REVISED TECHNICAL SPECIFICATIONS

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I. INTRODUCTION

The Nebraska Public Power District (District) requests that the NRC approve the proposed changes to the Cooper Nuclear Station (CNS) Technical Specifications described below. The requested changes include:

1) Revision of the Technical Specifications pertaining to the Standby Gas Treatment System (Section 3/4.7.B) for consistency with NUREG-1433, Standard Technical Specifications, BWR/4.

2) The clarification of the definition for Secondary Containment Integrity and revision of the Technical Specification and Bases section pertaining to secondary containment (Section 3/4.7.C and associated Bases) for consistency with NUREG-1433, Standard Technical Specifications, BWR/4.

3) The clarification of the definition for Primary Containment Integrity and revision of Technical Specifications pertaining to primary containment automatic isolation valves (Section 3/4.7.D) for consistency with NUREG-1433, Standard Technical Specifications, BWR/4.

4) Miscellaneous editorial changes including, but not limited to, movement of Technical Specification sections between pages, capitalization of defined terms, and making consistent the use of the term "containment automatic isolation valves".

The individual proposed changes are detailed in Section II and in the attached Summary of Changes. The Significant Hazards determination is provided in Section III. The District's analysis has determined that approval of this proposed change involves no significant hazards consideration.

II. DESCRIPTION OF CHANGES

1. Standby Gas Treatment System

The first part of Proposed Change No. 106 involves the revision of Section 3/4.7.B, Standby Gas Treatment System, to incorporate applicable Limiting Conditions for Operations (LCOs) and Surveillance Requirements (SRs) from NUREG-1433, BWR/4 Standard Technical Specifications (STS). This part of the proposed change includes the addition of a new SR (No. 4.7.B.1.c) that

requires, at least once per operating cycle, that each Standby Gas Treatment (SGT) subsystem be demonstrated to maintain $\geq$ 0.25 inches of water vacuum for 1 hour at a flow rate of $\leq$ 1780 cubic feet per minute (CFM), which is the design basis flow of each of the SGT subsystems. This part of the proposed change also includes the rewording of an existing LCO (No. 3.7.B.4), to be more explicit regarding actions to be taken when operability requirements of SGT cannot be met during reactor power operation.

Other minor changes associated with first part of the proposed change consists of a revision to a SR (No.4.7.B.2.d) to require that each SGT subsystem be operated with the heaters on for at least 10 continuous hours each month, as opposed to 10 hours, and a clarification of a SR (No. 4.7.B.4.b) that both SGT subsystems require operation of the bypass valve for filter cooling.

With the exception of the proposed new SR (No. 4.7.B.1.c) addressing the demonstration of the SGT for 1 hour (which represents a new requirement based on STS), these changes represent clarifications to existing requirements by adopting wording and terminology from the STS. The LCO (No. 3.7.B.4) which describes actions to be taken if SGT system is found to be inoperable, was rewritten in order to be consistent with the corresponding STS action statements and to be similar with proposed wording contained in the LCO (No. 3.7.C.3 - to be discussed later) addressing actions to be taken should Secondary Containment Integrity not be maintained during reactor power operation. All of the above described individual changes represent enhancements to Section 3/4.7.B of the CNS Technical Specifications and are more restrictive than those requirements currently in place. No Technical Specification requirements have been deleted.

2. Secondary Containment

The second part of Proposed Change No. 106 is in support of a District commitment contained in correspondence (NSD930779) to the NRC, dated June 22, 1993, and involves the revision of Section 3/4.7.C, Secondary Containment, to incorporate applicable LCOs and SRs from STS. This part of the proposed change includes clarification of the definition of Secondary Containment Integrity (Definition No. 1.0.V) to require the secondary containment automatic isolation valves required to be closed during design basis accident conditions to be operable, or the affected penetration is isolated. A new LCO (No. 3.7.C.2) has been added to explicitly state actions (including time limits based on STS) necessary to maintain Secondary Containment Integrity when one or more secondary containment automatic isolation valve(s), required to be closed during accident conditions, is found to be inoperable. To correspond with this new LCO, a new SR (No. 4.7.C.2) has been added to require a verification, at least every 31 days, that all secondary containment penetrations not capable of being closed by operable containment automatic isolation valves are closed by at least one valve, blind flange, or de-activated automatic valve secured in the closed position. The new 31-day SR is more restrictive in that it provides explicit instruction regarding actions to be taken when a secondary containment automatic isolation valve(s) is

(are) found to be inoperable. This will provide a higher level of assurance that Secondary Containment Integrity will be maintained, when required. The above described changes are consistent with wording contained in STS.

For the above described LCO changes, a footnote has been added to state that isolation valves closed to satisfy this requirement (LCO No. 3.7.C) may be reopened on an intermittent basis under administrative control. This footnote is consistent with wording contained in STS and in Section 3/4.7.D of the CNS Technical Specifications.

This part of the proposed change also involves the replacement of the SR (existing SR No. 4.7.C.1.d) for the demonstration of Secondary Containment Integrity (the ability to maintain $\geq$ 0.25 inches of water vacuum) by immediately operating the SGT system once a secondary containment violation has been determined and corrected. The proposed SR wording would, instead, require the affected area, identified during the plant conditions of Reactor Power Operation or Hot Shutdown, of the pressure retaining boundary of secondary containment to be verified through qualitative leak testing or evaluation prior to declaring Secondary Containment Integrity restored.

There are two reasons for this individual change. First, the secondary containment at CNS is not designed so that the affected zone(s) can be isolated. From the standpoint of maintaining Secondary Containment Integrity, the secondary containment constitutes a single zone. Therefore, the provision to isolate the affected zone(s) in the subject surveillance requirement cannot be implemented at CNS. The second reason for the replacement of the subject SR is that CNS design does not allow for the concurrent isolation of secondary containment (Group 6 isolation) and starting of SGT during reactor power operation while maintaining the portion of the ventilation system which cools the Reactor Recirculation Motor-Generator (RRMG) sets. Isolation of this portion of the ventilation system would result in an high-temperature trip of the RRMG sets, which would force a subsequent reactor scram.

The District proposes an additional SR which is contained in STS, but not currently contained in CNS Technical Specifications. SR 4.7.C.3 would require each secondary containment automatic isolation valve to actuate to its isolated position, within its specified isolation time, at least once per operating cycle. Proposed SR 4.7.C.3 varies from STS in that such demonstration be done at least once per operating cycle as opposed to once per quarter. This proposed time frame is consistent with the existing primary containment automatic isolation valve testing requirements contained in SR (No. 4.7.D.1.a), and takes into account the ventilation requirements of plant equipment during reactor power operation.

The District also proposes that two conditions be added to those conditions that must be met in order to not require Secondary Containment Integrity; that no core alterations are taking place with irradiated fuel in the vessel, and no operations with a potential for draining the reactor vessel are taking place with irradiated fuel in the vessel. The inclusion of these two conditions affect existing LCO No.s 3.7.C.1.d, 3.7.C.3 (renumbered), and 3.10.E, and effectively replace the condition regarding

the movement of loads which could potentially damage irradiated fuel (This condition is not contained in STS). These changes make consistent the conditions and terminology contained in STS. The term "with irradiated fuel in the vessel" is not in STS, but is stated in the proposed CNS LCOs as a clarification.

3. Primary Containment Automatic Isolation Valves

The third part of Proposed Change 106 is part of an overall corrective action initiative related to License Event Report (LER) No. 50/285 91-008, dated September 25, 1991. This LER describes the events leading up to a Technical Specification violation for the failure to de-activate an inoperable containment isolation valve. One of the root causes of this event was identified as an inconsistency in the Technical Specification requirements for inoperable automatic isolation valves. The action to de-activate inoperable isolation valves is currently contained in the definition for "Primary Containment Integrity," rather than in the action required by the LCO.

In response to the above described LER, the District proposes changes to both Definition No. 1.0.P (Primary Containment Integrity) and Section 3/4.7.D of the CNS Technical Specifications in order to be consistent with STS. The change to the definition involves the clarification of an existing condition to require that all containment automatic isolation valves required to be closed during accident conditions are operable or the affected penetration is isolated, as opposed to requiring that the specific inoperable valve be de-activated. This clarification is necessary due to the fact that it is not always possible to de-activate the specific inoperable valve in its isolated condition, but it is possible to isolate the affected penetration.

Section 3/4.7.D (Primary Containment Automatic Isolation Valves) was rewritten to provide explicit action (including time limits specified in STS) requirements when a given primary containment automatic isolation valve is determined to be inoperable. LCO 3.7.D.2 would allow for continued reactor power operation provided the line, having an inoperable valve, is isolated by means of at least one closed manual valve, blind flange, or de-activated automatic valve secured in the closed position. This new requirement is consistent with the revised definition of Primary Containment Integrity, and will further assure that events, similar to that described in LER 285/50 91-008 do not recur. The existing SR 4.7.D.2 has been replaced by a new SR that requires the verification, at least every 31 days, that primary containment penetrations, not capable of being isolated by operable containment automatic isolation valves, are isolated by valves, blind flanges, or de-activated automatic valves secured in the closed position. Similar to part of the proposed change for Secondary Containment Integrity, this part of the proposed change provides an option for either securing the inoperable valve, in the closed position, or securing another valve in the same line.

Also included in this part of the proposed change is a clarification to an existing LCO (No. 3.7.D.1) to specify that all primary containment automatic isolation valves listed in Table 3.7.1 of the Technical

Specifications are to be operable when Primary Containment Integrity is required, as opposed to during reactor power operating conditions. This proposed wording is consistent with STS.

