2 SIT Sampling (Pen P 28A)**													
2-SE-05-1E	2998 G 078-153	B-4	2	A	0.375	GL	SO	A	C	C	FSC LT-J PIT ST-C	M3 App J Y2 M3			TP-03
	Valve Name:	**Isolation Valve for Common SIT Sampling (Pen P 28A)**													
2-V-5200	2998 G 078-153	C-3	2	A	0.375	GL	SO	A	C	C	FSC LT-J PIT ST-C	M3 App J Y2 M3			TP-03
	Valve Name:	**RCS Sample Isolation Valve (Pen P 28B)**													
2-V-5201	2998 G 078-153	D-3	2	A	0.375	GL	SO	A	C	C	FSC LT-J PIT ST-C	M3 App J Y2 M3			TP-03
	Valve Name:	**RCS Sample Isolation Valve (Pen P 29A)**													

Attachment 15

Sampling System (SAM)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2-V-5202	2998 G 078-153	F-3	2	A	0.375	GL	SO	A	C	C	FSC	M3			TP-03
											LT-J	App J			
											PIT	Y2			
											ST-C	M3			
	Valve Name:	RCS Sample Isolation Valve (Pen P 29B)													
2-V-5203	2998 G 078-153	D-3	2	A	0.375	GL	AO	A	C	C	FSC	M3			TP-03
											LT-J	App J			
											PIT	Y2			
											ST-C	M3			
	Valve Name:	RCS Sample Isolation Valve (Pen P 29A)													
2-V-5204	2998 G 078-153	D-4	2	A	0.375	GL	AO	A	C	C	FSC	M3			TP-03
											LT-J	App J			
											PIT	Y2			
											ST-C	M3			
	Valve Name:	RCS Sample Isolation Valve (Pen P 29A)													
2-V-5205	2998 G 078-153	F-4	2	A	0.375	GL	AO	A	C	C	FSC	M3			TP-03
											LT-J	App J			
											PIT	Y2			
											ST-C	M3			
	Valve Name:	RCS Sample Isolation Valve (Pen P 29B)													

Attachment 15

Steam Generator Blowdown (SGBD)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2-FCV-23-3	2998 G 086-1	C-6	2	B	3	GL	AO	A	O	C	FSC	M3			TP-03
											PIT	Y2			
											ST-C	M3			
	Valve Name:	2A Steam Generator Blowdown Isolation													
2-FCV-23-5	2998 G 086-1	C-6	2	B	3	GL	AO	A	O	C	FSC	M3			TP-03
											PIT	Y2			
											ST-C	M3			
	Valve Name:	2B Steam Generator Blowdown Isolation													
2-FCV-23-7	2998 G 086-1	C-7	2	B	0.5	GL	AO	A	O	C	FSC	M3			TP-03
											PIT	Y2			
											ST-C	CS			
	Valve Name:	2A Steam Generator Blowdown Isolation													
2-FCV-23-9	2998 G 086-1	C-6	2	B	0.5	GL	AO	A	O	C	FSC	M3			TP-03
											PIT	Y2			
											ST-C	M3			
	Valve Name:	2B Steam Generator Blowdown Isolation													

Attachment 15

Safety Injection (SI)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2-FCV-3301	2998 G 078-130B	F-5	2	B	10	BTF	MO	A	LO	O/C	PIT	Y2			
											ST-C	M3			TP-11
	Valve Name:	LPSI Header SDC Hx Bypass Valve													
2-FCV-3306	2998 G 078-130B	E-5	2	B	10	BTF	MO	A	LO	O/C	PIT	Y2			
											ST-C	M3			TP-11
	Valve Name:	LPSI Header SDC Hx Bypass Valve													
2-HCV-3512	2998 G 078-130B	F-6	2	B	10	BTF	MO	A	LC	O/C	PIT	Y2			
											ST-O	M3			TP-11
	Valve Name:	Shutdown Cooling Temperature Control Valve													
2-HCV-3615	2998 G 078-131	A-2	2	B	6	GL	MO	A	C	O/C	PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	LPSI Cold Leg Injection Isolation Valve													
2-HCV-3616	2998 G 078-131	B-2	2	B	2	GL	MO	A	C	O/C	PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	2B HPSI Cold Leg Injection Isolation Valve													
2-HCV-3617	2998 G 078-131	B-2	2	B	2	GL	MO	A	C	O/C	PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	2A HPSI Cold Leg Injection Isolation Valve													
2-HCV-3618	2998 G 078-132	D-5	1	B	1	GL	AO	A	C	C	FSC	M3			TP-03
											PIT	Y2			
											ST-C	M3			
	Valve Name:	SI Check Valve Leakage Test Isolation Valve													
2-HCV-3625	2998 G 078-131	C-2	2	B	6	GL	MO	A	C	O/C	PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	LPSI Cold Leg Injection Isolation Valve													
2-HCV-3626	2998 G 078-131	D-2	2	B	2	GL	MO	A	C	O/C	PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	2B HPSI Cold Leg Injection Isolation Valve													

