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July 13, 2001

Re: Indian Point Unit No. 2
Docket No. 50-247
NL 01-095

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Mail Stop O-P1-17
Washington, D.C. 20555-0001

SUBJECT: Indian Point 2 License Amendment Request – Removal of Containment Isolation Valve Lists from the Technical Specifications

Transmitted herewith is an Application for Amendment to the Operating License. The application requests an amendment to the Consolidated Edison Company of New York, Inc. (Con Edison) Indian Point Unit No. 2 (IP2) Technical Specifications (TS). These changes consist of removal of TS Table 3.6-1, "Non-Automatic Containment Isolation Valves Open Continuously or Intermittently for Plant Operation," and Table 4.4-1, "Containment Isolation Valves," and corresponding changes to support removal of these tables. These component lists are being removed from the TS in accordance with the guidance provided in Generic Letter 91-08, "Removal of Component Lists from Technical Specifications," as well as the guidance in the Standard Technical Specifications (NUREG 1431). The details of the proposed changes are provided in the attachments to this letter.

Attachment 1 to this letter provides the description and evaluation of the proposed changes. The revised TS pages are provided in Attachment 2 (strikeout/shadow format).

The proposed TS changes do not require immediate implementation. However, Con Edison requests a timely review and that the proposed changes be approved by January 15, 2002 with an effective date within 60 days of approval. Implementation of this TS change will facilitate the implementation of Standard Technical Specifications at IP2.

The Station Nuclear Safety Committee (SNSC) and the Nuclear Facilities Safety Committee (NFSC) have reviewed the proposed changes. Both committees concur that the proposed changes do not involve a significant hazards consideration as defined by 10CFR50.92(c).

In accordance with 10CFR50.91, a copy of this submittal and the associated attachments are being submitted to the designated New York State official.

A001

There are no commitments contained in this submittal.

Should you or your staff have any questions regarding this submittal, please contact Mr. John F. McCann, Manager, Nuclear Safety and Licensing at (914) 734-5074.

Very truly yours,

James S. Baumstark
Vice President - Nuclear Engineering

Attachments

cc:

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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

In the Matter of	)	
CONSOLIDATED EDISON COMPANY	)	Docket No. 50-247
OF NEW YORK, INC.	)	
(Indian Point Station, Unit No. 2)	)	

APPLICATION FOR AMENDMENT
TO OPERATING LICENSE

Pursuant to Section 50.90 of the Regulations of the Nuclear Regulatory Commission (NRC), Consolidated Edison Company of New York, Inc. (Con Edison), as holder of Facility Operating License No. DPR-26, hereby applies for amendment of the Technical Specifications contained in Appendix A of this license.

The specific proposed Technical Specification revisions are set forth in the attachments. The associated assessments demonstrate that the proposed changes do not involve a significant hazards consideration as defined in 10CFR50.92(c).

As required by 10CFR50.91(b)(1), a copy of this Application and our analysis concluding that the proposed changes do not involve a significant hazards consideration have been provided to the appropriate New York State official designated to receive such amendments.

BY: _____
James S. Baumstark
Vice President - Nuclear Engineering

Subscribed and sworn to
before me this 13 day
July, 2001.

_____ (Bronx)
Notary Public

ERSILIA A. AMANNA
Notary Public, State of New York
No. 01AM6038689
Qualified in Westchester County
Commission Expires March 20, 2002

ATTACHMENT 1 TO NL 01-095

LICENSE AMENDMENT REQUEST

CONSOLIDATED EDISON COMPANY OF NEW YORK, INC
INDIAN POINT UNIT NO. 2
DOCKET NO. 50-247

LICENSE AMENDMENT REQUEST

DESCRIPTION OF THE PROPOSED CHANGE

Consolidated Edison Company of New York, Inc. (Con Edison) is requesting changes to the Indian Point Unit No. 2 (IP2) Technical Specifications (TS) that remove TS Table 3.6-1, "Non-Automatic Containment Isolation Valves Open Continuously or Intermittently for Plant Operation," and Table 4.4-1, "Containment Isolation Valves," and include editorial revisions that support removal of these tables. The component lists are being removed using the guidance provided in Generic Letter (GL) 91-08, "Removal of Component Lists from Technical Specifications." This action is consistent with the Standard Technical Specifications (STS) presented in NUREG-1431, "Standard Technical Specifications, Westinghouse Plants."

The proposed changes to the TS are described below.

TS Affected	Description
List of Tables	Remove listing for Tables 3.6-1 and 4.4-1.
1.7.a	Revise definition of containment integrity to reflect the change to TS regarding valves opened under administrative controls.
3.6.A.1.a	Remove reference to Table 3.6-1. Add requirement for administrative controls for non-automatic valves that are opened intermittently.
3.6.A.4	Remove specification. This specification no longer applies due to removal of Table 3.6-1
3.6 Bases	Remove reference to Table 3.6-1. Define administrative controls for non-automatic valves that are opened while containment integrity is required. Provide clarification to administrative controls for residual heat removal (RHR) system containment isolation valve 732. Provide clarification to administrative controls for non-automatic, remote manual containment isolation valves operated intermittently from the control room.
Table 3.6-1	Delete Table.
4.4.D	Remove reference to Table 4.4-1
4.4.D.1.d	Remove specification. This specification no longer applies due to removal of Table 4.4-1.
4.4.D.3	Remove specification. This specification no longer applies due to removal of Table 4.4-1.
4.4 Bases	Remove reference to Table 4.4-1.
Table 4.4-1	Remove Table

EVALUATION OF THE PROPOSED CHANGE

TS Table 3.6-1 provides a listing of non-automatic containment isolation valves open continuously or intermittently for plant operation. TS Table 4.4-1 provides a listing of containment isolation valves that require testing under TS 4.4, Containment Tests. These tables consist of component lists that can be removed from the TS in accordance with the guidelines of GL 91-08.

The removal of component lists from the TS is acceptable in GL 91-08 because such removal does not alter existing TS requirements or those components to which they apply. The removal of component lists from the TS would permit administrative control of changes to the lists subject to the provisions of 10CFR50.59. There would no longer be a need to process a license amendment, as is required to update TS component lists. This provides an adequate means of controlling changes to the lists without retaining the component lists within the TS.

The guidance from GL 91-08 for relocation of the containment isolation valve component lists and the Con Edison method of complying with the guidance follows:

GL 91-08 Guidance Item 1

Guidance

The TS should be revised to include an explicit description of those components for which the TS requirements apply. For containment isolation valves, the TS should be revised to state, "Each containment isolation valve shall be OPERABLE." The reference to the TS Tables should be deleted.