With the exception of the new 31-day SR, the changes to Definition 1.0.P and Section 3/4.7.D represent clarifications to existing requirements as opposed to the addition, deletion, or changes to requirements. The new LCO and 31-day SR is based on similar wording contained in STS. The new 31-day SR is more restrictive in that it provides explicit instruction regarding actions to be taken when a primary containment automatic isolation valve(s) is (are) found to be inoperable. This will provide a higher level of assurance that Primary Containment Integrity will be maintained, when required.

4. Miscellaneous Editorial Changes

The fourth part of Proposed Change No. 106 involves numerous editorial changes not directly related to the Standby Gas Treatment, Secondary Containment, or Primary Containment Automatic Isolation Valve portions of this proposed change. These changes include, but are not limited to, page renumbering, capitalization of defined terms, making consistent the use of the terms "containment automatic isolation valves" and "instrument line excess flow check valves". The specific changes are identified in the attachment to this submittal.

As an administrative note, Page ii is subject to revision by Proposed Technical Specification Change No. 117. In order to facilitate the orderly revision of affected plant procedures, the District requests that the amendment, associated with the proposed change, become effective 60 days after its issue date.

III. SIGNIFICANT HAZARDS DETERMINATION

10 CFR 50.91(a)(1) requires that licensee requests for operating license amendments be accompanied by an evaluation of significant hazards posed by the issuance of the amendment. This evaluation is to be performed with respect to the criteria given in 10 CFR 50.92(c). The following analysis meets these requirements.

This submittal is judged to consist of four changes:

1. The clarification of existing requirements and the addition of new requirements regarding the Standby Gas Treatment (SGT) system (Section 3/4.7.B).

2. The clarification of existing requirements and the addition of new requirements to both the definition of Secondary Containment Integrity and its associated Technical Specifications (Sections 3/4.7.C) and Bases (4.7.B and 4.7.C).

3. The clarification of existing requirements and the addition of new requirements to both the definition of Primary Containment Integrity

and the associated Technical Specifications for Primary Containment Automatic Isolation Valves (Sections 3/4.7.D).

4. Miscellaneous editorial changes including, but not limited to, making consistent the use of valve terminology, page renumbering, and capitalization of defined terms.

Evaluation of this Amendment with Respect to 10 CFR 50.92

The enclosed Technical Specifications change is judged to involve no significant hazards based on the following:

A. Does the proposed change involve a significant increase in the probability or consequences of an accident previously evaluated?

Evaluation

1. The first part of Proposed Change No. 106 revises Section 3/4.7.B, Standby Gas Treatment (SGT) System, in order to be consistent with NUREG-1433, Standard Technical Specifications (STS) for General Electric Plants (BWR/4). This portion of the proposed change consists of adding a new surveillance requirement (SR) to demonstrate, at least once per operating cycle, that each SGT subsystem can maintain $\geq$ 0.25 inches water vacuum for at least 1 hour at a flow rate of $\leq$ 1780 cubic feet per minute (CFM). Also included is a rewording to the Limiting Condition for Operation (LCO) governing actions to be taken if the SGT system is made or found inoperable, and two clarifications based on STS.

   All of the above changes are based on suggested wording contained in STS and represent requirements that are more explicit or restrictive than what are currently in place. These individual changes do not involve any physical modification of the plant or delete any Technical Specification requirements currently in place. They do not involve a change in plant settings and do not affect any accident initiators. For the reasons given above, the District concludes that this part of the proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. The second part of Proposed Change No. 106 revises a condition contained in the definition of Secondary Containment Integrity, Section 3/4.7.C, Secondary Containment, and the associated Bases section in order to be consistent with STS. This portion of the proposed change includes a clarification of a condition contained in the definition of Secondary Containment Integrity and a creation of an LCO to clearly specify actions to be taken when a given secondary containment automatic isolation valve becomes inoperable. A new 31-day surveillance requirement has been added to verify that secondary containment penetration lines containing inoperable

valves, are verified isolated.

Two additional SRs are also proposed; 1) that isolation time of the individual automatic isolation valves will be demonstrated at least once per operating cycle and, 2) to verify Secondary Containment Integrity through leak testing or evaluation of the affected area of the pressure retaining boundary prior to declaring Secondary Containment Integrity restored. Two new conditions (described as "operations with a potential for draining the reactor vessel with irradiated fuel in the vessel" and "core alterations with irradiated fuel in the vessel"), for determining when Secondary Containment Integrity is required, have also been added to the LCOs. The term "with irradiated fuel in the vessel" is not contained in STS, but is added to simply provide a clarification. These two new conditions effectively replace an existing condition regarding the movement of loads which could potentially damage irradiated fuel.

All of the above described changes, with the exception of the second new SR proposed, are based on STS. The second SR replaces an existing SR that is not implementable due to the fact that CNS secondary containment, by design, cannot be compartmentalized from a Secondary Containment Integrity standpoint. Furthermore, the ventilation system serving the Reactor Recirculation Motor-Generator (RRMG) sets would have to isolate in order to utilize SGT to create the required vacuum. Isolation of this portion of the ventilation system could result in a RRMG high-temperature trip, thus leading to a plant transient. Replacement of the old SR with the new SR removes the potential of creating a plant transient through implementation of the old SR, thus reducing the probability of an accident previously evaluated. Also, the LCO prohibiting continued reactor operation following a loss of secondary containment greater than 4 hours (when secondary containment is required) is unaffected by this SR change, and remains the dominant requirement. All of the above described changes provide additional Technical Specification controls on the management of secondary containment, and therefore will provide additional assurance that Secondary Containment Integrity continues to be met.

The individual changes contained within this proposed change do not involve any physical modification of the plant, do not affect any accident initiators, nor do they change any assumptions in the accident evaluations. There are no changes in plant settings that affect plant operation response. For the reasons given above, the District concludes that this part of the proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

3. The third part of Proposed Change No. 106 revises a condition contained in the definition of Primary Containment Integrity

and Section 3/4.7.D, Primary Containment Automatic Isolation Valves, in order to be consistent with STS. This portion of the proposed change revises the subject definition to include additional conditions for inoperable primary containment automatic isolation valves. This change revises Section 3/4.7.D to specify actions, including the establishment of time limits based on STS, to be taken when a given primary containment automatic isolation valve becomes inoperable. This part of the proposed change does not involve any physical modification of the plant or delete any Technical Specification requirements currently in place. There are no changes in plant settings that affect the plant operation response, nor are there any changes that affect any assumptions in the accident evaluation.

The new 31-day surveillance requirement places a specified time period for the verification of one closed manual valve, blind flange, or de-activated automatic valve secured in the closed position, in lines containing an inoperable valve. This surveillance requirement replaces an existing surveillance requirement with a more explicit verification requirement and provides a higher assurance that Primary Containment Integrity is being met. For the reasons given above, the District concludes that this part of the proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

4. The fourth part of Proposed Change No. 106 involves numerous editorial changes not directly related to the Standby Gas Treatment, Secondary Containment, or Primary Containment Automatic Isolation Valve portions of this proposed change. These changes include, but are not limited to, page renumbering, capitalization of defined terms, making consistent the use of the terms "containment automatic isolation valves" and "instrument line excess flow check valves". These changes are editorial in nature, and have no impact on plant equipment, plant design, or operations. These editorial changes do not modify or add any initiating parameters. Therefore, the District concludes that this part of the proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

B. Does the proposed change create the possibility for a new or different kind of accident from any accident previously evaluated?

Evaluation

1. The first part of Proposed Change No. 106 revises Section 3/4.7.B, Standby Gas Treatment (SGT) System, in order to be consistent with STS. This portion of the proposed change adds a new SR regarding the demonstration of SGT to maintain ≥ 0.25

inches of water vacuum for at least 1 hour at ≤ 1780 CFM, a revision to the LCO governing actions to be taken if the SCT system is made or found inoperable, and two clarifications based on STS. All of the above changes are based on suggested wording contained in STS and represent requirements that are more explicit or restrictive than what are currently in place. These individual changes do not constitute any changes or additions to any hardware or changes in plant configuration. These individual changes do not introduce any new modes of plant operation. Both the revised LCO and the proposed SR are more restrictive than current Technical Specification requirements. Therefore, the District concludes that this part of the proposed change does not create the possibility for a new or different kind of accident from any accident previously evaluated.

2. The second part of Proposed Change No. 106 revises a condition contained in the definition of Secondary Containment Integrity, provides a new LCO (Section 3/4.7.C) to clearly specify actions to be taken when a given secondary containment automatic isolation valve becomes inoperable, adds a new 31-day SR to verify that secondary containment penetration lines containing inoperable valves, are isolated, along with two additional SRs and two new conditions that must exist in order to not require secondary containment. All of the above described individual changes are based on STS except for a new SR which requires the affected area of the pressure retaining boundary to be verified through qualitative leak testing or evaluation prior to declaring Secondary Containment Integrity restored.

   The SR that is not based on STS replaces an existing SR that is not implementable during normal plant operations, and if implemented, could result in a RRMG high-temperature trip, thus leading to a plant transient. Implementation of the proposed SR does not require system lineups or tests that have not been previously analyzed; thus cannot create the possibility for a new or different accident from any accident previously evaluated.

   The individual changes contained in this portion of the proposed change do not involve a change in plant design, do not introduce a new mode of plant operation, nor will they contribute to a change in the plant's transient response. Therefore, the District concludes that this part of proposed change does not create the possibility for a new or different kind of accident from any accident previously evaluated.

3. The third part of Proposed Change No. 106 revises the definition of the term Primary Containment Integrity, revises Section 3/4.7.D to more clearly specify actions regarding inoperable containment automatic isolation valves. These individual changes do not constitute any hardware changes, additions, or changes in plant configuration. These changes

do not introduce any new modes of plant operation, or contribute to a change in the plant's transient response. There are no technical changes as to the limiting conditions for operations that must be satisfied. The new 31-day surveillance requirement is more restrictive than current Technical Specification requirements in that it provides explicit instruction for ensuring that a given penetration(s) is isolated. Therefore, the District concludes that this part of the proposed change does not create the possibility for a new or different kind of accident from any accident previously evaluated.

