ATTACHMENT I TO IPN-97-070

PROPOSED TECHNICAL SPECIFICATION CHANGES

REGARDING THE CLARIFICATION OF CONTAINMENT INTEGRITY

AND CHANGES TO SECTIONS 1.10 and 3.6, TABLE 3.6-1 AND TABLE 4.4-1

NEW YORK POWER AUTHORITY
INDIAN POINT 3 NUCLEAR POWER PLANT
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1.9.2 Instrument Channel Functional Test

Injection of a simulated signal into the channel to verify that it is operable, including alarm and/or trip initiating actions.

1.9.3 Instrument Channel Calibration

Adjustment of channel output such that it responds, with acceptable range and accuracy, to known values of the parameter which the channel measures. Calibration shall encompass the entire channel, including alarm or trip, and shall be deemed to include the channel functional test.

1.9.4 Logic Channel Functional Test

The operation of relays or switch contacts, in all the combinations required, to produce the required output.

1.10 CONTAINMENT INTEGRITY

Containment integrity is defined to exist when:

1.10.1 Non-automatic containment isolation valves (Table 3.6-1) are closed or may be opened under administrative control and only as long as necessary to perform their intended function.

1.10.2 Blind flanges, that provide an isolation function which are shown in FSAR drawings, are maintained installed.

1.10.3 Any test connection, vent or drain valve that is located within the isolation boundary and is required to perform an isolation function is closed and capped (threaded) or blind flanged as shown in FSAR drawings.

1.10.4 The equipment door is properly closed.

1.10.5 Both doors in each personnel air lock are properly closed unless being used for entry, egress or maintenance, at which time at least one air lock door shall be closed.

1.10.6 All automatic containment isolation valves are either operable or in the closed position, or isolated by a closed manual valve or flange that meets the same design criteria as the isolation valve.

3.6 CONTAINMENT SYSTEM

Applicability

Applies to the integrity of reactor containment.

Objective

To define the operating status of the reactor containment for plant operation.

Specification

A. Containment Integrity

1. Containment integrity (as defined in 1.10) shall not be violated unless the reactor is in the cold shutdown condition. Those valves to be opened continuously or intermittently are under administrative control and are open only as long as necessary to perform their intended function.

2. The containment integrity shall not be violated when the reactor vessel head is removed unless the boron concentration is sufficient to maintain the shutdown margin equal to or greater than the requirements of specification 3.8.D.

3. If the containment integrity requirements are not met when the reactor is above cold shutdown, containment integrity shall be restored within one hour or the reactor shall be in the hot shutdown condition within six hours and in cold shutdown condition within the next 30 hours.

B. Internal Pressure

If the internal pressure exceeds 2.5 psig or the internal vacuum exceeds 2.0 psig, the condition shall be corrected or the reactor shutdown.

Regarding internal pressure limitations, the containment design pressure of 47 psig would not be exceeded for a major loss-of-coolant accident or for a main steam line break accident.[1] The loss-of-coolant accident event bounds the main steam line break accident from the containment peak pressures standpoint. The initial pressure condition used in the containment analysis was 2.5 psig.[1] The containment can withstand an internal vacuum of 3 psig.[2] The 2.0 psig vacuum specified as an operating limit avoids any difficulties with motor cooling.

The requirement of a 50°F minimum containment ambient temperature is to assure that the minimum service metal temperature of the containment liner is well above the NDT + 30°F criterion for the liner material. [3]

Limiting maximum containment ambient temperature will ensure that the peak accident containment pressure does not exceed the design limit of 47 psig during steamline break or loss of coolant accidents. Environmentally and seismically qualified RTDs mounted on the crane wall above the containment fan cooler units inlet are normally used for measuring containment ambient temperature. Portable temperature sensing equipment may also be used, provided the criteria of 3.6.C.3 are met.

Table 3.6-1 lists non-automatic valves that are designated as part of the containment isolation function. [4] During periods of normal plant operations requiring containment integrity, some of the valves on this Table will be open either continuously or intermittently depending on requirements of the particular protection, safeguards or essential service systems. Those valves to be opened are under administrative control and are open only as long as necessary to perform their intended function. Some of the valves listed in Table 3.6-1 are closed during the post accident period in accordance with plant procedures and consistent with requirements of the related protection, safeguards, or essential service systems.