Attachment 15

Safety Injection (SI)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2-HCV-3627	2998 G 078-131	D-3	2	B	2	GL	MO	A	C	O/C	PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	2A HPSI Cold Leg Injection Isolation Valve													
2-HCV-3628	2998 G 078-132	D-2	1	B	1	GL	AO	A	C	C	FSC	M3			TP-03
											PIT	Y2			
											ST-C	M3			
	Valve Name:	SI Check Valve Leakage Test Isolation Valve													
2-HCV-3635	2998 G 078-131	E-2	2	B	6	GL	MO	A	C	O/C	PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	LPSI Cold Leg Injection Isolation Valve													
2-HCV-3636	2998 G 078-131	F-2	2	B	2	GL	MO	A	C	O/C	PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	2B HPSI Cold Leg Injection Isolation Valve													
2-HCV-3637	2998 G 078-131	F-2	2	B	2	GL	MO	A	C	O/C	PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	2A HPSI Cold Leg Injection Isolation Valve													
2-HCV-3638	2998 G 078-132	H-2	1	B	1	GL	AO	A	C	C	FSC	M3			TP-03
											PIT	Y2			
											ST-C	M3			
	Valve Name:	SI Check Valve Leakage Test Isolation Valve													
2-HCV-3645	2998 G 078-131	G-2	2	B	6	GL	MO	A	C	O/C	PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	LPSI Cold Leg Injection Isolation Valve													
2-HCV-3646	2998 G 078-131	H-2	2	B	2	GL	MO	A	C	O/C	PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	2B HPSI Cold Leg Injection Isolation Valve													

Attachment 15

Safety Injection (SI)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2-HCV-3647	2998 G 078-131	H-2	2	B	2	GL	MO	A	C	O/C	PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	2A HPSI Cold Leg Injection Isolation Valve													
2-HCV-3648	2998 G 078-132	H-5	1	B	1	GL	AO	A	C	C	FSC	M3			TP-03
											PIT	Y2			
											ST-C	M3			
	Valve Name:	SI Check Valve Leakage Test Isolation Valve													
2-HCV-3657	2998 G 078-130B	E-5	2	B	10	BTF	MO	A	LC	O/C	PIT	Y2			
											ST-O	M3			TP-11
	Valve Name:	Shutdown Cooling Temperature Control Valve													
2-MV-07-2A	2998 G 088-2	G-3	2	B	24	BTF	MO	A	C	O/C	PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	SI Pump Containment Sump Suction Valve													
2-MV-07-2B	2998 G 088-2	G-3	2	B	24	BTF	MO	A	C	O/C	PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	SI Pump Containment Sump Suction Valve													
2-SE-03-1A	2998 G 078-132	C-3	2	B	1	GL	SO	A	C	O/C	FSC	M3			TP-03
											PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	SI Tank Drain/fill Isolation Valve													
2-SE-03-1B	2998 G 078-132	C-6	2	B	1	GL	SO	A	C	O/C	FSC	M3			TP-03
											PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	SI Tank Drain/fill Isolation Valve													
2-SE-03-1C	2998 G 078-132	G-3	2	B	1	GL	SO	A	C	O/C	FSC	M3			TP-03
											PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	SI Tank Drain/fill Isolation Valve													

Attachment 15

Safety Injection (SI)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2-SE-03-1D	2998 G 078-132	G-6	2	B	1	GL	SO	A	C	O/C	FSC	M3			TP-03
											PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	**SI Tank Drain/fill Isolation Valve**													
2-SE-03-2A	2998 G 078-130B	B-7	2	A	2	GL	SO	A	C	O/C	FSC	M3			TP-03
											LT-J	App J			
											PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	**SI Tank Drain/Test Line to RWT**													
2-SE-03-2B	2998 G 078-130B	C-7	2	A	2	GL	SO	A	C	O/C	FSC	M3			TP-03
											LT-J	App J			
											PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	**SI Tank Drain/Test Line to RWT**													
2-SR-03-1	2998 G 078-130B	G-6	3	C	3/4x1	RV	SA	A	C	O/C	RVT	Y10			TP-08
	Valve Name:	**Shutdown Cooling To/From CVCS Purification Relief Valve**													
2-SR-03-2	2998 G 078-131	D-3	3	C	3/4x1	RV	SA	A	C	O/C	RVT	Y10			TP-08
	Valve Name:	**Shutdown Cooling To/From CVCS Purification**													
2-SR-07-1A	2998 G 078-130B	E-1	2	C	3/4x1	RV	SA	A	C	O	RVT	Y10			
	Valve Name:	**Safety Injection Pumps Suction Header Relief Valve**													
2-SR-07-1B	2998 G 078-130B	G-1	2	C	3/4x1	RV	SA	A	C	O	RVT	Y10			
	Valve Name:	**Safety Injection Pumps Suction Header Relief Valve**													
2-V-03002	2998 G 078-132	C-5	3	C	1	CK	SA	A	C	O	CC	CM			TP-01, TP-07
											CO	CM			TP-07
	Valve Name:	**SIT Drain To RWT Check Valve**													
2-V-03003	2998 G 078-132	G-2	3	C	1	CK	SA	A	C	O	CC	CM			TP-01, TP-07
											CO	CM			TP-07
	Valve Name:	**SIT Drain To RWT Check Valve**													