4. The fourth part of Proposed Change No. 106 involves numerous editorial changes not directly related to the Standby Gas Treatment, Secondary Containment, or Primary Containment Automatic Isolation Valve portions of this proposed change. These individual changes do not involve any alteration to the plant design, setpoints, or operating parameters, nor do they introduce or change any mode of plant operation. Therefore, this part of the proposed change does not create the possibility for a new or different kind of accident from any accident previously evaluated.

C. Does the proposed change create a significant reduction in the margin of safety?

Evaluation

1. The first part of Proposed Change No. 106 revises Section 3/4.7.B, Standby Gas Treatment (SGT) System, in order to be consistent with STS. This portion of the proposed change consists of the addition of a new SR (from STS), revision to an existing LCO to be more explicit regarding actions to be taken if the SGT system is made or found inoperable, and two clarifications. All of the above changes are based on suggested wording contained in STS and represent requirements that are more explicit or restrictive than what are currently in place. These individual changes do not involve any change to plant design, equipment, instrument setpoint settings, or operation. Therefore, the District concludes that this part of the proposed change does not create a significant reduction in the margin of safety.

2. The second part of Proposed Change No. 106 revises a condition contained in the definition of Secondary Containment Integrity, provides a new LCO (Section 3/4.7.C) to clearly specify actions to be taken when a given secondary containment automatic isolation valve becomes inoperable, adds a new 31-day SR to verify that secondary containment penetration lines containing inoperable valves, are isolated, along with two additional SRs and two new conditions that must be met in order to not require secondary containment All of the above described individual changes are based on STS except for a new

SR which requires qualitative leak testing or evaluation of the affected secondary containment pressure retaining boundary prior to declaring Secondary Containment Integrity restored.

None of the new requirements result in operation or testing that is different than what is currently being performed. Therefore, the District concludes that this part of the proposed change does not create a significant reduction in the margin of safety.

3. The third part of the proposed change revises the definition of the term Primary Containment Integrity to clarify conditions to be met regarding inoperable primary containment automatic isolation valves. This change revises Section 3/4.7.D to specify actions to be taken when a given primary containment automatic isolation valve becomes inoperable. The individual changes do not change the operating requirements specified in the Technical Specifications, but are more restrictive in that they provide explicit instruction regarding actions to be taken when a primary containment automatic isolation valve is found inoperable. By placing these requirements into LCO 3.7.D and providing a 31-day surveillance requirement for lines containing inoperative valves, the margin of safety is not reduced. None of the proposed individual changes involve any change to the plant design, equipment, instrument setpoint settings, or operation. Therefore, the District concludes that the proposed change does not create a significant reduction in the margin of safety.

4. The fourth part of Proposed Change No. 106 involves numerous editorial changes not directly related to the Standby Gas Treatment, Secondary Containment, or Primary Containment Automatic Isolation Valve portions of this proposed change. These individual changes do not involve any change to plant design, equipment, instrument setpoint settings, or operation. Therefore, the District concludes that this part of the proposed change does not create a significant reduction in the margin of safety.

IV. CONCLUSION

The District has evaluated the proposed changes described above against the criteria given in 10 CFR 50.92(c) in accordance with the requirements of 10 CFR 50.91 (a)(1). This evaluation has determined that this proposed change will not 1) involve a significant increase in the probability or consequences of an accident previously evaluated, 2) create the possibility for a new or different kind of accident from any accident previously evaluated, or 3) create a significant reduction in the margin of safety. Therefore, for the reasons detailed above, the District requests NRC approval of this Proposed Change No. 106.

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SUMMARY OF CHANGES

The following is a list of changes to CNS Technical Specifications associated with Proposed Change No. 106.

Changes Associated with Standby Gas Treatment System

Page 165 - Add new SR 4.7.B.1.c requiring demonstration of Standby Gas Treatment (SGT) subsystems to maintain $\geq$ 0.25 inch water vacuum for one hour at $\leq$ 1780 CFM during refueling outage This SR is consistent with similar SR contained in the Secondary Containment portion of Standard Technical Specifications (STS).

Page 165a - Reword LCO 3.7.B.4 to explicitly state that if SGT system operability requirements are not met, then be in at least HOT SHUTDOWN within the next 12 hours and COLD SHUTDOWN within the following 24 hours. This new wording is being added to be consistent with STS regarding SGT and POWER REACTOR OPERATION.

- Reword SR 4.7.B.2.d to require each Standby Gas Treatment (SGT) subsystem to be operated 10 continuous hours every month as opposed to 10 hours every month in order to be consistent with wording contained in STS.

- Reword SR 4.7.B.4.b to clarify that OPERABILITY of the bypass valve for filter cooling to each SGT subsystem shall be demonstrated. The requirements have not changed; wording changed to be consistent with STS wording.

Page 205a - For LCO 4.10.E, replace the term "handling of irradiated fuel" with the STS term "movement of irradiated fuel assemblies". Replace the Non-STS statement "movement of loads which could potentially damage irradiated fuel in the secondary containment" with the STS conditions "core alterations with irradiated fuel in the vessel, and operations with a potential for draining the reactor vessel with irradiated fuel in the vessel". This change is necessary to make the LCO conditions consistent with STS and changes made to proposed LCOs 3.7.C.1.d and 3.7.C.3.b (discussed below). The term "with irradiated fuel in the vessel" is not in STS, but is added as a clarification.

Changes Associated with Secondary Containment

Page 5 - Reword Condition No. 3 of Definition 1.0.V to explicitly state that all containment automatic isolation valves required to be closed during accident conditions are operable or the affected penetration is isolated.

Page 166 - For LCO 3.7.C.1.d, change wording to use the STS term "fuel assemblies" as opposed to fuel. Replace the word "handled" with the STS word "moved". Remove the statement "no loads which could potentially damage irradiated fuel in the secondary containment" (not in STS) and replace with two additional conditions contained in STS: "no core alterations are taking place with irradiated fuel in

the vessel", and "no operations with a potential for draining the reactor vessel are taking place with irradiated fuel in the vessel". Because none of these activities are allowed when secondary containment integrity does not exist (see LCO 3.7.C.1 wording), the term "and" has been retained. The term "with irradiated fuel in the vessel" is not in STS, but is added as a clarification.

- Add new LCO 3.7.C.2 to require that secondary containment penetrations having inoperable valves which are required to be closed during accident conditions, are isolated. In order to be consistent with STS wording, new Tech Spec time durations to isolate the penetration are established: 8 hour limit for flow paths with one secondary containment isolation valve inoperable, 4 hours for flow paths with two secondary containment isolation valves inoperable.

- Add footnote to the bottom of the page to allow for the intermittent opening of the subject valves under administrative controls (footnote currently exists for primary containment isolation valves and is also contained in STS).

- For LCO 3.7.C.3.b (renumbered), replace statement "irradiated fuel handling operations" with "movement of irradiated fuel assemblies", add the term "IMMEDIATELY". Delete the statement "movement of loads which could potentially damage irradiated fuel in the secondary containment" and insert an additional action to suspend operations with the potential for draining the reactor vessel. All of these changes are made in order for the LCO to be consistent with STS wording.

- Replace wording contained in SR 4.7.C.1.d with new SR wording requiring SECONDARY CONTAINMENT INTEGRITY to be verified through qualitative leak testing or evaluation of the affected area of the pressure retaining boundary prior to declaring SECONDARY CONTAINMENT INTEGRITY restored (SR applicable to REACTOR POWER OPERATION or HOT SHUTDOWN condition). The design of CNS does not allow the demonstration of SECONDARY CONTAINMENT INTEGRITY by use of SGT system during REACTOR POWER OPERATION. Isolation of the SGT system would result in the isolation of the ventilation system which serves the Reactor Recirculation Motor-Generator (RRMG) sets, which could ultimately result in a high-temperature trip of the RRMG sets. Also, it is not possible to isolate a given area of the reactor building from the balance of the reactor building. The new SR allows for immediate verification of secondary containment through leak testing and the demonstration of SECONDARY CONTAINMENT INTEGRITY, at the soonest practical time. STS does not contain a requirement for verification of SECONDARY CONTAINMENT INTEGRITY following major maintenance activities of secondary containment.

- Add new SR 4.7.C.2 to demonstrate SECONDARY CONTAINMENT INTEGRITY, by verifying, at least every 31 days, that secondary containment penetrations are isolated when associated inoperable isolation valves are identified. This proposed SR is based on similar wording contained in STS.

- Add new SR 4.7.C.3 to be consistent with STS with one variation. Isolation time will be demonstrated once per OPERATING CYCLE, as opposed to once per quarter. This time frame is consistent with the existing primary containment isolation valve SRs provided in SR 4.7.D.1.a.

Page 182 - Add statement to the 5th line of the 1st paragraph to 4.7.B & 4.7.C, Bases to support the new SR 4.7.C.3 which states that "timing of the isolation valves verify they are closing within the design basis requirements as specified in the USAR".

Changes Associated with Primary Containment Automatic Isolation Valves

Page 5 - Reword Condition No. 3 of Definition 1.0.P to explicitly state that all containment isolation valves required to be closed during accident conditions are operable or the affected penetration is isolated.

Page 167 - For LCO 3.7.D.1, clarify specification to state that all primary containment isolation valves listed in Table 3.7.1 to be operable when PRIMARY CONTAINMENT INTEGRITY is required, as opposed to during reactor power operating conditions. This proposed wording is consistent with STS.