Con Edison Method of Complying

The proposed TS meets this guidance in the revised definition of TS 1.7 and the requirements of TS 3.6.A. The proposed TS deletes the references to Tables 3.6-1 and 4.4-1.

GL 91-08 Guidance Item 2

Guidance

Although some components may be listed in the Updated Final Safety Analysis Report (UFSAR), the UFSAR should not be the sole means to identify these components. To highlight the change controls of 10CF50.59 or to clarify other issues related to these components, licensees may wish to include these component lists in the next update of the FSAR. The Bases section of the TS may reference the plant procedures where these lists are located; however, component lists should not be included in the Bases. It would be inappropriate for a limiting condition for operation to reference the FSAR or any other document to specify those individual components to which the TS requirements apply.

Con Edison Method of Complying

IP2 lists both the non-automatic containment isolation valves that are open continuously or intermittently for plant operation (Table 3.6-1) and the required containment isolation valves

in verifying the combined leakage rate for all containment bypass leakage paths (Table 4.4-1) in various locations that are subject to 10CFR50.59 change control provisions. This includes the UFSAR, plant valve check-off lists, surveillance test procedures, and system operating procedures. UFSAR Table 5.2-1, "Containment Piping Penetrations and Valving," provides a listing of containment isolation valves and references various UFSAR figures that illustrate the valve numbers and line penetration numbers.

The TS 4.4.D.1.d requirement to perform containment isolation valve tests at the fluid and minimum test pressures provided in TS Table 4.4-1 will be deleted along with TS Table 4.4.1. Containment isolation valve testing is performed in accordance with TS 4.4.D.1.a that requires testing in accordance with 10CFR50 Appendix J. The test pressures and medium will be specified in procedures implementing TS 4.4.D.1.a.

GL 91-08 Guidance Item 3

Guidance

The list of containment isolation valves typically includes footnotes that modify the TS requirements for these valves. Such notes must be incorporated into the associated LCO so that they remain in effect when the table containing these footnotes is removed from the TS.

Con Edison Method of Complying

For IP2, Table 3.6-1 has one associated footnote and Table 4.4-1 has seven associated footnotes. None of these footnotes meet the criteria presented in GL 91-08 for retention in the TS. These footnotes are descriptive in nature or provide information but do not modify the TS requirements for these valves. The descriptive information is found in other plant documentation as follows:

Table and Footnote No.	Footnote	Disposition
3.6-1 (1) 4.4-1 (6)	Either A or B valve(s) may be used for the required isolation valves for SWN valves	UFSAR Figure 5.2-16
4.4-1 (1) and (2)	Explains Table headers	None required
4.4-1 (3)	RHR Valves 732, 741A, and 744 only testable at Cold shutdown	Procedures implementing TS 4.4.D.1.a
4.4-1 (4)	Identifies valves sealed by the Isolation Valve Seal Water System	UFSAR Table 5.2 –1 Figure 5.2 – various UFSAR 6.5, Isolation Valve Seal-Water system UFSAR Figure 6.5-1

4.4-1 (5)	Identifies valves 741A and 885A&B as sealed by the Residual Heat Removal System fluid	UFSAR Table 5.2 –1 UFSAR Figure 5.2-2
4.4-1 (7)	Identifies valves sealed by the Weld Channel and Penetration Pressurization System	UFSAR Table 5.2 –1 UFSAR Paragraph 6.6, Containment Penetration and Weld Channel Pressurization System UFSAR figure 6.6-1

GL 91-08 Guidance Item 4

Guidance

The TS Bases should describe specifically those considerations that constitute acceptable administrative controls for opening locked or sealed closed containment isolation valves

Con Edison Method of Complying

A revision to the TS bases is being proposed to include specific administrative controls for opening locked or sealed closed containment isolation valves. The specific administrative controls are consistent with the STS that require the stationing of a dedicated operator at or near the valve controls, who is in continuous communication with the control room. In this way the penetration can be rapidly isolated when a need for containment isolation is indicated. The dedicated operator is permitted to be stationed nearby, so as to minimize the radiation exposure associated with the compensating action. Transit time to the valve will remain less than two minutes. Further additional clarification is provided for RHR valve 732 and other non-automatic remote-manual containment isolation valves operated intermittently from the control room.

For the RHR 732 valve a dedicated operator is not being required when the Reactor Coolant System temperature is less than 350°F. RHR valve 732 is the RHR system isolation valve for the RHR pumps' suction from the RCS. When the reactor is at power, the RHR pumps are lined up as standby Safety Injection (SI) pumps taking suction from the Refueling Water Storage Tank (RWST). The RHR pumps' suction is isolated from the RCS by two motor operated (MOV) reactor pressure boundary isolation valves, 730 and 731, and manual containment isolation valve (CIV), 732. All these valves are closed. When the reactor is not in operation and when the RCS temperature is below 350°F, the RHR system performs safe shutdown functions to transfer decay heat from the RCS and to mix the soluble poison. This safe shutdown requirement is prescribed in the IP2 TS 3.A-1 and described in UFSAR 9.3.2.2. The functions are also described in NUREG-1431, Westinghouse Standard Technical Specifications Section 3.4.6, Reactor Coolant System, RCS Loops – Mode 4, and Bases. In order to perform the safe shutdown functions, the RHR pumps are lined up to take suction from the RCS by opening valves MOV 730, MOV 731, and CIV 732. The RHR suction valve from the RWST is closed establishing a closed RHR system loop outside the

containment. Since the RHR system is only lined up in this configuration after the reactor has been cooled to <350°F, the lineup will not occur until several hours after reactor shutdown. Requiring the placement of a dedicated operator at valve 732 during a plant cooldown is an inappropriate use of resources and contrary to requirements to maintain radiation exposure as low as reasonably achievable at a time when the RHR system is operating continuously to transition the plant to cold shutdown. If in the unlikely event there is a need for safety injection after the RHR system has been aligned to its safe shutdown mode, plant procedures are in place to effectively accomplish the RHR system transition to safety injection and the re-imposition of the containment barriers at valve 732. Therefore, operation of this non-automatic CIV under the administrative constraints of operating procedures ensures an adequate means of control and is consistent with the plant and system design.

For non-automatic containment isolation valves that can be operated from the control room, the dedicated operator will consist of the normally stationed control room operator. This operator is continuously present in the control room to control valve position. Thus the intent of the dedicated operator administrative control is met.