Attachment 15

Safety Injection (SI)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2-V-03004	2998 G 078-132	C-2	3	C	1	CK	SA	A	C	O	CC	CM			TP-01, TP-07
											CO	CM			TP-07
	Valve Name:	SIT Drain To RWT Check Valve													
2-V-03005	2998 G 078-132	G-5	3	C	1	CK	SA	A	C	O	CC	CM			TP-01, TP-07
											CO	CM			TP-07
	Valve Name:	SIT Drain To RWT Check Valve													
2-V-07000	2998 G 078-130B	E-1	2	C	14	CK	SA	A	C	O	CC	CM			TP-01, TP-07
											CO	CM			TP-07
	Valve Name:	2A LPSI Pump Suction Check Valve													
2-V-07001	2998 G 078-130B	F-1	2	C	14	CK	SA	A	C	O	CC	CM			TP-01, TP-07
											CO	CM			TP-07
	Valve Name:	2B LPSI Pump Suction Check Valve													
2-V-07172	2998 G 088-2	G-2	2	C	24	CK	SA	A	C	O/C	CC	CM			TP-01, TP-07
											CO	CM			TP-07
	Valve Name:	SI Pump Containment Sump Suction Check Valve													
2-V-07174	2998 G 088-2	G-2	2	C	24	CK	SA	A	C	O/C	CC	CM			TP-01, TP-07
											CO	CM			TP-07
	Valve Name:	SI Pump Containment Sump Suction Check Valve													
2-V-3101	2998 G 078-130B	B-6	3	C	2	CK	SA	A	C	O	CC	CM			TP-01, TP-07
											CO	CM			TP-07
	Valve Name:	Safety Injection Supply To VCT													
2-V-3102	2998 G 078-130A	B-3	2	C	2	CK	SA	A	C	O	CC	CM			TP-01, TP-07
											CO	CM			TP-07
	Valve Name:	2A HPSI Minimum Flow Check Valve													
2-V-3103	2998 G 078-130A	E-4	2	C	2	CK	SA	A	C	O	CC	CM			TP-01, TP-07
											CO	CM			TP-07
	Valve Name:	2B HPSI Minimum Flow Check Valve													
2-V-3104	2998 G 078-130B	F-3	2	C	2	CK	SA	A	C	O/C	CC	CM			TP-07
											CO	CM			TP-07
	Valve Name:	2A LPSI Minimum Flow Check Valve													

Attachment 15

Safety Injection (SI)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2-V-3105	2998 G 078-130B	F-3	2	C	2	CK	SA	A	C	O/C	CC	CM			TP-07
											CO	CM			TP-07
	Valve Name:	2B LPSI Minimum Flow Check Valve													
2-V-3106	2998 G 078-130B	E-4	2	C	10	CK	SA	A	C	O/C	CC	CM			TP-07
											CO	CM			TP-07
	Valve Name:	2A LPSI Pump Discharge Check Valve													
2-V-3107	2998 G 078-130B	F-4	2	C	10	CK	SA	A	C	O/C	CC	CM			TP-07
											CO	CM			TP-07
	Valve Name:	2B LPSI Pump Discharge Check Valve													
2-V-3113	2998 G 078-131	B-3	2	C	2	CK	SA	A	C	O	CC	CM			TP-01, TP-07
											CO	CM			TP-07
	Valve Name:	HPSI 2A2 Cold Leg Injection Check Valve													
2-V-3114	2998 G 078-131	A-3	2	C	6	CK	SA	A	C	O/C	CC	CM			TP-07
											CO	CM			TP-07
	Valve Name:	LPSI 2A2 Cold Leg Injection Check Valve													
2-V-3124	2998 G 078-131	C-3	2	C	6	CK	SA	A	C	O/C	CC	CM			TP-07
											CO	CM			TP-07
	Valve Name:	LPSI 2A1 Cold Leg Injection Check Valve													
2-V-3133	2998 G 078-131	F-3	2	C	2	CK	SA	A	C	O	CC	CM			TP-01, TP-07
											CO	CM			TP-07
	Valve Name:	HPSI 2B1 Cold Leg Injection Check Valve													
2-V-3134	2998 G 078-131	E-3	2	C	6	CK	SA	A	C	O/C	CC	CM			TP-07
											CO	CM			TP-07
	Valve Name:	LPSI 2B1 Cold Leg Injection Check Valve													
2-V-3143	2998 G 078-131	H-3	2	C	2	CK	SA	A	C	O	CC	CM			TP-01, TP-07
											CO	CM			TP-07
	Valve Name:	HPSI 2B2 Cold Leg Injection Check Valve													
2-V-3144	2998 G 078-131	G-3	2	C	6	CK	SA	A	C	O/C	CC	CM			TP-07
											CO	CM			TP-07
	Valve Name:	LPSI 2B2 Cold Leg Injection Check Valve													
2-V-3201	2998 G 078-130B	B-6	3	B	2	GL	M	A	LC	O	ME	Y2			TP-04
	Valve Name:	Safety Injection To VCT													