- For LCO 3.7.D.2, replace the existing LCO with a requirement that primary containment penetration flow paths, having one or more inoperable automatic isolation valve(s), are isolated. In order to be consistent with STS wording, new Tech Spec time durations are established: 4 hour limit for lines containing a single inoperable valve (8 hours for main steam line); 1 hour if both the inboard and outboard isolation valves are inoperable.

- For SR 4.7.D.2, replace current surveillance requirement with a new surveillance requirement that requires the verification, at least once every 31 days, that lines containing inoperable primary containment isolation valves are isolated. This proposed SR is based on similar wording contained in STS.

Miscellaneous Editorial Changes

Page ii - Change page number references for Section 3.7.C, "Secondary Containment" from Page 165a to Page 166, and for Section 3.7.D, "Primary Containment Isolation Valves", from Page 166 to Page 167, to reflect changes in the body of the Tech Specs.

- Remove index entry for Section 3.5.H. This section was removed per Amendment No. 163, but was inadvertently reintroduced in Amendment 164. There are no changes to the corresponding Technical Specifications.

- Add the word "Automatic" between the words "Containment" and "Isolation" in the reference to Section 3.7.D.

Page 5 - For Definition 1.0.P. Condition 3, reword the term "automatic containment isolation valves" as "containment automatic isolation valves".

- For Definition 1.0.V, Condition 3, replace the term "automatic ventilation system" with "containment automatic".

Page 165 - Capitalize the following existing defined terms: OPERABLE (2 locations), SECONDARY CONTAINMENT INTEGRITY (1 location), and OPERATING CYCLE (1 location).

- For LCO 3.7.B.2.a, last line, replace "$\leq$ 0.25 Wg" with "$\geq$ 0.25 inch of water vacuum".

- Move LCO 3.7.B.2.a and SR 4.7.B.2.a to Page 165a.

Page 165a - Capitalize the following existing defined terms: OPERABLE (5 locations), OPERABILITY (3 locations), OPERATING CYCLE (2 locations), IMMEDIATELY (1 location), SECONDARY CONTAINMENT INTEGRITY (1 location).

- For LCO 3.7.B.2, change the term "CMF" to the correct units "CFM".

- For LCO 3.7.C.1, Line 3, insert "as specified in 3.7.C.2 or" between the terms "except" and "when". This change simply accommodates the addition of LCO 3.7.C.2 (previously discussed).

- For LCO 3.7.B.3, Line 4, change and capitalize the term "reactor operation" to "REACTOR POWER OPERATION".

- For LCO 3.7.C.3, change the statement "If secondary containment integrity cannot be maintained" with the statement "If Specification 3.7.C.1 and 3.7.C.2 cannot be met". This change is simply to recognize the addition of LCO 3.7.C.2 and does not change the requirements. It is also made in order to be consistent with similar LCO 3.7.D.3 and is consistent with other action statements throughout the CNS Tech Specs.

- Move Section 3/4.7.B.4 to new Page 165b.

- Move Section 3/4.7.C, <u>Secondary Containment</u>, to Page 166. Make corresponding change to Table of Contents.

Page 166 - Capitalize the following existing defined terms: SECONDARY CONTAINMENT INTEGRITY (1 location), HOT SHUTDOWN (1 location), COLD SHUTDOWN (1 location), OPERATING CYCLE (1 location), and REFUELING OUTAGE (1 location).

- For SR 4.7.C.1.a, last line, rephrase the term (μ= wind speed)" to "(μ= average wind speed)". This change is simply to be consistent with implementing procedures and represents <u>no change</u> in the requirements.

- Renumber LCO 3.7.C.1.e as 3.7.C.3 to reflect the addition of new LCO

3.7.C.2.

- Move new LCOs 3.7.C.2 & 3 and SRs 4.7.C.2 & 3 to new Page 166a.

- For SR 4.7.C.1.a, Line 10, and SR 4.7.C.1.c, Line 2, replace the term "1/4" with "0.25".

Page 167 - Move Section 3/4.7.D, Primary Containment Isolation Valves, to Page No. 167. Make corresponding change to Table of Contents.

- Capitalize the following existing defined terms: OPERABLE (2 locations), OPERATING CYCLE (3 locations), OPERABILITY (1 location), SHUTDOWN (2 locations), and COLD SHUTDOWN (1 location).

- For the headings to Sections 3.7.D and 4.7.D, insert the word "Automatic" between the words "Containment" and "Isolation".

- For LCO 3.7.D.1, Line 3, change the term "isolation valves" to "primary containment automatic isolation valves". For Line 5, change the term "instrument line flow check valves" to "instrument line excess flow check valves".

- For SR 4.7.C.1, Line 1, add the word "automatic" between the words "containment" and "isolation".

- For SR 4.7.D.1.c, change term "instrument line flow check valves" to "instrument line excess flow check valves".

- For SR 4.7.D.1.a, Line 4, replace the term "initiated" with the term "actuated". For Line 5, replace the term "initiation" with "ACTUATION" and capitalize the term "SIMULATED AUTOMATIC".

- Move revised Section 3/4.7.D.2, associated footnote, and 3.7.D.3 to new Page 167a.

Page 182 - For 3.7.B & 3.7.C, Paragraph 2, Line 4, replace the term "reactor operation" with the term "REACTOR POWER OPERATION".

- For 4.7.B and 4.7.C, second paragraph (due to addition of new first paragraph), Line 2, replace the term "1/4" with the term "0.25".

Page 205a - Capitalize the following existing defined terms: OPERABLE (8 locations), OPERABILITY (3 locations), SHUTDOWN (1 location), REFUELING OUTAGE (1 location), SPIRAL RELOAD (1 location).

REVISED TECHNICAL SPECIFICATION PAGES

FOR INFORMATION ONLY - NOT PART OF PROPOSED CHANGE 106.

L. Mode - The reactor mode is established by the mode selector-switch. The modes include refuel, run, shutdown and startup/hot standby which are defined as follows:

1. Refuel Mode - The reactor is in the refuel mode when the mode switch is in the REFUEL position. When the mode switch is in the REFUEL position, the refueling interlocks are in service.

2. Run Mode - In this mode the reactor system pressure is at or above 625 psig and the reactor protection system is energized with APRM protection (excluding the 15% high flux trip) and RBM interlocks in service.

3. Shutdown Mode - The reactor is in the shutdown mode when the mode switch is in the SHUTDOWN position.

4. Startup/Hot Standby - In this mode the reactor protection scram trips initiated by the main steam line isolation valve closure are bypassed, the low pressure main steam line isolation valve closure trip is bypassed, the reactor protection system is energized with APRM (15% SCRAM) and IRM neutron monitoring system trips and control rod withdrawal interlocks in service.

L.A Normal Ventilation - Normal ventilation is the controlled process of discharging and replacing air from/to a confinement to maintain temperature, humidity, or other conditions necessary for personnel safety and entry. The contents of the atmosphere being discharged from the confinement will have been established prior to establishing normal ventilation following a purging/venting operation.

M. Offsite Dose Assessment Manual (ODAM) - An OFFSITE DOSE ASSESSMENT MANUAL (ODAM) shall be a manual containing the methodology and parameters to be used in the calculation of offsite doses due to radioactive gaseous and liquid effluents, calculation of gaseous and liquid effluent monitoring instrumentation alarm/trip setpoints, and describes the Environmental Radiation Monitoring Program.

N. Operable - Operability - Operating

1. Operable - Operability - A system, subsystem, train, component or device shall be OPERABLE or have OPERABILITY when it is capable of performing its specified function(s). Implicit in this definition shall be the assumption that all necessary attendant instrumentation, controls, normal and emergency electrical power sources (except as specified in Section 1.0.J and 3.9), cooling or seal water, lubrication or other auxiliary equipment that are required for the system, subsystem, train, component or device to perform its function(s) are also capable of performing their related support function(s).

   A verification of OPERABILITY is an administrative check, by examination of appropriate plant records (logs, surveillance test records), to determine that a system, subsystem, train, component or device is not inoperable. Such verification does not preclude the demonstration (testing) of a given system, subsystem, train, component or device to determine OPERABILITY.

2. Operating - Operating means a system, subsystem, train, component, or device is performing its intended function in its required manner.

O. Operating Cycle - Interval between the end of one refueling outage and the end of the next subsequent refueling outage.

P. Primary Containment Integrity - Primary containment integrity means that the drywell and pressure suppression chamber are intact and all of the following conditions are satisfied:

1. All manual containment isolation valves on lines connected to the reactor coolant system or containment, and which are not required to be open during accident conditions, are closed.

2. At least one door in each airlock is closed and sealed.

3. All containment automatic isolation valves required to be closed during accident conditions are operable or the affected penetration is isolated.

4. All blind flanges and manways are closed.

P.A Purge - Purging - Purge or Purging is the controlled process of discharging air or gas from a confinement to establish temperature, pressure, humidity, concentration or other operating condition, in such a manner that replacement air or gas is required to purify the confinement.

P.B Process Control Program - The Process Control Program outlines the solidification of radioactive waste from liquid systems. It does not substitute for station operating procedures, but provides a general description of equipment, controls, and practices to be considered during waste solidification to assure solid wastes.

Q. Rated Power - Rated power refers to operation at a reactor power of 2381 megawatts thermal. This is also termed 100% power and is the maximum power level authorized by the operating license. Rated steam flow, rated coolant flow, rated neutron flux, and rated nuclear system pressure refer to the values of these parameters when the reactor is at rated power.

R. Reactor Power Operation - Reactor power operation is any operation with the mode switch in the "Startup/Hot Standby" or "Run" position with the reactor critical and above 1% rated power.

S. Reactor Vessel Pressure - Unless otherwise indicated, reactor vessel pressures listed in the Technical Specifications are those measured by the reactor vessel steam space detectors.