The proposed Bases follow the criteria given in the STS Action Statement for containment isolation valves in that administrative controls are required for intermittently unisolating penetration flow paths. Further, these valves are open only as long as necessary to perform their intended operational function. The current provisions for employing administrative controls do not prevent IP2 from providing rapid isolation should the need for containment isolation be warranted. Therefore, the proposed bases for this license amendment meet the intent of GL 91-08 recommendations for consideration to be covered by administrative controls.

As part of the requested TS change, IP2 is not requesting any changes to the existing component lists. However, there are separate actions that are in process that will affect the component lists. A previous LAR (Ref. 1) proposes changes to Tables 3.6-1 and 4.4-1 to delete valves 990A and 990B (Table 3.6-1 only) and add valves IIP-500 through IIP-507. Additionally, the containment penetration that contains valves 580A and 580B has been cut and capped. When these valves are removed from the plant at a later date, the containment isolation valve list will be updated. These actions do not affect the proposed changes to delete these component lists from the TS or the justification for the proposed changes.

The proposed changes are similar to changes provided for Indian Pont Unit 3 (IP3) in amendment 195 (Ref. 2) that deleted the containment isolation valve lists provided by IP3 TS Tables 3.6-1 and 4.4-1.

NO SIGNIFICANT HAZARDS CONSIDERATION

The proposed changes described above do not involve a significant hazards consideration. This conclusion is based on the evaluation, in accordance with 10CFR50.91(a)(1), of the three standards set forth in 10CFR50.92(c).

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

   The proposed changes consist of removal of the containment isolation valve component lists from the IP2 TS and corresponding editorial changes to support removal of the tables. The changes are being made in accordance with the guidance provided by the NRC in GL 91-08 and do not alter existing TS requirements or those components to which the TS requirements apply. The information contained in the Tables being removed is duplicated in the UFSAR and other appropriate plant procedures. Any subsequent changes regarding the individual components or their operation would be evaluated under the requirements of 10CFR50.59. The proposed changes do not involve a change to the design or operation of any plant structure, system, or component. Nor are the safety analyses affected as a result of the changes. Accordingly, the initiators of any accident as well as any structure, system or component relied upon for the mitigation of the accident are not affected by the proposed changes.

   Therefore, there is no increase in the probability or in the consequences of an accident previously evaluated.

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

   The proposed changes do not involve a change to the design or operation of the any plant structure, system or component. The proposed changes involve the removal of component lists for containment isolation valves from the TS. In accordance with the guidance provided by GL 91-08, the conditions, actions, and requirements of the TS will apply to those valves that are classified as containment isolation valves by the plant licensing basis. This includes the testing of Containment Isolation Valves as required by 10CFR50 Appendix J and IP2 TS 4.4.D.1.a. Required specifications and requirements of the tables remain applicable. There are no changes to any parameter used in the accident analyses. Therefore, the proposed changes do not create the possibility of a new or different kind of accident for any previously evaluated.

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

   The proposed changes are in accordance with the guidance provided by the NRC in GL 91-08 and NUREG-1431, Standard Technical Specifications. The changes will maintain current safety margins while reducing the regulatory and administrative burdens to both the NRC and IP2. The proposed changes will not result in changes to the design or operation of any plant system and do not involve changes to any margin of safety.

CONCLUSION

The removal of the component lists from the TS is acceptable because the removal does not alter existing TS requirements or any structure, system, or component. The removal of the component lists from the TS permits administrative control of the lists subject to the provisions of 10CFR50.59 without the need to process a license amendment. This provides an adequate means

of controlling changes to the lists. These changes do not involve physical changes to the plant, changes to the operation of plant systems, or changes that affect the plant safety analyses. Accordingly, these changes do not involve a significant hazards consideration. The Station Nuclear Safety Committee (SNSC) and the Nuclear Facilities Safety Committee (NFSC) have reviewed the proposed changes. Both committees concur that the proposed changes do not involve a significant hazards consideration as defined by 10 CFR 50.92 (c).

ENVIRONMENTAL ASSESSMENT

An environmental assessment is not required for the above proposed change because the requested change to the Indian Point Unit 2 Technical Specifications conforms to the criteria for "actions eligible for categorical exclusion," as specified in 10 CFR 51.22(c)(9). The requested change will have no impact on the environment. The proposed change does not involve a significant hazards consideration as discussed in the preceding section. The proposed change does not involve a significant change in the types or significant increase in the amounts of any effluents that may be released offsite. In addition, the proposed change does not involve a significant increase in individual or cumulative occupational radiation exposure.

REFERENCES

1. Con Edison letter NL 00-017 to NRC dated February 14, 2000, "Proposed Technical Specification Amendment Consisting of Administrative Changes"

2. NRC letter to Power Authority of the State of New York dated September 16, 1999, "Issuance of Amendment for Indian Point Nuclear Generating Unit No.3 Re: Removal of Containment Isolation Valve Tables (TAC No. MA4678)"

ATTACHMENT 2 TO NL 01-095

LICENSE AMENDMENT REQUEST

TECHNICAL SPECIFICATION PAGES IN

STRIKEOUT/SHADOW FORMAT

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CONSOLIDATED EDISON COMPANY OF NEW YORK, INC
INDIAN POINT UNIT NO. 2
DOCKET NO. 50-247

LIST OF TABLES

Title	Table No.
Frequency Notation	1-1
Reactor Coolant (RC) Pumps/Residual Heat Removal (RHR) Pump(s) Operability/Operating Requirements for Decay Heat Removal and Core Mixing	3.1.A-1
OPS Operability Requirements	3.1.A-2
Maximum Allowable Power Range Neutron Flux High Setpoint with Inoperable Steam Line Safety Valves During 4-Loop Operation	3.4-1
Engineered Safety Features Initiation Instrument Setting Limits	3.5-1
Reactor Trip Instrumentation Limiting Operating Conditions	3.5-2
Instrumentation Operating Conditions for Engineered Safety Features	3.5-3
Instrumentation Operating Conditions for Isolation Functions	3.5-4
Accident Monitoring Instrumentation	3.5-5
~~Non-Automatic Containment Isolation Valves Open Continuously or Intermittently for Plant Operation~~	~~3.6-1~~
Radioactive Liquid Effluent Monitoring Instrumentation	3.9-1
Radioactive Gaseous Effluent Monitoring Instrumentation	3.9-2
Meteorological Monitoring Instrumentation	3.15-1

LIST OF TABLES (Cont'd)