Attachment 15

Safety Injection (SI)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2-V-3205	2998 G 078-130B	E-4	2	B	2	GL	M	A	LO	O/C	ME	Y2			TP-04
	Valve Name:	**2B LPSI Pump Recirc to RWT Iso Valve**													
2-V-3211	2998 G 078-132	A-6	2	C	1.5x2.5	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name:	**2A2 Safety Injection Tank Relief Valve**													
2-V-3215	2998 G 078-132	C-6	2	A/C	12	CK	SA	A	C	O/C	CC	CM			TP-07
											CO	CM			TP-07
											LT-S	Y2			
	Valve Name:	**2A2 Safety Injection Tank Discharge Check Valve**													
2-V-3217	2998 G 078-132	D-7	1	A/C	12	CK	SA	A	C	O/C	CC	CM			TP-07
											CO	CM			TP-07
											LT-S	Y2			
	Valve Name:	**2A1 SI Header Inboard Check Valve**													
2-V-3221	2998 G 078-132	A-3	2	C	1.5x2.5	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name:	**2A1 Safety Injection Tank Relief Valve**													
2-V-3225	2998 G 078-132	C-3	2	A/C	12	CK	SA	A	C	O/C	CC	CM			TP-07
											CO	CM			TP-07
											LT-S	Y2			
	Valve Name:	**2A1 Safety Injection Tank Discharge Check Valve**													
2-V-3227	2998 G 078-132	D-4	1	A/C	12	CK	SA	A	C	O/C	CC	CM			TP-07
											CO	CM			TP-07
											LT-S	Y2			
	Valve Name:	**2B1 SI Header Inboard Check Valve**													
2-V-3231	2998 G 078-132	E-3	2	C	1.5x2.5	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name:	**2B1 Safety Injection Tank Relief Valve**													
2-V-3235	2998 G 078-132	G-3	2	A/C	12	CK	SA	A	C	O/C	CC	CM			TP-07
											CO	CM			TP-07
											LT-S	Y2			
	Valve Name:	**2B1 Safety Injection Tank Discharge Check Valve**													
2-V-3237	2998 G 078-132	H-4	1	A/C	12	CK	SA	A	C	O/C	CC	CM			TP-07
											CO	CM			TP-07
											LT-S	Y2			
	Valve Name:	**2B2 SI Header Inboard Check Valve**													

Attachment 15

Safety Injection (SI)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2-V-3241	2998 G 078-132	E-6	2	C	1.5x2.5	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name:	**2B2 Safety Injection Tank Relief Valve**													
2-V-3245	2998 G 078-132	G-6	2	A/C	12	CK	SA	A	C	O/C	CC	CM			TP-07
											CO	CM			TP-07
											LT-S	Y2			
	Valve Name:	**2B2 Safety Injection Tank Discharge Check Valve**													
2-V-3247	2998 G 078-132	H-7	1	A/C	12	CK	SA	A	C	O/C	CC	CM			TP-07
											CO	CM			TP-07
											LT-S	Y2			
	Valve Name:	**2A2 SI Header Inboard Check Valve**													
2-V-3258	2998 G 078-132	D-3	1	A/C	6	CK	SA	A	C	O/C	CC	CM			TP-07
											CO	CM			TP-07
											LT-S	Y2			
	Valve Name:	**2A1 SI Header Outboard Check Valve**													
2-V-3259	2998 G 078-132	D-6	1	A/C	6	CK	SA	A	C	O/C	CC	CM			TP-07
											CO	CM			TP-07
											LT-S	Y2			
	Valve Name:	**2A2 SI Header Outboard Check Valve**													
2-V-3260	2998 G 078-132	H-3	1	A/C	6	CK	SA	A	C	O/C	CC	CM			TP-07
											CO	CM			TP-07
											LT-S	Y2			
	Valve Name:	**2B1 SI Header Outboard Check Valve**													
2-V-3261	2998 G 078-132	H-6	1	A/C	6	CK	SA	A	C	O/C	CC	CM			TP-07
											CO	CM			TP-07
											LT-S	Y2			
	Valve Name:	**2B2 SI Header Outboard Check Valve**													
2-V-3401	2998 G 078-130A	B-2	2	C	6	CK	SA	A	C	O	CC	CM			TP-01, TP-07
											CO	CM			TP-07
	Valve Name:	**HPSI Pump Suction Check Valve**													
2-V-3407	2998 G 078-130B	B-6	3	C	1/2 x 1	RV	SA	A	C	O/C	RVT	Y10			TP-08
	Valve Name:	**Safety Injection Tank Recirculation Relief Valve**													