The opening angle of the containment vent isolation valves is being limited as an analysis demonstrates valve operability against accident containment pressures provided the valves are limited to a maximum opening angle of 60°. The containment purge supply and exhaust isolation valves are required to be closed during plant operation above cold shutdown.

REFERENCES

(1) FSAR - Section 14.3.6
(2) FSAR - Appendix 5A, Section 3.1.8
(3) FSAR - Section 5.1.1.1
(4) FSAR - Section 5.2

TABLE 3.6-1

NON-AUTOMATIC CONTAINMENT ISOLATION VALVES

OPEN CONTINUOUSLY OR INTERMITTENTLY FOR PLANT OPERATION

VALVE NO.	VALVE NO.	VALVE NO.
AC-MOV-744	SI-MOV-1835B	SWN-71-4
AC-MOV-1870	SI-859A	SWN-71-5
AC-MOV-743	SI-859C	SA-24-1
AC-MOV-822A	AC-752F	SA-24-2
AC-MOV-822B	AC-753F	PS-PCV-1111-1
SP-990C	AC-752J	PS-PCV-1111-2
AC-732	AC-753J	SP-MOV-990A
SI-MOV-885A	SWN-41-1	SP-MOV-990B
SI-MOV-885B	SWN-43-1	SI-1814A
SI-MOV-888A	SWN-41-2	SI-1814B
SI-MOV-888B	SWN-43-2	SI-1814C
CH-MOV-205	SWN-41-3	PS-7
CH-MOV-226	SWN-43-3	PS-8
CH-227	SWN-41-4	PS-9
CH-MOV-250A	SWN-43-4	PS-10
CH-MOV-441	SWN-41-5	SP-SOV-506[1]
CH-MOV-250B	SWN-43-5	SP-SOV-507[1]
CH-MOV-442	SWN-44-1	SP-SOV-508[1]
CH-MOV-250C	SWN-51-1	SP-SOV-509[1]
CH-MOV-443	SWN-44-2	SP-SOV-510[1]
CH-MOV-250D	SWN-51-2	SP-SOV-511[1]
CH-MOV-444	SWN-44-3	SP-SOV-512[1]
SI-869A	SWN-51-3	SP-SOV-513[1]
SI-869B	SWN-44-4	SP-SOV-514[1]
SI-878A	SWN-51-4	SP-SOV-515[1]
SI-878B	SWN-44-5	SP-SOV-516[1]
SI-MOV-851A	SWN-51-5	CB-3
SI-MOV-850A	SWN-71-1	CB-4
SI-MOV-850C	SWN-71-2	CB-7
SI-MOV-1835A	SWN-71-3	CB-8

[1] Note: These series valves have non-redundant Phase A automatic signals and therefore are treated as non-automatic containment isolation valves.

TABLE 4.4-1 (Page 5 of 7)

CONTAINMENT ISOLATION VALVES			
Valve No.	Penetration Number[1]	Test Fluid[2]	Minimum Test Pressure (PSIG)[8]
SWN-44-5	40	Water[6]	47
SWN-51-5	40	Water[6]	47
SWN-71-1	40	Water[6]	47
SWN-71-2	40	Water[6]	47
SWN-71-3	40	Water[6]	47
SWN-71-4	40	Water[6]	47
SWN-71-5	40	Water[6]	47
SA-24-1	41	Water[4]	47
SA-24-2	41	Water[4]	47
VS-FCV-1170	48	Gas[7]	43
VS-FCV-1171	48	Gas[7]	43
VS-FCV-1172	49	Gas[7]	43
VS-FCV-1173	49	Gas[7]	43
VS-FCV-1190	50	Gas[7]	43
VS-FCV-1191	50	Gas[7]	43
VS-FCV-1192	50	Gas[7]	43
SP-MOV-990A	51	Nitrogen[4]	43
SP-MOV-990B	51	Nitrogen[4]	43
SP-AOV-956A	52	Water[4]	47
SP-AOV-956B	52	Water[4]	47
SP-AOV-956C	53	Water[4]	47
SP-AOV-956D	53	Water[4]	47
SI-1814A	54	Gas	43
SI-1814B	55	Gas	43
SI-1814C	56	Gas	43
SP-SOV-506	57	Gas[7]	43
SP-SOV-507	57	Gas[7]	43