Title	Table No.
Minimum Frequencies for Checks, Calibrations and Tests of Instrument Channels	4.1-1
Frequencies for Sampling Tests	4.1-2
Frequencies for Equipment Tests	4.1-3
Inservice Inspection Requirements for Indian Point No. 2	4.2-1
~~Containment Isolation Valves~~	~~4.4-1~~
Radioactive Liquid Waste Sampling and Analysis Program	4.10-1
Radioactive Liquid Effluent Monitoring Instrumentation Surveillance Requirements	4.10-2
Radioactive Gaseous Waste Sampling and Analysis Program	4.10-3
Radioactive Gaseous Effluent Monitoring Instrumentation Surveillance Requirements	4.10-4
Radiological Environmental Monitoring Program	4.11-1
Reporting Levels for Radioactivity Concentrations in Environmental Samples	4.11-2
Detection Capabilities for Environmental Sample Analysis	4.11-3
Steam Generator Tube Inspection	4.13-1
Meteorological Monitoring Instrumentation Surveillance Requirements	4.19-1
Minimum Shift Crew Composition	6.2-1

1.6 INSTRUMENTATION SURVEILLANCE

1.6.1 Channel Check

A qualitative determination of acceptable operability by observation of channel behavior during operation. This determination shall include, where possible, comparison of the channel with other independent channels measuring the same variable.

1.6.2 Channel Functional Test

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

1.6.3 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.

1.6.4 Source Check

A Source Check is the qualitative assessment of channel response when the channel sensor is exposed to a source of increased radioactivity.

1.7 CONTAINMENT INTEGRITY

Containment integrity is defined to exist when:

a. 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 Specification 3.6.A~~, are closed and blind flanges are installed where required.

b. The equipment door is properly closed.

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.

Specifications

A. CONTAINMENT INTEGRITY

1. The following requirements shall be satisfied: (a) whenever the reactor is above cold shutdown or (b) whenever the reactor vessel head is less than fully tensioned, and (i) the shutdown margin is <5% $\Delta k/k$, or (ii) the boron concentration within the reactor is less than 2000 ppm.

   a. All non-automatic containment isolation valves which are not required to be open during accident conditions are closed and blind flanges installed where required. ~~These~~ ~~n~~Non-automatic containment isolation valves ~~listed in Table 3.6-1~~ and any test connection valves which are located between containment isolation valves and which are normally closed with threaded caps or blind flanges installed, may be opened with administrative controls if necessary for plant operation or for testing and only as long as necessary to perform the intended function.

   b. 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.

   c. The equipment door is properly closed.

   d. At least one door in each personnel air lock is properly closed.

   e. The WC&PPS requirements of Specification 3.3.D are being satisfied.

   f. Containment leakage has been verified in accordance with the surveillance requirements of Specification 4.4.

2. The following additional requirements shall be satisfied during power operation:

(d) Be in cold shutdown within the following 36 hours, utilizing normal operating procedures.

~~4. Non-automatic containment isolation valves may be added to plant systems, without prior license amendment to Table 3.6-1, provided that a revision to this Table is included in a subsequent license amendment application.~~

B. INTERNAL PRESSURE

If the internal pressure exceeds 2 psig or the internal vacuum exceeds 2.0 psig, the condition shall be corrected or the reactor shut down.

C. CONTAINMENT TEMPERATURE

The reactor shall not be taken above the cold shutdown condition unless the containment ambient temperature is greater than 50°F.

Basis

The Reactor Coolant System conditions of cold shutdown assure that no steam will be formed and hence there would be no pressure buildup in the containment if a Reactor Coolant System rupture were to occur.

The shutdown margins are selected based on the type of activities that are being carried out. The shutdown margin requirement of Specification 3.8.B.2 when the head is off precludes criticality during refueling. When the reactor head is not to be removed, the specified cold shutdown margin of 1% $\Delta k/k$ precludes criticality at cold shutdown conditions.

The containment can withstand an internal vacuum of 2.5 psig. 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[1].

~~Table 3.6-1 lists non-automatic valves that are designated as part of the containment isolation function.~~ During periods of normal plant operations requiring containment integrity, non-automatic valves that are designated as part of the containment isolation function ~~on this Table will~~ may be opened either continuously or intermittently depending on requirements of the particular protection, safeguards or essential service systems. The valves ~~to be open~~ which are opened intermittently are under administrative control and are open only for as long as necessary to perform their intended function. These administrate controls consist of stationing a dedicated operator at or near the valve controls who is in continuous communication with the control room. In this way, the penetration can be rapidly isolated when the need for containment isolation is indicated. The dedicated operator is permitted to be stationed nearby, so as to minimize the radiation exposure associated with the compensating action. Transit time to the valve will remain less than two minutes. For those valves that are remote-manually operated from the control room, the dedicated operator administrative control is clarified to be the normally stationed control room operator, since this operator is continuously available to isolate the valve from the control room. An exception to these administrative controls is provided for valve 732 when the RHR system is operating in RHR Cooling mode. Valve 732 is the RHR pumps' suction line isolation valve that is continuously open during RHR cooling when the RCS temperature is < 350°F. If containment isolation is required, valve 732 is shut in accordance with administrative controls to realign the RHR system for safety injection.

In all cases, however, ~~the valves listed in Table 3.6-1~~ those containment isolation valves that are not required to be opened post-accident 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.

Reference

(1) UFSAR Section 5.1.1.1

~~Table 3.6-1~~

~~Non-Automatic Containment Isolation Valves Open Continuously Or Intermittently for Plant Operation~~