Attachment 15

Safety Injection (SI)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2-V-3410	2998 G 078-130A	F-2	2	C	8	CK	SA	A	C	O	CC	CM			TP-01, TP-07
											CO	CM			TP-07
	Valve Name:	**HPSI Pump Suction Check Valve**													
2-V-3412	2998 G 078-130A	E-5	2	C	1x2	RV	SA	A	C	O/C	RVT	Y10			TP-08
	Valve Name:	**High Pressure Safety Injection Relief Valve**													
2-V-3414	2998 G 078-130A	F-4	2	C	3	CK	SA	A	C	O/C	CC	CM			TP-07
											CO	CM			TP-07
	Valve Name:	**2B HPSI Pump Discharge Stop Check Valve**													
2-V-3417	2998 G 078-130A	B-5	2	C	1x2	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name:	**High Pressure Safety Injection Relief Valve**													
2-V-3427	2998 G 078-130A	B-4	2	C	3	CK	SA	A	C	O/C	CC	CM			TP-07
											CO	CM			TP-07
	Valve Name:	**2A HPSI Pump Discharge Stop Check Valve**													
2-V-3430	2998 G 078-130B	C-3	2	C	1x2	RV	SA	A	C	O/C	RVT	Y10			TP-08
	Valve Name:	**2B Shutdown Cooling Heat Exchanger Relief Valve**													
2-V-3431	2998 G 078-130B	A-3	2	C	1x2	RV	SA	A	C	O/C	RVT	Y10			TP-08
	Valve Name:	**2A Shutdown Cooling Heat Exchanger Relief Valve**													
2-V-3432	2998 G 078-130B	F-1	2	B	14	GA	MO	A	LO	O/C	PIT	Y2			
											ST-C	M3			TP-11
	Valve Name:	**2B LPSI Pump Suction Isolation Valve**													
2-V-3439	2998 G 078-130B	D-7	2	C	1x2	RV	SA	A	C	O/C	RVT	Y10			TP-08
	Valve Name:	**2A LPSI Header Relief Valve**													
2-V-3444	2998 G 078-130B	E-1	2	B	14	GA	MO	A	LO	O/C	PIT	Y2			
											ST-C	M3			TP-11
	Valve Name:	**2A LPSI Pump Suction Isolation Valve**													
2-V-3456	2998 G 078-130B	C-5	2	B	10	GA	MO	A	LC	O/C	PIT	Y2			
											ST-O	M3			TP-11
	Valve Name:	**2A Shutdown Cooling Hx Outlet Isolation Valve**													
2-V-3457	2998 G 078-130B	D-6	2	B	10	GA	MO	A	LC	O/C	PIT	Y2			
											ST-O	M3			TP-11
	Valve Name:	**2B Shutdown Cooling Hx Outlet Isolation Valve**													

Attachment 15

Safety Injection (SI)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2-V-3463	2998 G 078-130B	B-6	2	A	2	GA	M	A	LC	O/C	LT-J	App J			
											ME	Y2			TP-04
	Valve Name:	**SI Tank Drain/Test Line to RWT**													
2-V-3466	2998 G 078-130B	A-7	3	C	1.5x2	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name:	**SI Check Valve Leakage Test Line Relief Valve**													
2-V-3468	2998 G 078-131	D-2	2	C	2x3	RV	SA	A	C	O/C	RVT	Y10			TP-08
	Valve Name:	**2B Shutdown Cooling Suction Relief Valve**													
2-V-3469	2998 G 078-131	D-6	1	C	0.75	RV	SA	A	C	O/C	RVT	Y5			
	Valve Name:	**2B Shutdown Cooling Isolation Relief Valve**													
2-V-3480	2998 G 078-131	D-7	1	A	10	GA	MO	A	LC	O/C	LT-S	Y2			
											PIT	Y2			
											ST-C	CS		CS-08	
											ST-O	CS		CS-08	
	Valve Name:	**2A Shutdown Cooling Isolation Valve**													
2-V-3481	2998 G 078-131	D-6	1	A	10	GA	MO	A	LC	O/C	LT-S	Y2			
											PIT	Y2			
											ST-C	CS		CS-08	
											ST-O	CS		CS-08	
	Valve Name:	**2A Shutdown Cooling Isolation Valve**													
2-V-3482	2998 G 078-131	D-6	1	C	0.75	RV	SA	A	C	O/C	RVT	Y5			
	Valve Name:	**2A Shutdown Cooling Isolation Relief Valve**													
2-V-3483	2998 G 078-131	D-2	2	C	2x3	RV	SA	A	C	O/C	RVT	Y10			TP-08
	Valve Name:	**2A Shutdown Cooling Suction Relief Valve**													
2-V-3495	2998 G 078-130B	B-4	2	B	6	GL	SO	A	LO	O/C	FSC	M3			TP-03
											PIT	Y2			
											ST-C	M3			TP-11
	Valve Name:	**A Train SI Pump Common Mini Flow Isolation Valve**													
2-V-3496	2998 G 078-130B	B-3	2	B	6	GL	SO	A	LO	O/C	FSC	M3			TP-03
											PIT	Y2			
											ST-C	M3			TP-11
	Valve Name:	**B Train SI Pump Common Mini Flow Isolation Valve**													