ATTACHMENT II TO IPN-97-070

SAFETY EVALUATION OF THE
PROPOSED TECHNICAL SPECIFICATION CHANGES
REGARDING THE CLARIFICATION OF CONTAINMENT INTEGRITY
AND CHANGES TO SECTIONS 1.10 and 3.6, TABLE 3.6-1 AND TABLE 4.4-1

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Section I - Description of Changes

This application for amendment to the Indian Point 3 Technical Specification proposes to:

1. Revise the definition of Containment Integrity in Section 1.10, revise Section 3.6., and Table 3.6-1 for consistency. Several valves are being added to Table 3.6-1 for consistency with the revised definition in Section 1.10.

2. Include footnote (7) as a superscript to valves SP-SOV-506 and SP-SOV-507 in Table 4.4-1, "Containment Isolation Valves."

Section II - Evaluation of Changes

Change (1):

The current definition of containment integrity, in part, states, "All non-automatic containment isolation valves which are not required to be open during accident conditions, except those required to be open for normal plant operation or testing as identified in Table 3.6-1, are closed and blind flanges are installed where required." Application of this definition to Table 3.6-1 may result in the exclusion of a subset of valves that may be opened during normal plant operation or testing and are required to be opened during accident conditions and a subset of valves that are normally closed during normal operation and are required to be open during accident conditions. Based on this application, valves such as hydrogen concentration monitoring cabinet (HCMC) valves are not required to be on the table. However, the intent appears to be that all non-automatic valves be listed since other valves such as the service water valves were on the original Table 3.6-1 and are still part of the table as it stands.

The non-automatic containment isolation valves can be broken into three separate groups. Those that are closed during normal operation and not required to be open during accident conditions, those that are required to be opened for normal plant operation or testing, and those that are normally closed during normal operation and are required to be open during accident conditions. All three groups of valves are included on Table 3.6-1. Also, Technical Specification paragraph 3.6.A.1 and the Basis contained in Section 3.6 have been revised to be in agreement with section 1.10.

Based on the revised definition in Section 1.10, the following valves are being added to Table 3.6-1:

A. SP-SOV-506 through SP-SOV-516

Post-accident containment sampling lines for the hydrogen monitoring system use normally closed/fail closed solenoid operated valves for containment isolation located outside vapor containment. Each sample supply line has an installed valve serving as an inboard isolation barrier. The outboard isolation barrier is provided by a single valve installed in the supply header. The return lines have two valves in series. Based on the original design/licensing basis of the plant, these lines are specifically designed for use in a post-accident condition; and as such, it appears they were not included on Table 3.6-1 previously, based on Section 1.10.1 wording.

An non-redundant automatic Phase A isolation signal is provided, but is not required since this system is essential for post accident operation. Capability to close these containment isolation valves (CIVs) is assured during a single failure of the Containment Phase A Isolation signal by using the control room switches (Reference 1).

The present configuration and associated controls for the containment isolation and weld channel valves for the HCMCs meet all plant design basis requirements provided that administrative controls are placed during system testing and operation.

Section 3.6 of the station's Technical Specification discusses the Containment System. Table 3.6-1 in this section lists non-automatic isolation valves open continuously or intermittently for plant operation. The containment isolation valves for the HCMCs are not currently listed in this table even though they may be intermittently opened during plant operation for testing purposes. Because these valves are now clearly covered by the proposed definition in section 1.10, and they are not provided with protective signal redundancy from the Containment Phase A Isolation circuitry, automatic containment isolation of these lines is not single failure proof; thus, these valves should be categorized as "non-automatic containment isolation valves" and are to be listed in Table 3.6-1.