~~3418~~	~~851A~~	~~SWN-44-5-A or B(1)~~	~~1814B~~
~~3419~~	~~850A~~	~~SWN-51-5(1)~~	~~1814C~~
		~~SWN-44-1-A or B(1)~~	
~~4136~~	~~851B~~	~~SWN-51-1(1)~~	~~5018~~
			~~5019~~
~~744~~	~~850B~~	~~SWN-44-2-A or B(1)~~	~~5020~~
		~~SWN-51-2(1)~~	
~~888A~~	~~859A~~	~~SWN-44-3-A or B(1)~~	~~5021~~
~~888B~~	~~859C~~	~~SWN-51-3(1)~~	~~5022~~
~~958~~			~~5023~~
~~959~~	~~3416~~	~~SWN-44-4-A or B(1)~~	~~5024~~
~~990D~~	~~3417~~	~~SWN-51-4(1)~~	~~5025~~
~~1870~~	~~5459~~	~~SWN-71-5-A or B(1)~~	~~E-2~~
~~743~~	~~753H~~	~~SWN-71-1-A or B(1)~~	~~E-1~~
~~732~~	~~753G~~	~~SWN-71-2-A or B(1)~~	~~E-3~~
~~885A~~	~~SWN-41-5-A or B(1)~~	~~SWN-71-3-A or B(1)~~	~~E-5~~
~~885B~~	~~SWN-42-5~~	~~SWN-71-4-A or B(1)~~	~~MW-17~~
			~~MW-17-1~~
~~205~~	~~SWN-43-5~~	~~SA-24~~	~~85C~~
~~226~~	~~SWN-41-1-A or B(1)~~	~~SA-24-1~~	~~85D~~
~~227~~	~~SWN-42-1~~	~~PCV-1111-1~~	~~95C~~
~~250A~~	~~SWN-43-1~~	~~PCV-1111-2~~	~~95D~~
~~4925~~	~~SWN-41-2-A or B(1)~~	~~580A~~	
~~250B~~	~~SWN-42-2~~	~~580B~~	
~~4926~~	~~SWN-43-2~~	~~UH-43~~	
~~250C~~	~~SWN-41-3-A or B(1)~~	~~UH-44~~	
~~4927~~	~~SWN-42-3~~	~~990A~~	
~~250D~~	~~SWN-43-3~~	~~990B~~	
~~4928~~	~~SWN-41-4-A or B (1)~~	~~1814A~~	
~~869A~~	~~SWN-42-4~~		
~~878A~~	~~SWN-43-4~~		
~~869B~~			

~~(1) Either A or B valve(s) may serve as the required containment isolation valve(s) for the SWN-41, SWN-44 and SWN-77 series. Designation of the B valves(s) in the SWN-44 series requires the codesignation of the SWN-51 valve(s) associated with the penetration(s) as an additional required containment isolation valves(s).~~

C. AIR LOCK TESTS

1. The containment air locks shall be tested at a minimum pressure of 47 psig. The test shall be performed in accordance with 10 CFR 50 Appendix J, Option B, as modified by approved exemptions and in accordance with guidelines contained in Regulatory Guide 1.163, dated September 1995. The acceptance criteria is included in Specification 4.4.D.2.a.

2. Whenever containment integrity is required, verification shall be made of proper repressurization to at least 47 psig of the double-gasket air lock door seal upon closing an air lock door.

D. CONTAINMENT ISOLATION VALVES

1. Tests and Frequency

a. ~~All~~ Containment isolation valves ~~in Table 4.4-1~~ shall be tested for operability in accordance with 10 CFR 50 Appendix J, Option B, as modified by approved exemptions and in accordance with guidelines contained in Regulatory Guide 1.163, dated September 1995.

b. Containment Isolation valves ~~in Table 4.4-1~~ which are pressurized by the Weld Channel and Containment Penetration Pressurization System are leakage tested as part of the Sensitive Leakage Rate Test included in Specification 4.4.B.

c. Containment Isolation valves ~~in Table 4.4-1~~ which are pressurized by the Isolation Valve Seal Water System shall be tested at every refueling but in no case at intervals greater than a Refueling Interval (R##), as part of an overall Isolation Valve Seal Water System Test.

~~d. Isolation valves in Table 4.4-1 shall be tested with the medium and at the pressure specified therein.~~

2. Acceptance Criteria

a. The combined leakage rate for the following shall be less than 0.6 L_a: Containment isolation valves ~~listed in Table 4.4-1~~ subject to gas or nitrogen pressurization testing, air lock testing as specified in Specification 4.4.C.1, portions of the sensitive leakage rate test described in

Specification 4.4.B.1 which pertain to containment penetrations and double-gasketed seals.

b. The leakage rate into containment for the isolation valves sealed with the service water system shall not exceed 0.36 gpm per fan cooler.

c. The leakage rate for the Isolation Valve Seal Water System shall not exceed 14,700 cc/hr.

~~3. Containment isolation valves may be added to plant systems without prior license amendment to Table 4.4-1 provided that a revision to this table is included in a subsequent license amendment application.~~

E. CONTAINMENT MODIFICATIONS

Any major modification or replacement of components of the containment performed after the initial pre-operational leakage rate test shall be followed by either an integrated leakage rate test or a local leak detection test and shall meet the appropriate acceptance criteria of Specifications 4.4.A.2, 4.4.B.2, or 4.4.D.2. Modifications or replacements performed directly prior to the conduct of an integrated leakage rate test shall not require a separate test.

F. REPORT OF TEST RESULTS

A post-outage report shall be prepared presenting results of the previous cycle=s Type B and Type C tests, and Type A, Type B, and Type C tests, if performed during that outage. The technical contents of the report are generally described in ANSI/ANS 56.8-1994, and will be available on-site for NRC review. The report shall also show that the applicable performance criteria are met and serves as a record that continuing performance is acceptable.

G. VISUAL INSPECTION

A detailed visual examination of the accessible interior and exterior surfaces of the containment structure and its components shall be performed at each Refueling Interval (R##) and prior to any integrated leak test to uncover any evidence of deterioration which may affect either the containment structural integrity or leak-tightness. The discovery of any significant deterioration shall be accompanied by corrective actions in accordance with acceptable procedures, non-destructive tests and inspections, and local testing where practical, prior to the conduct of any integrated leak test. Such repairs shall be

seals and spaces between certain containment isolation valves and personnel door locks. A leak would be expected to build up slowly and would, therefore, be noted before design limits are exceeded. Remedial action can be taken before the limit is reached.

During normal plant operation, containment personnel lock door seals are continuously pressurized after each closure by the Weld Channel and Penetration Pressurization System. Whenever containment integrity is required, verification is made that seals repressurize properly upon closure of an air lock door.

A full pressure test of the air lock will be periodically performed to detect any unanticipated leakage.

The containment isolation valve leakage and sensitive leakage rate measurements obtained periodically, periodic inspection of accessible portions of the containment wall to detect possible damage to the liner plates, combined with the leakage monitoring afforded by the Weld Channel and Penetration Pressurization System[(4)] and IVSWS[(5)], provide assurance that the containment leakage is within design limits.

The testing of containment isolation valves ~~in Table 4.4-1~~, either individually or in groups, utilizes the WC & PPS[(4)] or IVSWS[(5)] where appropriate and is in accordance with the requirements of Type C tests in 10 CFR 50 Appendix J, Option B, as modified by approved exemptions and in accordance with guidelines contained in Regulatory Guide 1.163 dated September 1995. The specified test pressures are ≥ the peak calculated accident pressure. Sufficient water is available in the Isolation Valve Seal Water System, Primary Water System, Service Water System, Residual Heat Removal System, and the City Water System to assure a sealing function for at least 30 days. The leakage limit for the Isolation Valve Seal Water System is consistent with the design capacity of the Isolation Valve Seal Water supply tank.