Attachment 15

Safety Injection (SI)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2-V-3507	2998 G 078-130B	F-7	2	C	1x2	RV	SA	A	C	O/C	RVT	Y10			TP-08
	Valve Name:	**2B LPSI Header Relief Valve**													
2-V-3513	2998 G 078-130B	C-6	2	C	2x3	RV	SA	A	C	O/C	RVT	Y10			TP-08
	Valve Name:	**2B Shutdown Cooling to LPSI Header Relief Valve**													
2-V-3517	2998 G 078-130B	B-2	2	B	12	GA	MO	A	LC	O/C	PIT	Y2			
											ST-O	M3			TP-11
	Valve Name:	**2A LPSI Pump Discharge to SDC Hx Valve**													
2-V-3518	2998 G 078-130A	B-6	2	B	2	GL	M	A	C	O	ME	Y2			TP-04
	Valve Name:	**CVCS Charging to the 2B HPSI Header Cross Connect Valve**													
2-V-3519	2998 G 078-130A	B-5	2	B	2	GL	M	A	C	O	ME	Y2			TP-04
	Valve Name:	**CVCS Charging to the 2A HPSI Header Cross Connect Valve**													
2-V-3522	2998 G 078-130A	G-4	2	C	3	CK	SA	A	C	O/C	CC	CM			TP-07
											CO	CM			TP-07
	Valve Name:	**2B HPSI Hot Leg Injection Check Valve**													
2-V-3523	2998 G 078-130A	G-7	2	B	3	GL	MO	A	LC	O/C	PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	**2B HPSI Hot Leg Injection Isolation Valve**													
2-V-3524	2998 G 078-131	B-5	1	A/C	3	CK	SA	A	C	O/C	CC	CM			TP-07
											CO	CM			TP-07
											LT-S	Y2			
	Valve Name:	**2A HPSI Hot Leg Injection Check Valve**													
2-V-3525	2998 G 078-131	B-6	1	A/C	3	CK	SA	A	C	O/C	CC	CM			TP-07
											CO	CM			TP-07
											LT-S	Y2			
	Valve Name:	**2A HPSI Hot Leg Injection Check Valve**													
2-V-3526	2998 G 078-131	G-5	1	A/C	3	CK	SA	A	C	O/C	CC	CM			TP-07
											CO	CM			TP-07
											LT-S	Y2			
	Valve Name:	**2B HPSI Hot Leg Injection Check Valve**													

Attachment 15

Safety Injection (SI)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2-V-3527	2998 G 078-131	G-6	1	A/C	3	CK	SA	A	C	O/C	CC	CM			TP-07
											CO	CM			TP-07
											LT-S	Y2			
	Valve Name:	2B HPSI Hot Leg Injection Check Valve													
2-V-3536	2998 G 078-131	D-2	2	B	4	GL	MO	A	LC	C	PIT	Y2			
											ST-C	M3			
	Valve Name:	2A Shutdown Cooling Warm up Line Isolation Valve													
2-V-3539	2998 G 078-131	F-2	2	B	4	GL	MO	A	LC	C	PIT	Y2			
											ST-C	M3			
	Valve Name:	2B Shutdown Cooling Warm up Line Isolation Valve													
2-V-3540	2998 G 078-130A	C-7	2	B	3	GL	MO	A	LC	O/C	PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	2A HPSI Hot Leg Injection Isolation Valve													
2-V-3545	2998 G 078-131	D-6	1	B	10	GA	MO	P	LO	O	PIT	Y2			
	Valve Name:	Shutdown Cooling Header Cross Connect Valve													
2-V-3547	2998 G 078-130A	C-4	2	C	3	CK	SA	A	C	O	CC	CM			TP-01, TP-07
											CO	CM			TP-07
	Valve Name:	2A HPSI Hot Leg Injection Check Valve													
2-V-3550	2998 G 078-130A	C-6	2	B	3	GL	MO	A	LC	O/C	PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	2A HPSI Hot Leg Injection Isolation Valve													
2-V-3551	2998 G 078-130A	G-6	2	B	3	GL	MO	A	LC	O/C	PIT	Y2			
											ST-C	M3			
											ST-O	M3			
	Valve Name:	2B HPSI Hot Leg Injection Isolation Valve													
2-V-3570	2998 G 078-130A	E-6	2	C	1x2	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name:	Hot Leg Injection Header Relief Valve													
2-V-3571	2998 G 078-131	G-6	1	B	1	GL	AO	A	C	C	FSC	M3			TP-03
											PIT	Y2			
											ST-C	M3			
	Valve Name:	SIT Fill Line Isolation Valve													

Attachment 15

Safety Injection (SI)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2-V-3572	2998 G 078-131	C-6	1	B	1	GL	AO	A	C	C	FSC	M3			TP-03
											PIT	Y2			
											ST-C	M3			
	Valve Name:	SIT Fill Line Isolation Valve													
2-V-3611	2998 G 078-132	C-6	2	B	1	GL	AO	A	C	C	FSC	M3			TP-03
											PIT	Y2			
											ST-C	M3			
	Valve Name:	2A2 SI Tank Drain/Fill Isolation Valve													
2-V-3612	2998 G 078-132	B-6	2	B	0.5	GL	AO	P	C	C	PIT	Y2			
	Valve Name:	2A2 SI Tank Nitrogen Supply Valve													
2-V-3614	2998 G 078-132	C-6	1	B	12	GA	MO	P	LO	O	PIT	Y2			
	Valve Name:	2A2 SI Tank Outlet Isolation Valve													
2-V-3621	2998 G 078-132	C-3	2	B	1	GL	AO	A	C	C	FSC	M3			TP-03
											PIT	Y2			
											ST-C	M3			
	Valve Name:	2A1 SI Tank Drain/fill Isolation Valve													
2-V-3622	2998 G 078-132	B-3	2	B	0.5	GL	AO	P	C	C	PIT	Y2			
	Valve Name:	2A1 SI Tank Nitrogen Supply Valve													
2-V-3624	2998 G 078-132	C-3	1	B	12	GA	MO	P	LO	O	PIT	Y2			
	Valve Name:	2A1 SI Tank Outlet Isolation Valve													
2-V-3631	2998 G 078-132	G-3	2	B	1	GL	AO	A	C	C	FSC	M3			TP-03
											PIT	Y2			
											ST-C	M3			
	Valve Name:	2B1 SI Tank Drain/Fill Isolation Valve													
2-V-3632	2998 G 078-132	F-3	2	B	0.5	GL	AO	P	C	C	PIT	Y2			
	Valve Name:	2B1 SI Tank Nitrogen Supply Valve													
2-V-3634	2998 G 078-132	G-3	1	B	12	GA	MO	P	LO	O	PIT	Y2			
	Valve Name:	2B1 SI Tank Outlet Isolation Valve													
2-V-3641	2998 G 078-132	G-6	2	B	1	GL	AO	A	C	C	FSC	M3			TP-03
											PIT	Y2			
											ST-C	M3			
	Valve Name:	2B2 SI Tank Drain/Fill Isolation Valve													