T. Refueling Outage - Refueling outage is the period of time between the shutdown of the unit prior to a refueling and the startup of the plant after that refueling.

U. Safety Limits - The safety limits are limits within which the reasonable maintenance of the fuel cladding integrity and the reactor coolant system integrity are assured. Violation of such a limit is cause for unit shutdown and review by the Nuclear Regulatory Commission before resumption of unit operation. Operation beyond such a limit may not in itself result in serious consequences but it indicates an operational deficiency subject to regulatory review.

V. Secondary Containment Integrity - Secondary containment integrity means that the reactor building is intact and the following conditions are met:

1. At least one door in each access opening is closed.

2. The standby gas treatment system is operable.

3. All containment automatic isolation valves required to be closed during accident conditions are operable or the affected penetration is isolated.

W. Shutdown - The reactor is in a shutdown condition when the mode switch is in the "Shutdown" or "Refuel" position.

1. Hot Shutdown means conditions as above with reactor coolant temperature greater than 212°F.

2. Cold Shutdown means conditions as above with reactor coolant temperature equal to or less than 212°F and the reactor vessel vented.

LIMITING CONDITION FOR OPERATION	SURVEILLANCE REQUIREMENT
3.7.A (cont'd.)	4.7.A (cont'd.)
6. Low-Low Set Relief Function	6. Low-Low Set Relief Function
a. The low-low set function of the safety-relief valves shall be OPERABLE when there is irradiated fuel in the reactor vessel and the reactor coolant temperature is ≥ 212°F, except as specified in 3.7.A.6.a.1 and 2 below.	a. The low-low set safety/relief valves shall be tested and calibrated as specified in Table 4.2.B.
1. With the low-low function of one safety/relief valve (S/RV) inoperable, restore the inoperable LLS S/RV to OPERABLE within 14 days or be in the HOT STANDBY mode within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.	
2. With the low-low set function of both S/RVs inoperable, be in at least HOT STANDBY within 12 hours and in COLD SHUTDOWN within the next 24 hours.	
b. The pressure switches which control the low-low set safety/relief valves shall have the following settings. NBI-PS-51A Open Low Valve 1015 ± 20 psig (Increasing) NBI-PS-51B Close Low Valve 875 ± 20 psig (Decreasing) NBI-PS-51C Open High Valve 1025 ± 20 psig (Increasing) NBI-PS-51D Close High Valve 875 ± 20 psig (Decreasing)	
B. Standby Gas Treatment System	B. Standby Gas Treatment System
1. Except as specified in 3.7.B.3 below, both Standby Gas Treatment subsystems shall be OPERABLE at all times when SECONDARY CONTAINMENT INTEGRITY is required.	1. At least once per OPERATING CYCLE the following conditions shall be demonstrated.
	a. Pressure drop across the combined HEPA filters and charcoal adsorber banks is less than 6 inches of water at the system design flow rate.
	b. Inlet heater input is capable of reducing R.H. from 100 to 70% R.H.
	c. Demonstrate that each Standby Gas Treatment subsystem can maintain ≥ 0.25 inch of water vacuum in the secondary containment for 1 hour at a flow rate of ≤ 1780 CFM under calm wind conditions ($2<\bar{\mu}<5$ mph where $\bar{\mu}$= average wind speed).

LIMITING CONDITION FOR OPERATION	SURVEILLANCE REQUIREMENT
3.7 B (cont'd)	4.7.B (cont'd)
2.a. The results of the in-place cold DOP leak tests on the HEPA filters shall show ≥99% DOP removal. The results of the halogenated hydrocarbon leak tests on the charcoal adsorbers shall show ≥99% halogenated hydrocarbon removal. The DOP and halogenated hydrocarbon tests shall be performed at a Standby Gas Treatment flowrate of ≤1780 CFM and at a Reactor Building pressure of ≥ 0.25 inch of water vacuum.	2.a. The tests and sample analysis of Specification 3.7.B.2 shall be performed at least once every 18 months for standby service or after every 720 hours of system operation and following significant painting, fire or chemical release in any ventilation zone communicating with the system.
b. The results of laboratory carbon sample analysis shall show ≥99% radioactive methyl iodide removal with inlet conditions of: velocity ≥27 FPM, ≥1.75 mg/m^3 inlet methyl iodide concentration, ≥70% R.H. and ≤30°C.	b. Cold DOP testing shall be performed after each complete or partial replacement of the HEPA filter bank or after any structural maintenance on the system housing.
c. Each fan shall be shown to provide 1780 CFM ±10%.	c. Halogenated hydrocarbon testing shall be performed after each complete or partial replacement of the charcoal adsorber bank or after any structural maintenance on the system housing.
	d. Each subsystem shall be operated with the heaters on at least 10 continuous hours every month.
	e. Test sealing of gaskets for housing doors downstream of the HEPA filters and charcoal adsorbers shall be performed at, and in conformance with, each test performed for compliance with Specification 4.7.B.2.a and Specification 3.7.B.2.a.
3. From and after the date that one Standby Gas Treatment subsystem is made or found to be inoperable for any reason, REACTOR POWER OPERATION is permissible only during the succeeding seven days unless such subsystem is sooner made OPERABLE, provided that during such seven days all active components that affect OPERABILITY of the OPERABLE Standby Gas Treatment subsystem, and its associated diesel generator, shall be OPERABLE. Fuel handling requirements are specified in Specification 3.10.E.	3. System drains where present shall be inspected quarterly for adequate water level in loop-seals.

LIMITING CONDITIONS FOR OPERATION	SURVEILLANCE REQUIREMENTS
3.7.B (cont'd)	4.7.B (cont'd)
4. If the conditions of LCO 3.7.B.1, 2, or 3 cannot be met, be in at least HOT SHUTDOWN within the next 12 hours and COLD SHUTDOWN within the following 24 hours.	4.a. At least once per OPERATING CYCLE automatic initiation of each Standby Gas Treatment subsystem shall be demonstrated. b. At least once per OPERATING CYCLE manual OPERABILITY of the bypass valve for filter cooling to each Standby Gas Treatment subsystem shall be demonstrated. c. When one Standby Gas Treatment subsystem becomes inoperable, the OPERABLE Standby Gas Treatment subsystem shall be verified to be OPERABLE IMMEDIATELY and daily thereafter. A demonstration of diesel generator OPERABILITY is not required by this specification.

LIMITING CONDITIONS FOR OPERATION	SURVEILLANCE REQUIREMENTS
3.7.C Secondary Containment	4.7.C Secondary Containment
1. SECONDARY CONTAINMENT INTEGRITY shall be maintained during all modes of plant operation except as specified in 3.7.C.2 or when all of the following conditions are met.	1. Secondary containment surveillance shall be performed as indicated below:
a. The reactor is subcritical and Specification 3.3.A is met.	a. A preoperational secondary containment capability test shall be conducted after isolating the reactor building and placing either Standby Gas Treatment subsystem filter train in operation. Such tests shall demonstrate the capability to maintain 0.25 inch of water vacuum under calm wind ($2<\bar{\mu}<5$ mph) conditions with a filter train flow rate of not more than 100% of building volume per day. ($\bar{\mu}$= average wind speed)
b. The reactor water temperature is below 212°F and the reactor coolant system is vented.	b. Additional tests shall be performed during the first OPERATING CYCLE under an adequate number of different environmental wind conditions to enable valid extrapolation of the test results.
c. No activity is being performed which can reduce the shutdown margin below that specified in Specification 3.3.A.	c. Secondary containment capability to maintain 0.25 inch of water vacuum under calm wind ($2<\bar{\mu}<5$ mph) conditions with a filter train flow rate of not more than 100% of building volume per day, shall be demonstrated at each REFUELING OUTAGE prior to refueling.
d. No irradiated fuel assemblies are being moved in the secondary containment, no core alterations are taking place with irradiated fuel in the vessel, and no operations with a potential for draining the reactor vessel are taking place with irradiated fuel in the vessel.	d. When the integrity of the pressure retaining boundary of secondary containment has been lost during POWER REACTOR OPERATION or HOT SHUTDOWN, then SECONDARY CONTAINMENT INTEGRITY shall be verified through qualitative leak testing or evaluation of the affected area prior to declaring SECONDARY CONTAINMENT INTEGRITY restored.

LIMITING CONDITIONS FOR OPERATION	SURVEILLANCE REQUIREMENTS
3.7.C (cont'd)	4.7.C (cont'd)
2. Whenever SECONDARY CONTAINMENT INTEGRITY is required, but one or more penetration flow paths contain an inoperable secondary containment automatic isolation valve required to be closed during accident conditions, then isolate the affected penetration(s), having an inoperable automatic isolation valve within 8 hours by use of at least one closed manual valve, blind flange, or de-activated automatic valve secured in the closed position.* If both secondary containment automatic isolation valves are inoperable in the affected penetration(s), then the above action shall be taken within 4 hours.* This requirement may be satisfied by de-activating the inoperable valve(s) in the closed position.	2. When it is determined that one or more secondary containment automatic isolation valve(s) required to be closed during accident conditions is inoperable when SECONDARY CONTAINMENT INTEGRITY is required, the affected penetration(s) shall be verified isolated, at least every 31 days, by at least one closed manual valve, blind flange, or de-activated automatic valve, secured in the closed position.
3. If Specification 3.7.C.1 and 3.7.C.2 cannot be met, restore SECONDARY CONTAINMENT INTEGRITY within 4 hours or;	3. At least once per OPERATING CYCLE, demonstrate each OPERABLE secondary containment automatic isolation valve required to be closed during accident conditions actuates to the isolated position, on an actual or simulated AUTOMATIC actuation signal, within the specified isolation time.
a. Be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.	
b. IMMEDIATELY suspend movement of irradiated fuel assemblies in the secondary containment, all core alterations, activities which could reduce the shutdown margin, and initiate actions to suspend operations with the potential for draining the reactor vessel. The provisions of Specification 1.0.J are not applicable.	
*Isolation valves closed to satisfy this requirement may be reopened on an intermittent basis under administrative control.	