The acceptance criterion of 0.6 L_a for the combined leakage of isolation valves subject to gas or nitrogen pressurization, the air lock, containment penetrations and double-gasketed seals is consistent with 10 CFR 50 Appendix J, Option B, as modified by approved exemptions and in accordance with guidelines contained in Regulatory Guide 1.163, dated September 1995.

The 350 psig test pressure, achieved either by normal Residual Heat Removal System operation or hydrostatic testing, gives an adequate margin over the highest pressure within the system after a design basis accident. Similarly, the hydrostatic test pressure for the containment sump return line of 100 psig gives an adequate margin over the highest pressure within the line after a design basis accident. A recirculation system leakage of 2 gal./hr. will limit offsite exposures due to leakage to insignificant levels relative to those calculated for leakage directly from the containment in the design basis accident.

~~Table 4.4-1~~

~~Containment Isolation Valves~~

~~Valve No.~~	~~System(1)~~	~~Test Fluid(2)~~	~~Minimum Test Pressure (PSIG)~~
~~549~~	~~PRT to Gas Analyzer~~	~~Water(4)~~	~~52~~
~~548~~	~~" " " "~~	~~Water(4)~~	~~52~~
~~518~~	~~PRT N_2 Supply~~	~~Gas~~	~~47~~
~~3418~~	~~" " "~~	~~Gas~~	~~47~~
~~3419~~	~~" " "~~	~~Gas~~	~~47~~
~~4136~~	~~" " "~~	~~Gas~~	~~47~~
~~552~~	~~PRT Makeup Water~~	~~Water(4)~~	~~52~~
~~519~~	~~" " "~~	~~Water(4)~~	~~52~~
~~741A~~	~~RHR return to RCS~~	~~Water(5)~~	~~52(3)~~
~~744~~	~~" " " "~~	~~Nitrogen(4)~~	~~47(3)~~
~~888A~~	~~RHR to S.I. Pumps~~	~~Nitrogen(4)~~	~~47~~
~~888B~~	~~" " " "~~	~~Nitrogen(4)~~	~~47~~
~~958~~	~~RHR to Sample System~~	~~Nitrogen(4)~~	~~47~~
~~959~~	~~" " " "~~	~~Nitrogen(4)~~	~~47~~
~~990D~~	~~" " " "~~	~~Nitrogen(4)~~	~~47~~
~~1870~~	~~RHR from RCS~~	~~Nitrogen(4)~~	~~47~~
~~743~~	~~" " "~~	~~Nitrogen(4)~~	~~47~~
~~732~~	~~" " "~~	~~Nitrogen(4)~~	~~47(3)~~
~~885A~~	~~Cont. Sump Recirc. Line~~	~~Water(5)~~	~~52~~
~~885B~~	~~" " " "~~	~~Water(5)~~	~~52~~
~~201~~	~~Letdown Line (CVCS)~~	~~Water(4)~~	~~52~~

~~Table 4.4-1~~

~~Containment Isolation Valves~~

~~Valve No.~~	~~System(1)~~	~~Test Fluid(2)~~	~~Minimum Test Pressure (PSIG)~~
~~202~~	~~" " "~~	~~Water(4)~~	~~52~~
~~205~~	~~Charging Line (CVCS)~~	~~Water(4)~~	~~52~~
~~226~~	~~Charging Line (CVCS)~~	~~Water(4)~~	~~52~~
~~227~~	~~" " "~~	~~Water(4)~~	~~52~~
~~250A~~	~~RCP Seal Water (CVCS)~~	~~Water(4)~~	~~52~~
~~4925~~	~~" " " "~~	~~Water(4)~~	~~52~~
~~250B~~	~~" " " "~~	~~Water(4)~~	~~52~~
~~4926~~	~~" " " "~~	~~Water(4)~~	~~52~~
~~250C~~	~~" " " "~~	~~Water(4)~~	~~52~~
~~4927~~	~~" " " "~~	~~Water(4)~~	~~52~~
~~250D~~	~~" " " "~~	~~Water(4)~~	~~52~~
~~4928~~	~~" " " "~~	~~Water(4)~~	~~52~~
~~222~~	~~" " " "~~	~~Water(4)~~	~~52~~
~~956E~~	~~RCS to Sample System~~	~~Water(4)~~	~~52~~
~~956F~~	~~" " " "~~	~~Water(4)~~	~~52~~
~~869A~~	~~Cont. Spray System~~	~~Water(4)~~	~~52~~
~~867A~~	~~" " "~~	~~Gas~~	~~47~~
~~878A~~	~~" " "~~	~~Gas~~	~~47~~
~~869B~~	~~" " "~~	~~Water(4)~~	~~52~~
~~867B~~	~~" " "~~	~~Gas~~	~~47~~
~~851A~~	~~Safety Inj. System~~	~~Water(4)~~	~~52~~

~~Table 4.4-1~~

~~Containment Isolation Valves~~

~~Valve No.~~	~~System(1)~~	~~Test Fluid(2)~~	~~Minimum Test Pressure (PSIG)~~
~~850A~~	~~" " "~~	~~Water(4)~~	~~52~~
~~851B~~	~~" " "~~	~~Water(4)~~	~~52~~
~~850B~~	~~" " "~~	~~Water(4)~~	~~52~~
~~859A~~	~~S.I. Test Line~~	~~Water(4)~~	~~52~~
~~859C~~	~~S.I. Test Line~~	~~Water(4)~~	~~52~~
~~4312~~	~~Acc. & OPS N_2 Supply~~	~~Gas~~	~~47~~
~~863~~	~~" " " " "~~	~~Gas~~	~~47~~
~~956G~~	~~Acc. to Sample System~~	~~Water(4)~~	~~52~~
~~956H~~	~~" " " "~~	~~Water(4)~~	~~52~~
~~1786~~	~~RCDT to Vent Header~~	~~Water(4)~~	~~52~~
~~1787~~	~~" " " "~~	~~Water(4)~~	~~52~~
~~3416~~	~~RCDT N_2 Supply~~	~~Gas~~	~~47~~
~~3417~~	~~" " "~~	~~Gas~~	~~47~~
~~5459~~	~~" " "~~	~~Gas~~	~~47~~
~~1616~~	~~" " "~~	~~Gas~~	~~47~~
~~1788~~	~~RCDT to Gas Analyzer~~	~~Water(4)~~	~~52~~
~~1789~~	~~" " " "~~	~~Water(4)~~	~~52~~
~~1702~~	~~RCDT to WHT (WDS)~~	~~Water(4)~~	~~52~~
~~1705~~	~~" " " "~~	~~Water(4)~~	~~52~~
~~797~~	~~RCP Comp. Cooling (CCS)~~	~~Water(4)~~	~~52~~
~~784~~	~~" " " "~~	~~Water(4)~~	~~52~~