B. AC-MOV-822A and AC-MOV-822B.

Lines 53 and 52 (penetration number 25 and 26) are the Residual Heat Removal heat exchanger (RHR HX) #31 Component Cooling Water (CCW) supply and return lines. In order for RHR HX #31 to perform its intended function, this line must be functional. CCW is the cooling medium for the RHR HX. CCW flows through the shell side of RHR HX #31 cooling the reactor coolant system (RCS) in the HX tubes. The function of RHR HX #31 is to remove decay heat and cooldown the RCS during normal and post accident conditions.

The RHR HX #31 CCW supply and return piping has two containment isolation valves. The containment isolation valve in line #53, supply line, is check valve AC-751A. Valve AC-751A is located in the pipe penetration area. The containment isolation valve in line #52, the return line, is AC-MOV-822A. It is also located in the pipe penetration area. Normally closed valve AC-MOV-822A does not get a containment isolation signal, but does open on Safety Injection (SI)(Reference 2).

Lines #53A and #52A (penetration number 25 and 26) are the RHR HX #32 CCW supply and return lines. In order for RHR HX #32 to perform its intended function, this line must be functional. CCW is the cooling medium for the RHR HX. CCW flows through the shell side of RHR HX #32, cooling the RCS in the HX tubes. The function of RHR HX #32 is to remove decay heat and cooldown the RCS during normal and post accident conditions.

The RHR HX #32 CCW supply and return piping has two containment isolation valves. The containment isolation valve in line #53A, supply line, is check valve AC-751B. Valve AC-751B is located in the pipe penetration area. The containment isolation valve in line #52A, the return line, is AC-MOV-822B. It is also located in the pipe penetration area. Normally closed valve AC-MOV-822B does not get a containment isolation signal, but does open on Safety Injection (Reference 2).

Valves AC-MOV-822A and AC-MOV-822B are normally closed during operation. While performing operational verification of these valves, in accordance with NYPA's approved Inservice Testing Program, the valves are opened. If the plant enters into an accident condition during valve testing, the valves will receive a Safety Injection signal and will already be in the proper configuration. That is, they will be in the open position and able to perform their safety function.

Adding these valves assures consistency with existing valves on the table (i.e. 1835A, 1835B, Amendment 152) and with the revised definition (section 1.10) of containment integrity.

C. CB-3, CB-4, CB-7, CB-8

These CIVs are for the outer and inner doors of the equipment hatch airlock (CB-7 and CB-8) and the outer and inner doors of the personnel airlock (CB-3 and CB-4). The isolation valves are integral with the airlock mechanism and open and close when opening or closing the handwheel of the associated airlock door (Reference 3). Since these valves are an integral part of the airlocks, operation of them is controlled under the current Technical Specification paragraph 1.10.3 that has been renumbered to 1.10.5..

This change does not involve any potential initiating events that would create any new or different kind of accident and does not involve a significant reduction in a margin of safety. The valves are being added to be consistent with the revised definition of containment integrity and are administratively controlled to meet FSAR and Technical Specification requirements (References 4, 5 and 6). Therefore the change does not increase the probability or consequence of an accident previously evaluated.

<u>Change (2)</u>

Revise Table 4.4-1, "Containment Isolation Valves", to include footnote (7) as a superscript to valves SP-SOV-506 and SP-SOV-507.

Footnote (7) states that the noted valves are sealed from weld channel and containment penetration pressurization system (WCCPPS). CIVs SP-SOV-508 through 516 currently have footnote (7) applied. A field walkdown verified that valves SP-SOV-506 and 507 also have pressure from WCCPPS applied to the pipeline between them.

Table 4.4-1 in Section 4.4 of the station's Technical Specification lists the containment isolation valves which must be periodically leak tested. Footnote (7) is applied as a superscript to valves SP-SOV-508 through SP-SOV-516, but is not applied to valves SP-SOV-506 and SP-SOV-507 even though all eleven valves are HCMC CIVs. Footnote (7) states that the noted valves are sealed from WCCPPS. The addition of the superscript is administrative with no physical change to the configuration and it ensures Table 4.4-1 is consistent with the installed configuration (FSAR Section 5.2-3).