LIMITING CONDITIONS FOR OPERATION	SURVEILLANCE REQUIREMENTS
3.7.D Primary Containment Automatic Isolation Valves	4.7.D Primary Containment Automatic Isolation Valves
1. When PRIMARY CONTAINMENT INTEGRITY is required, all primary containment automatic isolation valves listed in Table 3.7.1 and all instrument line excess flow check valves shall be OPERABLE except as specified in 3.7.D.2.	1. The primary containment automatic isolation valves surveillance shall be performed as follows:
	a. At least once per OPERATING CYCLE the OPERABLE isolation valves that are power operated and automatically actuated shall be tested for simulated automatic ACTUATION and closure times.
	b. At least once per quarter:
	(1) All normally open power operated isolation valves (except for the main steam line power-operated isolation valves) shall be fully closed and reopened.
	(2) With the reactor power less than 75%, trip main steam isolation valves individually and verify closure time.
	c. At least once per OPERATING CYCLE the OPERABILITY of the reactor coolant system instrument line excess flow check valves shall be verified.
	d. At least once per OPERATING CYCLE, while SHUTDOWN, the devices that limit the maximum opening angle to 60° shall be verified functional for the following valves: PC-230MV, PC-231MV, PC-232MV, and PC-233MV.

LIMITING CONDITIONS FOR OPERATION	SURVEILLANCE REQUIREMENTS
3.7.D (cont'd)	4.7.D (cont'd)
2. Whenever PRIMARY CONTAINMENT INTEGRITY is required, but one or more penetration flow paths contain an inoperable primary containment automatic isolation valve specified in Table 3.7.1, REACTOR POWER OPERATION may continue provided the penetration(s), having an inoperable automatic valve, is (are) isolated within 4 hours (8 hours for main steam line) by the use of at least one closed manual valve, blind flange, or de-activated automatic valve secured in the closed position.* If both inboard and outboard containment isolation valves are inoperable in the affected penetration(s), then the above action shall be taken within one hour.* This requirement may be satisfied by de-activating the inoperable valve(s) in the closed position.	2. When it is determined that one or more primary containment automatic isolation valve(s) specified in Table 3.7.1 required to be closed during accident conditions is inoperable when PRIMARY CONTAINMENT INTEGRITY is required, the affected penetration(s) shall be verified isolated, at least every 31 days, by at least one closed manual valve, blind flange, or de-activated automatic valve, secured in the closed position.
3. If Specification 3.7.D.1 and 3.7.D.2 cannot be met, an orderly SHUTDOWN shall be initiated and the reactor shall be in the COLD SHUTDOWN condition within 24 hours.	

*Isolation valves closed to satisfy these requirements may be reopened on an intermittent basis under administrative control.

3.7.B & 3.7.C BASES (cont'd)

High efficiency particulate absolute (HEPA) filters are installed before and after the charcoal adsorbers to minimize potential release of particulates to the environment and to prevent clogging of the iodine adsorbers. The charcoal adsorbers are installed to reduce the potential release of radioiodine to the environment. The in-place test results should indicate a system leak tightness of less than 1 percent bypass leakage for the charcoal adsorbers and HEPA filters. The laboratory carbon sample test results should indicate a radioactive methyl iodide removal efficiency of at least 99 percent for expected accident conditions. If the performance of the HEPA filters and charcoal adsorbers are as specified, the resulting doses will be less than the 10 CFR 100 guidelines for the accidents analyzed.

Only one of the two Standby Gas Treatment subsystems is needed to cleanup the reactor building atmosphere upon containment isolation. If one subsystem is found to be inoperable, there is no immediate threat to the containment system performance and REACTOR POWER OPERATION or refueling operation may continue while repairs are being made. If both subsystems are inoperable, the plant is brought to a condition where the Standby Gas Treatment System is not required.

4.7.B & 4.7.C BASES

Standby Gas Treatment System and Secondary Containment

Initiating reactor building isolation and operation of the Standby Gas Treatment System to maintain at least a 0.25 inch of water vacuum within the secondary containment provides an adequate test of the operation of the reactor building isolation valves, leak tightness of the reactor building and performance of the Standby Gas Treatment System. Timing of the isolation valves verify they are closing within the design basis requirements as specified in the USAR. Functionally testing the initiating sensors and associated trip channels demonstrates the capability for automatic actuation. Periodic testing gives sufficient confidence of reactor building integrity and Standby Gas Treatment System performance capability.

Pressure drop across the combined HEPA filters and charcoal adsorbers of less than 6 inches of water at the system design flow rate will indicate that the filters and adsorbers are not clogged by excessive amounts of foreign matter. A 7.8 kw heater is capable of maintaining relative humidity below 70%. Heater capacity and pressure drop should be determined at least once per operating cycle to show system performance capability.

The frequency of tests and sample analysis are necessary to show that the HEPA filters and charcoal adsorbers can perform as evaluated. Tests of the charcoal adsorbers with halogenated hydrocarbon refrigerant shall be performed in accordance with ANSI N510-1980. The test canisters that are installed with the adsorber trays should be used for the charcoal adsorber efficiency test. Each sample should be at least two inches in diameter and a length equal to the thickness of the bed. If test results are unacceptable, all adsorbent in the system shall be replaced

LIMITING CONDITIONS FOR OPERATION	SURVEILLANCE REQUIREMENTS
3.10.B (Cont'd)	4.10 (Cont'd)
4. During SPIRAL RELOAD, SRM OPERABILITY will be verified by using a portable external source every 12 hours until the required amount of fuel is loaded to maintain 3 cps. As an alternative to the above, two fuel assemblies will be loaded in different cells containing control blades around each SRM to obtain the required 3 cps. Until these two assemblies have been loaded, the 3 cps requirement is not necessary.	
C. Spent Fuel Pool Water Level Whenever irradiated fuel is stored in the spent fuel pool, the pool water level shall be maintained at or above 8½' above the top of the fuel.	C. Spent Fuel Pool Water Level When irradiated fuel is stored in the spent fuel pool, the water level shall be recorded daily.
D. Time Limitation Irradiated fuel shall not be handled in or above the reactor prior to 24 hours after reactor SHUTDOWN.	
E. Standby Gas Treatment System From and after the date that one Standby Gas Treatment subsystem is made or found to be inoperable for any reason, movement of irradiated fuel assemblies, core alterations with irradiated fuel in the vessel, and operations with a potential for draining the reactor vessel with irradiated fuel in the vessel is permissible only during the succeeding seven days unless such subsystem is sooner made OPERABLE, provided that during such seven days all active components that affect OPERABILITY of the OPERABLE Standby Gas Treatment subsystem, and its associated diesel generator, shall be OPERABLE. At least one diesel generator shall be OPERABLE during fuel handling operations. This one diesel shall be capable of supplying power to an OPERABLE Standby Gas Treatment subsystem.	E. Standby Gas Treatment System When one Standby Gas Treatment subsystem becomes inoperable, the OPERABLE Standby Gas Treatment subsystem shall be verified to be OPERABLE immediately and daily thereafter. A demonstration of diesel generator OPERABILITY is not required by this specification.
F. Core Standby Cooling Systems During a REFUELING OUTAGE, refueling operation with fuel in the reactor vessel may continue with one Core Spray and one LPCI subsystem inoperable, or with both Core Spray subsystems inoperable. Refueling is permitted with the suppression chamber drained provided an OPERABLE Core Spray or LPCI subsystem is aligned to take a suction on the condensate storage tank containing at least 150,000 gallons (≥14 ft. indicated level).	

MARKED UP TECHNICAL SPECIFICATION PAGES

TABLE OF CONTENTS (cont'd)

Automatic

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FOR INFORMATION ONLY; NOT PART OF PROPOSED CHANGE

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2. Run Mode - In this mode the reactor system pressure is at or above 825 psig and the reactor protection system is energized with APRM protection (excluding the 15% high flux trip) and RBM interlocks in service.

3. Shutdown Mode - The reactor is in the shutdown mode when the mode switch is in the SHUTDOWN position.

4. Startup/Hot Standby - In this mode the reactor protection scram trips initiated by the main steam line isolation valve closure are bypassed, the low pressure main steam line isolation valve closure trip is bypassed, the reactor protection system is energized with APRM (15% SCRAM) and IRM neutron monitoring system trips and control rod withdrawal interlocks in service.

L.A Normal Ventilation - Normal ventilation is the controlled process of discharging and replacing air from/to a confinement to maintain temperature, humidity, or other conditions necessary for personnel safety and entry. The contents of the atmosphere being discharged from the confinement will have been established prior to establishing normal ventilation following a purging/venting operation.

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2. At least one door in each airlock is closed and sealed.

required to be closed during accident conditions

3. All automatic containment isolation valves are operable or ~~are activated in the isolated position~~ the affected penetration is.

4. All blind flanges and manways are closed.

P.A Purge - Purging - Purge or Purging is the controlled process of discharging air or gas from a confinement to establish temperature, pressure, humidity, concentration or other operating condition, in such a manner that replacement air or gas is required to purify the confinement.

P.B Process Control Program - The Process Control Program outlines the solidification of radioactive waste from liquid systems. It does not substitute for station operating procedures, but provides a general description of equipment, controls, and practices to be considered during waste solidification to assure solid wastes.

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R. Reactor Power Operation - Reactor power operation is any operation with the mode switch in the "Startup/Hot Standby" or "Run" position with the reactor critical and above 1% rated power.