~~Table 4.4-1~~

~~Containment Isolation Valves~~

~~Valve No.~~	~~System[1]~~	~~Test Fluid[2]~~	~~Minimum Test Pressure (PSIG)~~
~~FCV-625~~	~~" " " "~~	~~Water[4]~~	~~52~~
~~791~~	~~Excess Letdown Cool. (CCS)~~	~~Water[4]~~	~~52~~
~~798~~	~~" " " "~~	~~Water[4]~~	~~52~~
~~796~~	~~" " " "~~	~~Water[4]~~	~~52~~
~~793~~	~~" " " "~~	~~Water[4]~~	~~52~~
~~1728~~	~~Cont. Sump to WHT (WDS)~~	~~Water[4]~~	~~52~~
~~1723~~	~~Cont. Sump to WHT (WDS)~~	~~Water[4]~~	~~52~~
~~1234~~	~~Cont. Air Sample~~	~~Gas[7]~~	~~47~~
~~1235~~	~~" " "~~	~~Gas[7]~~	~~47~~
~~1236~~	~~" " "~~	~~Gas[7]~~	~~47~~
~~1237~~	~~" " "~~	~~Gas[7]~~	~~47~~
~~PCV-1229~~	~~Air Ejector to Cont.~~	~~Gas[7]~~	~~47~~
~~PCV-1230~~	~~" " " "~~	~~Gas[7]~~	~~47~~
~~PCV-1214~~	~~S.G. Blowdown/Sample~~	~~Water[4]~~	~~52~~
~~PCV-1214A~~	~~" " "~~	~~Water[4]~~	~~52~~
~~PCV-1215~~	~~" " "~~	~~Water[4]~~	~~52~~
~~PCV-1215A~~	~~" " "~~	~~Water[4]~~	~~52~~
~~PCV-1216~~	~~" " "~~	~~Water[4]~~	~~52~~
~~PCV-1216A~~	~~" " "~~	~~Water[4]~~	~~52~~
~~PCV-1217~~	~~" " "~~	~~Water[4]~~	~~52~~
~~PCV-1217A~~	~~" " "~~	~~Water[4]~~	~~52~~

~~Table 4.4-1~~

~~Containment Isolation Valves~~

~~Valve No.~~	~~System(1)~~	~~Test Fluid(2)~~	~~Minimum Test Pressure (PSIG)~~
~~SWN-41-5-A~~	~~Cont. Fan Cooler-Ser. Wtr.~~	~~Water(6)~~	~~52~~
~~SWN-41-5-B~~	~~" " " " "~~	~~Water(6)~~	~~52~~
~~SWN-43-5~~	~~" " " " "~~	~~Water(6)~~	~~52~~
~~SWN-42-5~~	~~" " " " "~~	~~Water(6)~~	~~52~~
~~SWN-41-1-A~~	~~" " " " "~~	~~Water(6)~~	~~52~~
~~SWN-41-1-B~~	~~" " " " "~~	~~Water(6)~~	~~52~~
~~SWN-43-1~~	~~" " " " "~~	~~Water(6)~~	~~52~~
~~SWN-42-1~~	~~" " " " "~~	~~Water(6)~~	~~52~~
~~SWN-41-2-A~~	~~Cont. Fan Cooler-Ser. Wtr.~~	~~Water(6)~~	~~52~~
~~SWN-41-2-B~~	~~" " " " "~~	~~Water(6)~~	~~52~~
~~SWN-43-2~~	~~" " " " "~~	~~Water(6)~~	~~52~~
~~SWN-42-2~~	~~" " " " "~~	~~Water(6)~~	~~52~~
~~SWN-41-3-A~~	~~" " " " "~~	~~Water(6)~~	~~52~~
~~SWN-41-3-B~~	~~" " " " "~~	~~Water(6)~~	~~52~~
~~SWN-43-3~~	~~" " " " "~~	~~Water(6)~~	~~52~~
~~SWN-42-3~~	~~" " " " "~~	~~Water(6)~~	~~52~~
~~SWN-41-4-A~~	~~" " " " "~~	~~Water(6)~~	~~52~~
~~SWN-41-4-B~~	~~" " " " "~~	~~Water(6)~~	~~52~~
~~SWN-43-4~~	~~" " " " "~~	~~Water(6)~~	~~52~~
~~SWN-42-4~~	~~" " " " "~~	~~Water(6)~~	~~52~~
~~SWN-44-5-A~~	~~" " " " "~~	~~Water(6)~~	~~52~~

~~Table 4.4-1~~

~~Containment Isolation Valves~~

~~Valve No.~~	~~System(1)~~	~~Test Fluid(2)~~	~~Minimum Test Pressure (PSIG)~~
~~SWN-44-5-B~~	~~" " " " "~~	~~Water(6)~~	~~52~~
~~SWN-51-5~~	~~" " " " "~~	~~Water(6)~~	~~52~~
~~SWN-44-1-A~~	~~" " " " "~~	~~Water(6)~~	~~52~~
~~SWN-44-1-B~~	~~" " " " "~~	~~Water(6)~~	~~52~~
~~SWN-51-1~~	~~" " " " "~~	~~Water(6)~~	~~52~~
~~SWN-44-2-A~~	~~" " " " "~~	~~Water(6)~~	~~52~~
~~SWN-44-2-B~~	~~" " " " "~~	~~Water(6)~~	~~52~~
~~SWN-51-2~~	~~" " " " "~~	~~Water(6)~~	~~52~~
~~SWN-44-3-A~~	~~" " " " "~~	~~Water(6)~~	~~52~~
~~SWN-44-3-B~~	~~" " " " "~~	~~Water(6)~~	~~52~~
~~SWN-51-3~~	~~Cont. Fan Cooler Ser. Wtr.~~	~~Water(6)~~	~~52~~
~~SWN-44-4-A~~	~~" " " " "~~	~~Water(6)~~	~~52~~
~~SWN-44-4-B~~	~~" " " " "~~	~~Water(6)~~	~~52~~
~~SWN-51-4~~	~~" " " " "~~	~~Water(6)~~	~~52~~
~~SWN-71-5-A~~	~~" " " " "~~	~~Water(6)~~	~~52~~
~~SWN-71-5-B~~	~~" " " " "~~	~~Water(6)~~	~~52~~
~~SWN-71-1-A~~	~~" " " " "~~	~~Water(6)~~	~~52~~
~~SWN-71-1-B~~	~~" " " " "~~	~~Water(6)~~	~~52~~
~~SWN-71-2-A~~	~~" " " " "~~	~~Water(6)~~	~~52~~
~~SWN-71-2-B~~	~~" " " " "~~	~~Water(6)~~	~~52~~
~~SWN-71-3-A~~	~~" " " " "~~	~~Water(6)~~	~~52~~