Section III - No Significant Hazards Evaluation

In accordance with the requirements of 10 CFR 50.92, the enclosed application is judged to involve no significant hazards based upon the following information:

1. **Does the proposed license amendment involve a significant increase in the probability or consequences of an accident previously evaluated?**

   The revision of the definition of containment integrity in Section 1.10, Section 3.6.A.1, the Basis, and the addition of existing containment isolation valves into the Table of Containment Isolation Valves in the Technical Specifications does not change the design, operation or testing of the plant. Section 1.10 is being revised to clearly cover all non-automatic containment isolation valves, and the valves are being added to be consistent with the revised definition. The valves being added are currently identified as containment isolation valves and tested as specified in the Final Safety Analysis Report. Additionally, valves CB-3, 4, 7 & 8 are controlled in accordance with Section 1.10.5 (revised numbering) for the airlock doors. Because the design and operation are not being changed, the addition of the valves has no effect on the probability or consequences of an accident.

2. **Does the proposed license amendment create the possibility of a new or different kind of accident from any accident previously evaluated?**

   Changing the definition in Section 1.10 and the list of containment isolation valves for consistency does not change the design, operation or testing of the plant. Section 1.10 is being revised to clearly cover all non-automatic containment isolation valves, and the valves are being added to be consistent with the revised definition. The valves being added are currently identified as containment isolation valves and tested as specified in the Final Safety Analysis Report. Therefore, without changing design, operation or testing of the plant this does not create a new or different type of accident.

3. **Does the proposed amendment involve a significant reduction in a margin of safety?**

The proposed changes in the definition for containment integrity and the listings of Containment Isolation Valves in the Technical Specifications does not involve a significant reduction in the margin of safety because the change reflects current design, operation and testing of the plant, and will not alter plant operation.

Section IV - Impact of Changes

These changes will not adversely impact the following:

1. ALARA Program
2. Security and Fire Protection Programs
3. Emergency Plan
4. FSAR or SER Conclusions
5. Overall Plant Operations and the Environment

Section V - Conclusions

The incorporation of these changes: a) will not increase the probability nor the consequences of an accident or malfunction of equipment important to safety as previously evaluated in the Safety Analysis Report; b) will not increase the possibility for an accident or malfunction of a different type than any evaluated previously in the Safety Analysis Report; c) will not reduce the margin of safety as defined in the bases for any Technical Specification; and d) involves no significant hazards considerations as defined in 10 CFR 50.92.

Section VI - References

1. NYPA NSE 97-3-077 VCHA, Rev. 0, "Channelization of Containment Isolation for Hydrogen Monitors."
2. Final Safety Analysis Report, Table 5.2-3, "Containment Piping Penetrations and Valving"
3. Instruction Manual for Airlocks and Closures, Chicago Bridge & Iron Company
4. 3PT-R35, Rev. 9, "Containment Isolation Valve Leakage Test"
5. SOP-CB-2, Rev. 20, "Containment Entry and Egress"
6. SOP-CB-1, Rev. 21, "Establishment of Containment Integrity"
7. Licensee Event Report # 97-002-00, "Containment Isolation Valves for the Hydrogen Monitoring System Were Open During Testing But Not Listed in the Technical Specification Table of Non-Automatic Valves Open Continuously or Intermittently Due to a Personnel Error; A Condition Prohibited by Technical Specifications."

ATTACHMENT III TO IPN-97-070

MARK-UP OF TECHNICAL SPECIFICATION PAGES

REGARDING THE CLARIFICATION OF CONTAINMENT INTEGRITY

AND CHANGES TO SECTIONS 1.10 and 3.6, TABLE 3.6-1 AND TABLE 4.4-1

NOTE 1: Deletions are shown in ~~strikeout~~. Additions are shown in **bold**.

NOTE 2: Previous amendment numbers and the revision bars are not shown.

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1.9.2 Instrument Channel Functional Test

Injection of a simulated signal into the channel to verify that it is operable, including alarm and/or trip initiating actions.