S. Reactor Vessel Pressure - Unless otherwise indicated, reactor vessel pressures listed in the Technical Specifications are those measured by the reactor vessel steam space detectors.

T. Refueling Outage - Refueling outage is the period of time between the shutdown of the unit prior to a refueling and the startup of the plant after that refueling.

U. Safety Limits - The safety limits are limits within which the reasonable maintenance of the fuel cladding integrity and the reactor coolant system integrity are assured. Violation of such a limit is cause for unit shutdown and review by the Nuclear Regulatory Commission before resumption of unit operation. Operation beyond such a limit may not in itself result in serious consequences but it indicates an operational deficiency subject to regulatory review.

V. Secondary Containment Integrity - Secondary containment integrity means that the reactor building is intact and the following conditions are met:

1. At least one door in each access opening is closed.

2. The standby gas treatment system is operable.

required to be closed during accident conditions

3. All ~~automatic ventilation system~~ isolation valves are operable or ~~secured in the isolated position~~ containment automatic the affected penetration is

W Shutdown - The reactor is in a shutdown condition when the mode switch is in the "Shutdown" or "Refuel" position.

1. Hot Shutdown means conditions as above with reactor coolant temperature greater than 212°F.

2. Cold Shutdown means conditions as above with reactor coolant temperature equal to or less than 212°F and the reactor vessel vented.

~~06/12/90~~

LIMITING CONDITION FOR OPERATION	SURVEILLANCE REQUIREMENT
3.7.A (cont'd.)	4.7.A (cont'd.)
6. Low-Low Set Relief Function	6. Low-Low Set Relief Function
a. The low-low set function of the safety-relief valves shall be operable when there is irradiated fuel in the reactor vessel and the reactor coolant temperature is ≥ 212°F, except as specified in 3.7.A.6.a.1 and 2 below.	a. The low-low set safety/relief valves shall be tested and calibrated as specified in Table 4.2.B.
1. With the low-low function of one safety/relief valve (S/RV) inoperable, restore the inoperable LLS S/RV to OPERABLE within 14 days or be in the HOT STANDBY mode within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.	
2. With the low-low set function of both S/RVs inoperable, be in at least HOT STANDBY within 12 hours and in COLD SHUTDOWN within the next 24 hours.	
b. The pressure switches which control the low-low set safety/relief valves shall have the following settings.	
NBI-PS-51A Open Low Valve 1015 ± 20 psig (Increasing)	
NBI-PS-51B Close Low Valve 875 ± 20 psig (Decreasing)	
NBI-PS-51C Open High Valve 1025 ± 20 psig (Increasing)	
NBI-PS-51D Close High Valve 875 ± 20 psig (Decreasing)	
B. Standby Gas Treatment System	Move 4.7.B to down here with 3.7.B B. Standby Gas Treatment System
1. Except as specified in 3.7.B.3 below, both Standby Gas Treatment subsystems shall be operable at all times when secondary containment integrity is required.	1. At least once per operating cycle the following conditions shall be demonstrated.
	a. Pressure drop across the combined HEPA filters and charcoal adsorber banks is less than 6 inches of water at the system design flow rate.
	b. Inlet heater input is capable of reducing R.H. from 100 to 70% R.H.
2.a. The results of the in-place cold DOP leak tests on the HEPA filters shall show ≥99% DOP removal. The results of the halogenated hydrocarbon leak tests on the charcoal adsorbers shall show ≥99% halogenated hydrocarbon removal. The DOP and halogenated hydrocarbon tests shall be performed at a Standby Gas Treatment flowrate of ≤1780 CFM and at a Reactor Building pressure of ≥ 0.25 inch of water vacuum	c. - Add new SR, next page 2.a. The tests and sample analysis of Specification 3.7.B.2 shall be performed at least once every 18 months for standby service or after every 720 hours of system operation and following significant painting, fire or chemical release in any ventilation zone communicating with the system.

ALL CAPS

Move Sections 3.7.B.2.a & 4.7.B.2.a to Page No. 165a

~~3/11/92~~

REVISED WORDING FOR PAGE 165, CNS TECHNICAL SPECIFICATION SECTIONS 3/4.7.B

Add new SR 4.7.B.1.c

c. Demonstrate that each Standby Gas Treatment subsystem can maintain $\geq$ 0.25 inch of water vacuum in the secondary containment for 1 hour at a flow rate of $\leq$ 1780 CFM under calm wind conditions ($2<\mu<5$ mph where μ= average wind speed).

LIMITING CONDITION FOR OPERATION

3.7.B (cont'd)

b. The results of laboratory carbon sample analysis shall show ≥99% radioactive methyl iodide removal with inlet conditions of: velocity ≥27 FPM, ≥1.75 mg/m³ inlet methyl iodide concentration, ≥70% R.H. and ≤30°C.

c. Each fan shall be shown to provide 1780 ~~CMF~~ CFM ±10%.

3. From and after the date that one Standby Gas Treatment subsystem is made or found to be inoperable for any reason, reactor operation is permissible only during the succeeding seven days unless such subsystem is sooner made operable, provided that during such seven days all active components that affect operability of the operable Standby Gas Treatment subsystem, and its associated diesel generator, shall be operable.

Fuel handling requirements are specified in Specification 3.10.E.

4. ~~If these conditions cannot be met, procedures shall be initiated immediately to establish reactor conditions for which the Standby Gas Treatment System is not required.~~ Replace with statement next page.

SURVEILLANCE REQUIREMENT

4.7.B (cont'd)

b. Cold DOP testing shall be performed after each complete or partial replacement of the HEPA filter bank or after any structural maintenance on the system housing.

c. Halogenated hydrocarbon testing shall be performed after each complete or partial replacement of the charcoal adsorber bank or after any structural maintenance on the system housing.

d. Each subsystem shall be operated with the heaters on at least 10 hours every month. Continuous

e. Test sealing of gaskets for housing doors downstream of the HEPA filters and charcoal adsorbers shall be performed at, and in conformance with, each test performed for compliance with Specification 4.7.B.2.a and Specification 3.7.B.2.a.

3. System drains where present shall be inspected quarterly for adequate water level in loop-seals.

4.a. At least once per operating cycle automatic initiation of each Standby Gas Treatment subsystem shall be demonstrated.

b. At least once per operating cycle manual operability of the bypass valve for filter cooling shall be demonstrated. For each Standby Gas Treatment subsystem

c. When one Standby Gas Treatment subsystem becomes inoperable, the operable Standby Gas Treatment subsystem shall be verified to be operable immediately and daily thereafter. A demonstration of diesel generator operability is not required by this specification.

ALL CAPS

Move Sections 3.7.B.4 & 4.7.B.4 to new Page No. 165b.

3.7.C. Secondary Containment

1. Secondary containment integrity shall be maintained during all modes of plant operation except when all of the following conditions are met. As specified in 3.7.C.2 or

4.7.C. Secondary Containment

1. Secondary containment surveillance shall be performed as indicated below:

Move Sections 3.7.C & 4.7.C To Page No. 166

~~2/11/98~~

REVISED WORDING FOR PAGE 165a, CNS TECHNICAL SPECIFICATION SECTIONS 3/4.7.B

Revise LCO 3.7.B.4 to read

4. If the conditions of LCO 3.7.B.1, 2, or 3 cannot be met, be in at least HOT SHUTDOWN within the next 12 hours and COLD SHUTDOWN within the following 24 hours.

LIMITING CONDITIONS FOR OPERATION

~~3.7.C (cont'd.)~~

If Specification 3.7.C.1 and 3.7.C.2 cannot be met

a. The reactor is subcritical and Specification 3.3.A is met.

b. The reactor water temperature is below 212°F and the reactor coolant system is vented.

c. No activity is being performed which can reduce the shutdown margin below that specified in Specification 3.3.A.

d. No irradiated fuel ~~is~~ being ~~handled~~ in the secondary containment, ~~and no loads which could potentially damage irradiated fuel are being moved in the secondary containment.~~

2. See next page for NEW LCO 3.7.C.2

3. If ~~secondary containment integrity cannot be maintained~~, restore secondary containment integrity within 4 hours or;

Move Section 3.7.C.2&3 To Page 166a (new)

a. Be in at least Hot Shutdown within the next 12 hours and in cold shutdown within the following 24 hours.

IMMEDIATELY

b. Suspend irradiated fuel ~~handling operations~~ in the secondary containment, ~~movement of loads which could potentially damage irradiated fuel in the secondary containment,~~ ~~and~~ all core alterations, ~~and~~ activities which could reduce the shutdown margin. The provisions of Specification 1.0.J are not applicable.

and initiate actions to suspend operations with the potential for draining the reactor vessel

SURVEILLANCE REQUIREMENTS

~~4.7.C (cont'd.)~~

No core alterations are taking place with irradiated fuel in the vessel, and no operations with a potential for draining the reactor vessel are taking place with irradiated fuel in the vessel

a. A preoperational secondary containment capability test shall be conducted after isolating the reactor building and placing either Standby Gas Treatment subsystem filter train in operation. Such tests shall demonstrate the capability to maintain ~~1/4~~ inch of water vacuum under calm wind ($2<\bar{\mu}<5$ mph) conditions with a filter train flow rate of not more than 100% of building volume per day. ($\bar{\mu}$ = wind speed)

0.25

average

b. Additional tests shall be performed during the first operating cycle under an adequate number of different environmental wind conditions to enable valid extrapolation of the test results.

ALL CAPS

0.25

c. Secondary containment capability to maintain ~~1/4~~ inch of water vacuum under calm wind ($2<\bar{\mu}<5$ mph) conditions with a filter train flow rate of not more than 100% of building volume per day, shall be demonstrated at each refueling outage prior to refueling.

d. ~~After a secondary containment~~ violation is determined, the Standby Gas Treatment System will be operated immediately after the affected zones are isolated from the remainder of the secondary containment to confirm its ability to maintain the remainder of the secondary containment at 1/4 inch of water negative pressure under calm wind conditions.