Attachment 15

Safety Injection (SI)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2-V-3642	2998 G 078-132	F-6	2	B	0.5	GL	AO	P	C	C	PIT	Y2			
	Valve Name:	2B2 SI Tank Nitrogen Supply Valve													
2-V-3644	2998 G 078-132	G-6	1	B	12	GA	MO	P	LO	O	PIT	Y2			
	Valve Name:	2B2 SI Tank Outlet Isolation Valve													
2-V-3651	2998 G 078-131	E-5	1	A	10	GA	MO	A	LC	O/C	LT-S	Y2			
											PIT	Y2			
											ST-C	CS		CS-08	
											ST-O	CS		CS-08	
	Valve Name:	2B Shutdown Cooling Isolation Valve													
2-V-3652	2998 G 078-131	E-7	1	A	10	GA	MO	A	LC	O/C	LT-S	Y2			
											PIT	Y2			
											ST-C	CS		CS-08	
											ST-O	CS		CS-08	
	Valve Name:	2B Shutdown Cooling Isolation Valve													
2-V-3654	2998 G 078-130A	F-4	2	B	6	GA	MO	A	LO	O/C	PIT	Y2			
											ST-C	M3			
	Valve Name:	2B HPSI Pump Discharge Valve													
2-V-3656	2998 G 078-130A	B-4	2	B	6	GA	MO	A	LO	O/C	PIT	Y2			
											ST-C	M3			
	Valve Name:	2A HPSI Pump Discharge Valve													
2-V-3658	2998 G 078-130B	D-2	2	B	12	GA	MO	A	LC	O/C	PIT	Y2			
											ST-O	M3			TP-11
	Valve Name:	2B LPSI Pump Discharge to SDC Hx Valve													
2-V-3659	2998 G 078-130B	C-4	2	B	3	GA	MO	A	LO	O/C	PIT	Y2			
											ST-C	M3			TP-11
	Valve Name:	A Train SI Pump Common Mini Flow Isolation Valve													
2-V-3660	2998 G 078-130B	C-3	2	B	3	GA	MO	A	LO	O/C	PIT	Y2			
											ST-C	M3			TP-11
	Valve Name:	B Train SI Pump Common Mini Flow Isolation Valve													
2-V-3661	2998 G 078-130B	B-7	3	B	1	GA	AO	P	C	C	PIT	Y2			TP-11
	Valve Name:	SIT Outlet Drain to RDT 2A Control Valve													

Attachment 15

Safety Injection (SI)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2-V-3664	2998 G 078-131	D-3	2	B	10	GA	MO	A	LC	O/C	PIT	Y2			
											ST-O	M3			TP-11
	Valve Name:	**Shutdown Cooling Header Isolation Valve**													
2-V-3665	2998 G 078-131	E-4	2	B	10	GA	MO	A	LC	O/C	PIT	Y2			
											ST-O	M3			TP-11
	Valve Name:	**Shutdown Cooling Header Isolation Valve**													
2-V-3666	2998 G 078-131	D-4	2	C	6x8	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name:	**Shutdown Cooling Suction Relief Valve**													
2-V-3667	2998 G 078-131	D-4	2	C	6x8	RV	SA	A	C	O/C	RVT	Y10			
	Valve Name:	**Shutdown Cooling Suction Relief Valve**													
2-V-3688	2998 G 078-130B	C-5	2	C	2x3	RV	SA	A	C	O/C	RVT	Y10			TP-08
	Valve Name:	**2A Shutdown Cooling to LPSI Header Relief Valve**													
2-V-3733	2998 G 078-132	B-5	2	B	1	GL	SO	A	LC	O/C	FSC	CS		CS-14	TP-03
											PIT	Y2			
											ST-C	CS		CS-14	
											ST-O	CS		CS-14	
	Valve Name:	**2A2 SI Tank Vent Valve**													
2-V-3734	2998 G 078-132	B-5	2	B	1	GL	SO	A	LC	O/C	FSC	CS		CS-14	TP-03
											PIT	Y2			
											ST-C	CS		CS-14	
											ST-O	CS		CS-14	
	Valve Name:	**2A2 SI Tank Vent Valve**													
2-V-3735	2998 G 078-132	B-2	2	B	1	GL	SO	A	LC	O/C	FSC	CS		CS-14	TP-03
											PIT	Y2			
											ST-C	CS		CS-14	
											ST-O	CS		CS-14	
	Valve Name:	**2A1 SI Tank Vent Valve**													
2-V-3736	2998 G 078-132	B-2	2	B	1	GL	SO	A	LC	O/C	FSC	CS		CS-14	TP-03
											PIT	Y2			
											ST-C	CS		CS-14	
											ST-O	CS		CS-14	
	Valve Name:	**2A1 SI Tank Vent Valve**													