~~Table 4.4-1~~

~~Containment Isolation Valves~~

~~Valve No.~~	~~System[1]~~	~~Test Fluid[2]~~	~~Minimum Test Pressure (PSIG)~~
~~SWN-71-3-B~~	~~" " " " "~~	~~Water[6]~~	~~52~~
~~SWN-71-4-A~~	~~" " " " "~~	~~Water[6]~~	~~52~~
~~SWN-71-4-B~~	~~" " " " "~~	~~Water[6]~~	~~52~~
~~SA-24~~	~~Service Air to Cont.~~	~~Water[4]~~	~~52~~
~~SA-24-1~~	~~" " "~~	~~Water[4]~~	~~52~~
~~580A~~	~~Dead Weight Tester~~	~~Gas~~	~~47~~
~~580B~~	~~" " "~~	~~Gas~~	~~47~~
~~UH-43~~	~~Auxiliary Steam System~~	~~Water[4]~~	~~52~~
~~UH-44~~	~~" " "~~	~~Water[4]~~	~~52~~
~~MW-17~~	~~City Wtr. to Cont.~~	~~Water[4]~~	~~52~~
~~MW-17-1~~	~~" " " "~~	~~Water[4]~~	~~52~~
~~1170~~	~~Cont. Purge System~~	~~Gas[7]~~	~~47~~
~~1171~~	~~Cont. Purge System~~	~~Gas[7]~~	~~47~~
~~1172~~	~~" " "~~	~~Gas[7]~~	~~47~~
~~1173~~	~~" " "~~	~~Gas[7]~~	~~47~~
~~1190~~	~~Cont. Pressure Relief~~	~~Gas[7]~~	~~47~~
~~1191~~	~~" " "~~	~~Gas[7]~~	~~47~~
~~1192~~	~~" " "~~	~~Gas[7]~~	~~47~~
~~990A~~	~~Recirc. Pump to Samp. Sys.~~	~~Nitrogen[4]~~	~~47~~
~~990B~~	~~" " " " "~~	~~Nitrogen[4]~~	~~47~~
~~956A~~	~~Pressurizer to Samp. Sys.~~	~~Water[4]~~	~~52~~

~~Table 4.4-1~~

~~Containment Isolation Valves~~

~~Valve No.~~	~~System[1]~~	~~Test Fluid[2]~~	~~Minimum Test Pressure (PSIG)~~
~~956B~~	~~" " " "~~	~~Water[4]~~	~~52~~
~~956C~~	~~" " " "~~	~~Water[4]~~	~~52~~
~~956D~~	~~" " " "~~	~~Water[4]~~	~~52~~
~~1814A~~	~~Cont. Pressure Instr.~~	~~Gas~~	~~47~~
~~1814B~~	~~" " "~~	~~Gas~~	~~47~~
~~1814C~~	~~" " "~~	~~Gas~~	~~47~~
~~5018~~	~~Post Acc. Cont. Sampling~~	~~Gas~~	~~47~~
~~5019~~	~~" " " "~~	~~Gas~~	~~47~~
~~5020~~	~~" " " "~~	~~Gas~~	~~47~~
~~5021~~	~~" " " "~~	~~Gas~~	~~47~~
~~5022~~	~~" " " "~~	~~Gas~~	~~47~~
~~5023~~	~~" " " "~~	~~Gas~~	~~47~~
~~5024~~	~~" " " "~~	~~Gas~~	~~47~~
~~5025~~	~~" " " "~~	~~Gas~~	~~47~~
~~IA-39~~	~~Inst. Air to Cont.~~	~~Gas~~	~~47~~
~~PCV-1228~~	~~" " " "~~	~~Gas~~	~~47~~
~~E-2~~	~~Post Acc. Vent Exh.~~	~~Gas[7]~~	~~47~~
~~E-1~~	~~" " " "~~	~~Gas[7]~~	~~47~~
~~E-3~~	~~" " " "~~	~~Gas[7]~~	~~47~~
~~E-5~~	~~" " " "~~	~~Gas[7]~~	~~47~~
~~85A~~	~~Personnel Airlock~~	~~Gas~~	~~47~~

~~Table 4.4-1~~

~~Containment Isolation Valves~~

~~Valve No.~~	~~System[1]~~	~~Test Fluid[2]~~	~~Minimum Test Pressure (PSIG)~~
~~85B~~	~~" "~~	~~Gas~~	~~47~~
~~85C~~	~~" "~~	~~Gas[7]~~	~~47~~
~~85D~~	~~" "~~	~~Gas[7]~~	~~47~~
~~95A~~	~~Equipment Airlock~~	~~Gas~~	~~47~~
~~95B~~	~~Equipment Airlock~~	~~Gas~~	~~47~~
~~95C~~	~~" "~~	~~Gas[7]~~	~~47~~
~~95D~~	~~" "~~	~~Gas[7]~~	~~47~~
~~4399~~	~~Sample Return to Cont. Sump.~~	~~Water[4]~~	~~52~~
~~5132~~	~~" " "~~	~~Water[4]~~	~~52~~

~~Notes:~~

~~1. System in which valve is located.~~

~~2. Gas test fluid indicates either nitrogen or air as test medium.~~

~~3. Testable only when at cold shutdown.~~

~~4. Isolation Valve Seal Water System.~~

~~5. Sealed by Residual Heat Removal System fluid.~~

~~6. Sealed by Service Water System. Either A or B valve(s) may serve as the required containment isolation valve(s) for the SWN-41, SWN-44 and SWN-71 series. Designation of the B valve(s) in the SWN-44 series requires the codesignation of the SWN-51 valve(s) associated with the penetration(s) as an additional required containment isolation valve(s).~~

~~7. Sealed by Weld Channel and Penetration Pressurization System.~~