1.9.3 Instrument Channel Calibration

Adjustment of channel output such that it responds, with acceptable range and accuracy, to known values of the parameter which the channel measures. Calibration shall encompass the entire channel, including alarm or trip, and shall be deemed to include the channel functional test.

1.9.4 Logic Channel Functional Test

The operation of relays or switch contacts, in all the combinations required, to produce the required output.

1.10 CONTAINMENT INTEGRITY

Containment integrity is defined to exist when:

~~1.10.1 All non-automatic containment isolation valves which are not required to be open during accident conditions, except those required to be open for normal plant operation or testing as identified in Table 3.6-1, are closed and blind flanges are installed where required.~~

1.10.1 Non-automatic containment isolation valves (Table 3.6-1) are closed or may be opened under administrative control and only as long as necessary to perform their intended function.

1.10.2 Blind flanges, that provide an isolation function which are shown in FSAR drawings, are maintained installed.

1.10.3 Any test connection, vent or drain valve that is located within the isolation boundary and is required to perform an isolation function is closed and capped (threaded) or blind flanged as shown in FSAR drawings.

1.10.4 ~~1.10.2~~ The equipment door is properly closed.

1.10.5 ~~1.10.3~~ Both doors in each personnel air lock are properly closed unless being used for entry, egress or maintenance, at which time at least one air lock door shall be closed.

1.10.6 ~~1.10.4~~ All automatic containment isolation valves are either operable or in the closed position, or isolated by a closed manual valve or flange that meets the same design criteria as the isolation valve.

3.6 CONTAINMENT SYSTEM

Applicability

Applies to the integrity of reactor containment.

Objective

To define the operating status of the reactor containment for plant operation.

Specification

A. Containment Integrity

1. Containment integrity (as defined in 1.10) shall not be violated unless the reactor is in the cold shutdown condition. ~~Those non-automatic valves listed in Table 3.6-1, may be opened if necessary for plant operation and only as long as necessary to perform the intended function.~~ **Those valves to be opened continuously or intermittently are under administrative control and are open only as long as necessary to perform their intended function.**

2. The containment integrity shall not be violated when the reactor vessel head is removed unless the boron concentration is sufficient to maintain the shutdown margin equal to or greater than the requirements of specification 3.8.D.

3. If the containment integrity requirements are not met when the reactor is above cold shutdown, containment integrity shall be restored within one hour or the reactor shall be in the hot shutdown condition within six hours and in cold shutdown condition within the next 30 hours.

B. Internal Pressure

If the internal pressure exceeds 2.5 psig or the internal vacuum exceeds 2.0 psig, the condition shall be corrected or the reactor shutdown.

Regarding internal pressure limitations, the containment design pressure of 47 psig would not be exceeded for a major loss-of-coolant accident or for a main steam line break accident.[1] The loss-of-coolant accident event bounds the main steam line break accident from the containment peak pressures standpoint. The initial pressure condition used in the containment analysis was 2.5 psig.[1] The containment can withstand an internal vacuum of 3 psig.[2] The 2.0 psig vacuum specified as an operating limit avoids any difficulties with motor cooling.

The requirement of a 50°F minimum containment ambient temperature is to assure that the minimum service metal temperature of the containment liner is well above the NDT + 30°F criterion for the liner material. [3]

Limiting maximum containment ambient temperature will ensure that the peak accident containment pressure does not exceed the design limit of 47 psig during steamline break or loss of coolant accidents. Environmentally and seismically qualified RTDs mounted on the crane wall above the containment fan cooler units inlet are normally used for measuring containment ambient temperature. Portable temperature sensing equipment may also be used, provided the criteria of 3.6.C.3 are met.

Table 3.6-1 lists non-automatic valves that are designated as part of the containment isolation function. [4] During periods of normal plant operations requiring containment integrity, **some of the** valves on this Table will be open either continuously or intermittently depending on requirements of the particular protection, safeguards or essential service systems. Those valves to be opened are under administrative control and are open only as long as necessary to perform their intended function. ~~In all cases, however, the valves listed in Table 3.6-1 are closed during the post accident period in accordance with plant procedures and consistent with requirement of the related protection, safeguards, or essential service systems.~~ **Some of the valves listed in Table 3.6-1 are closed during the post accident period in accordance with plant procedures and consistent with requirements of the related protection, safeguards, or essential service systems.**

The opening angle of the containment vent isolation valves is being limited as an analysis demonstrates valve operability against accident containment pressures provided the valves are limited to a maximum opening angle of 60°. The containment purge supply and exhaust isolation valves are required to be closed during plant operation above cold shutdown.