Attachment 15

Safety Injection (SI)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2-V-3737	2998 G 078-132	E-2	2	B	1	GL	SO	A	LC	O/C	FSC	CS		CS-14	TP-03
											PIT	Y2			
											ST-C	CS		CS-14	
											ST-O	CS		CS-14	
	Valve Name:	2B1 SI Tank Vent Valve													
2-V-3738	2998 G 078-132	F-2	2	B	1	GL	SO	A	LC	O/C	FSC	CS		CS-14	TP-03
											PIT	Y2			
											ST-C	CS		CS-14	
											ST-O	CS		CS-14	
	Valve Name:	2B1 SI Tank Vent Valve													
2-V-3739	2998 G 078-132	E-5	2	B	1	GL	SO	A	LC	O/C	FSC	CS		CS-14	TP-03
											PIT	Y2			
											ST-C	CS		CS-14	
											ST-O	CS		CS-14	
	Valve Name:	2B2 SI Tank Vent Valve													
2-V-3740	2998 G 078-132	F-5	2	B	1	GL	SO	A	LC	O/C	FSC	CS		CS-14	TP-03
											PIT	Y2			
											ST-C	CS		CS-14	
											ST-O	CS		CS-14	
	Valve Name:	2B2 SI Tank Vent Valve													
2-V-3766	2998 G 078-131	C-3	2	C	2	CK	SA	A	C	O	CC	CM			TP-01, TP-07
											CO	CM			TP-07
	Valve Name:	HPSI 2A1 Cold Leg Injection Check Valve													
2-V-3767	2998 G 078-130B	F-4	2	B	2	GL	M	A	LO	O/C	ME	Y2			TP-04
	Valve Name:	2A LPSI Pump Recirc to RWT Iso Valve													

Attachment 15

Waste Management (W-MAN)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2-LCV-07-11A	2998 G 088-2	G-4	2	A	2	GL	AO	A	C	C	FSC	M3			TP-03
											LT-J	App J			
											PIT	Y2			
											ST-C	M3			
	Valve Name:	Containment Sump Pump Discharge Valve													
2-LCV-07-11B	2998 G 088-2	G-3	2	A	2	GL	AO	A	C	C	FSC	M3			TP-03
											LT-J	App J			
											PIT	Y2			
											ST-C	M3			
	Valve Name:	Containment Sump Pump Discharge Valve													
2-SR-07474	2998 G 088-2	F-4	2	A/C	0.75	RV	SA	A	C	O	LT-J	App J			
											RVT	Y10			TP-08
	Valve Name:	Containment Spray Rx Cavity Sump Discharge Thermal Relief													
2-SR-07477	2998 G 088-2	F-5	4	N/A	0.75	RV	SA	N/A	C	N/A	RVT	Y10			TP-08
	Valve Name:	Containment Spray Rx Cavity Sump Discharge Thermal Relief													
2-V-6341	2998 G 078-160A	G-3	2	A	3	DIA	AO	A	O	C	FSC	M3			TP-03
											LT-J	App J			
											PIT	Y2			
											ST-C	M3			
	Valve Name:	Reactor Drain Tank Pump Suction Isolation Valve (Pen P 43)													
2-V-6342	2998 G 078-160A	G-4	2	A	3	DIA	AO	A	O	C	FSC	M3			TP-03
											LT-J	App J			
											PIT	Y2			
											ST-C	M3			
	Valve Name:	Reactor Drain Tank Pump Suction Isolation Valve (Pen P 43)													
2-V-6718	2998 G 078-163A	B-3	2	A	1	DIA	AO	A	O	C	FSC	M3			TP-03
											LT-J	App J			
											PIT	Y2			
											ST-C	M3			
	Valve Name:	QT/RDT Vent to Gas Surge Tank 2A Isolation Valve													

Attachment 15

Waste Management (W-MAN)

Valve Tag	P&ID	P&ID Coor.	Safety Class	Cat.	Size	Valve Type	Act. Type	Active / Passive	Normal Position	Safety Position	Test Type	Test Freq.	Relief Request	Deferred Just.	Tech. Pos.
2-V-6741	2998 G 078-163B	D-4	2	A	1	GL	PO	A	C	C	FSC	M3			TP-03
											LT-J	App J			
											PIT	Y2			
											ST-C	M3			
	Valve Name:	Nitrogen Supply Containment Isolation Valve (Pen P 14)													
2-V-6750	2998 G 078-163A	B-3	2	A	1	DIA	AO	A	O	C	FSC	M3			TP-03
											LT-J	App J			
											PIT	Y2			
											ST-C	M3			
	Valve Name:	QT/RDT Vent to Gas Surge Tank 2A Isolation Valve													
2-V-6792	2998 G 078-163B	D-3	2	A/C	1	CK	SA	A	C	C	CC	CM			TP-07
											CO	CM			TP-01, TP-07
											LT-J	App J			
	Valve Name:	Nitrogen Supply Containment Isolation Valve. (Pen P 14)													