REFERENCES

(1) FSAR - Section 14.3.6

(2) FSAR - Appendix 5A, Section 3.1.8

(3) FSAR - Section 5.1.1.1

(4) FSAR - Section 5.2

TABLE 3.6-1

NON-AUTOMATIC CONTAINMENT ISOLATION VALVES

OPEN CONTINUOUSLY OR INTERMITTENTLY FOR PLANT OPERATION

VALVE NO.	VALVE NO.	VALVE NO.
AC-MOV-744	SI-MOV-1835B	SWN-71-4
AC-MOV-1870	SI-859A	SWN-71-5
AC-MOV-743	SI-859C	SA-24-1
AC-MOV-822A	AC-752F	SA-24-2
AC-MOV-822B	AC-753F	PS-PCV-1111-1
SP-990C	AC-752J	PS-PCV-1111-2
AC-732	AC-753J	SP-MOV-990A
SI-MOV-885A	SWN-41-1	SP-MOV-990B
SI-MOV-885B	SWN-43-1	SI-1814A
SI-MOV-888A	SWN-41-2	SI-1814B
SI-MOV-888B	SWN-43-2	SI-1814C
CH-MOV-205	SWN-41-3	PS-7
CH-MOV-226	SWN-43-3	PS-8
CH-227	SWN-41-4	PS-9
CH-MOV-250A	SWN-43-4	PS-10
CH-MOV-441	SWN-41-5	**SP-SOV-506**(1)
CH-MOV-250B	SWN-43-5	**SP-SOV-507**(1)
CH-MOV-442	SWN-44-1	**SP-SOV-508**(1)
CH-MOV-250C	SWN-51-1	**SP-SOV-509**(1)
CH-MOV-443	SWN-44-2	**SP-SOV-510**(1)
CH-MOV-250D	SWN-51-2	**SP-SOV-511**(1)
CH-MOV-444	SWN-44-3	**SP-SOV-512**(1)
SI-869A	SWN-51-3	**SP-SOV-513**(1)
SI-869B	SWN-44-4	**SP-SOV-514**(1)
SI-878A	SWN-51-4	**SP-SOV-515**(1)
SI-878B	SWN-44-5	**SP-SOV-516**(1)
SI-MOV-851A	SWN-51-5	**CB-3**
SI-MOV-850A	SWN-71-1	**CB-4**
SI-MOV-850C	SWN-71-2	**CB-7**
SI-MOV-1835A	SWN-71-3	**CB-8**

(1) **Note: These series valves have non-redundant Phase A automatic signals and therefore are treated as non-automatic containment isolation valves.**

CONTAINMENT ISOLATION VALVES			
Valve No.	Penetration Number[1]	Test Fluid[2]	Minimum Test Pressure (PSIG)[8]
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SWN-51-5	40	Water[6]	47
SWN-71-1	40	Water[6]	47
SWN-71-2	40	Water[6]	47
SWN-71-3	40	Water[6]	47
SWN-71-4	40	Water[6]	47
SWN-71-5	40	Water[6]	47
SA-24-1	41	Water[4]	47
SA-24-2	41	Water[4]	47
VS-FCV-1170	48	Gas[7]	43
VS-FCV-1171	48	Gas[7]	43
VS-FCV-1172	49	Gas[7]	43
VS-FCV-1173	49	Gas[7]	43
VS-FCV-1190	50	Gas[7]	43
VS-FCV-1191	50	Gas[7]	43
VS-FCV-1192	50	Gas[7]	43
SP-MOV-990A	51	Nitrogen[4]	43
SP-MOV-990B	51	Nitrogen[4]	43
SP-AOV-956A	52	Water[4]	47
SP-AOV-956B	52	Water[4]	47
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