Replace wording with new SR 4.7.C.1.d, next page.

2

3

* Page

Add new SR 4.7.C.2 & 3, next page 166a.

Add footnote to bottom of Page 166a.

D. Primary Containment Isolation Valves

When PRIMARY CONTAINMENT INTEGRITY is required

1. ~~During reactor power operating conditions~~, all isolation valves listed in Table 3.7.1 and all instrument line flow check valves shall be operable except as specified in 3.7.D.2.

excess

primary containment automatic

* Isolation valves closed to satisfy this requirement may be reopened on an intermittent basis under administrative control.

Move SECTION 3/4.7.D to Page 167

D. Primary Containment Isolation Valves

Automatic

1. The primary containment isolation valves surveillance shall be performed as follows:

a. At least once per operating cycle the operable isolation valves that are power operated and automatically ~~initiated~~ shall be tested for simulated automatic ~~initiation~~ and closure times.

ACTUATION

actuated

~~3/21/92~~

REVISED WORDING FOR PAGE 166, CNS TECHNICAL SPECIFICATION SECTIONS 3/4.7.C

Add New LCO 3.7.C.2

2. Whenever SECONDARY CONTAINMENT INTEGRITY is required, but one or more penetration flow paths contain an inoperable secondary containment automatic isolation valve required to be closed during accident conditions, then isolate the affected penetration(s), having an inoperable automatic isolation valve, within 8 hours by use of at least one closed manual valve, blind flange, or de-activated automatic valve secured in the closed position.* If both secondary containment automatic isolation valves are inoperable in the affected penetration(s), then the above action shall be taken within 4 hours.* This requirement may be satisfied by de-activating the inoperable valve(s) in the closed position.

Replace existing Surveillance Requirement 4.7.C.1.d wording with new SR wording

d. When the integrity of the pressure retaining boundary of secondary containment has been lost during POWER REACTOR OPERATION or HOT SHUTDOWN, then SECONDARY CONTAINMENT INTEGRITY shall be verified through qualitative leak testing or evaluation of the affected area prior to declaring the SECONDARY CONTAINMENT INTEGRITY restored.

Add New Surveillance Requirements 4.7.C.2 and 4.7.C.3

2. When it is determined that one or more secondary containment automatic isolation valve(s) required to be closed during accident conditions is inoperable when SECONDARY CONTAINMENT INTEGRITY is required, the affected penetration(s) shall be verified isolated, at least every 31 days, by at least one closed manual valve, blind flange, or de-activated automatic valve, secured in the closed position.

3. At least once per OPERATING CYCLE, demonstrate each OPERABLE secondary containment automatic isolation valve required to be closed during accident conditions actuates to the isolated position, on an actual or SIMULATED AUTOMATIC ACTUATION signal, within the specified isolation time.

LIMITING CONDITIONS FOR OPERATION

~~3.7.D (cont'd.)~~

SURVEILLANCE REQUIREMENTS

~~4.7.D (cont'd.)~~

b. At least once per quarter:

(1) All normally open power operated isolation valves (except for the main steam line power-operated isolation valves) shall be fully closed and reopened.

(2) With the reactor power less than 75%, trip main steam isolation valves individually and verify closure time.

c. At least once per operating cycle the operability of the reactor coolant system instrument line flow check valves shall be verified. EOC 6R

d. At least once per operating cycle, while shutdown, the devices that limit the maximum opening angle to 60° shall be verified functional for the following valves: PC-230MV, PC-231MV, PC-232MV, and PC-233MV.

Replace with new wording; next page.

2. ~~In the event any isolation valve specified in Table 3.7.1 becomes inoperable, reactor power operation may continue provided at least one valve in each line having an inoperable valve shall be in the mode corresponding to the isolated condition.*~~

2. ~~Whenever an isolation valve listed in Table 3.7.1 is inoperable, the position of at least one other valve in each line having an inoperable valve shall be recorded daily.~~

Replace with new wording; next page.

3. If Specification 3.7.D.1 and 3.7.D.2 cannot be met, an orderly shutdown shall be initiated and the reactor shall be in the Cold Shutdown condition within 24 hours.

All CAPS

*Isolation valves closed to satisfy these requirements may be reopened on an intermittent basis under administrative control.

More sections 3/4.7.D.2, 3, 4 Footnote to new Page 167a

~~3/7/82~~

REVISED WORDING FOR PAGE 167, CNS TECHNICAL SPECIFICATION SECTIONS 3/4.7.D

Replace existing LCO 3.7.D.2 with new LCO 3.7.D.2

2. Whenever PRIMARY CONTAINMENT INTEGRITY is required, but one or more penetration flow paths contain an inoperable primary containment automatic isolation valve specified in Table 3.7.1, REACTOR POWER OPERATION may continue provided the penetration(s), having an inoperable automatic valve, is (are) isolated within 4 hours (8 hours for main steam line) by the use of at least one closed manual valve, blind flange, or de-activated automatic valve secured in the closed position.* If both inboard and outboard containment isolation valves are inoperable in the affected penetration(s), then the above action shall be taken within one hour.* This requirement may be satisfied by de-activating the inoperable valve(s) in the closed position.

Replace existing SR 4.7.D.2 with new SR 4.7.D.2

2. When it is determined that one or more primary containment automatic isolation valve(s) specified in Table 3.7.1 required to be closed during accident conditions is inoperable when PRIMARY CONTAINMENT INTEGRITY is required, the affected penetration(s) shall be verified isolated, at least every 31 days, by at least one closed manual valve, blind flange, or de-activated automatic valve, secured in the closed position.

3.7.B & 3.7.C BASES (cont'd)

High efficiency particulate absolute (HEPA) filters are installed before and after the charcoal adsorbers to minimize potential release of particulates to the environment and to prevent clogging of the iodine adsorbers. The charcoal adsorbers are installed to reduce the potential release of radioiodine to the environment. The in-place test results should indicate a system leak tightness of less than 1 percent bypass leakage for the charcoal adsorbers and HEPA filters. The laboratory carbon sample test results should indicate a radioactive methyl iodide removal efficiency of at least 99 percent for expected accident conditions. If the performance of the HEPA filters and charcoal adsorbers are as specified, the resulting doses will be less than the 10 CFR 100 guidelines for the accidents analyzed.

Only one of the two Standby Gas Treatment subsystems is needed to cleanup the reactor building atmosphere upon containment isolation. If one subsystem is found to be inoperable, there is no immediate threat to the containment system performance and ~~reactor operation~~ or refueling operation may continue while repairs are being made. If both subsystems are inoperable, the plant is brought to a condition where the Standby Gas Treatment System is not required.

4.7.B & 4.7.C BASES

REACTOR POWER OPERATION

Timing of the isolation valves verify they are closing within the design basis requirements as specified in the USAR.

Standby Gas Treatment System and Secondary Containment

Initiating reactor building isolation and operation of the Standby Gas Treatment System to maintain at least a ~~1/4~~ 0.25 inch of water vacuum within the secondary containment provides an adequate test of the operation of the reactor building isolation valves, leak tightness of the reactor building and performance of the Standby Gas Treatment System. Functionally testing the initiating sensors and associated trip channels demonstrates the capability for automatic actuation. Periodic testing gives sufficient confidence of reactor building integrity and Standby Gas Treatment System performance capability.

Pressure drop across the combined HEPA filters and charcoal adsorbers of less than 6 inches of water at the system design flow rate will indicate that the filters and adsorbers are not clogged by excessive amounts of foreign matter. A 7.8 kw heater is capable of maintaining relative humidity below 70%. Heater capacity and pressure drop should be determined at least once per operating cycle to show system performance capability.

The frequency of tests and sample analysis are necessary to show that the HEPA filters and charcoal adsorbers can perform as evaluated. Tests of the charcoal adsorbers with halogenated hydrocarbon refrigerant shall be performed in accordance with ANSI N510-1980. The test canisters that are installed with the adsorber trays should be used for the charcoal adsorber efficiency test. Each sample should be at least two inches in diameter and a length equal to the thickness of the bed. If test results are unacceptable, all adsorbent in the system shall be replaced

LIMITING CONDITIONS FOR OPERATION	SURVEILLANCE REQUIREMENTS
3.10.B (Cont'd)	4.10 (Cont'd)
4. During ~~a~~ spiral reload, SRM operability will be verified by using a portable external source every 12 hours until the required amount of fuel is loaded to maintain 3 cps. As an alternative to the above, two fuel assemblies will be loaded in different cells containing control blades around each SRM to obtain the required 3 cps. Until these two assemblies have been loaded, the 3 cps requirement is not necessary.	
C. Spent Fuel Pool Water Level Whenever irradiated fuel is stored in the spent fuel pool, the pool water level shall be maintained at or above 8½' above the top of the fuel.	C. Spent Fuel Pool Water Level When irradiated fuel is stored in the spent fuel pool, the water level shall be recorded daily.
D. Time Limitation Irradiated fuel shall not be handled in or above the reactor prior to 24 hours after reactor shutdown.	
E. Standby Gas Treatment System From and after the date that one Standby Gas Treatment subsystem is made or found to be inoperable for any reason, handling of irradiated fuel, ~~and movement of loads which could potentially damage irradiated fuel in the secondary containment~~, is permissible only during the succeeding seven days unless such subsystem is sooner made operable, provided that during such seven days all active components that affect operability of the operable Standby Gas Treatment subsystem, and its associated diesel generator, shall be operable. At least one diesel generator shall be operable during fuel handling operations. This one diesel shall be capable of supplying power to an operable Standby Gas Treatment subsystem.	E. Standby Gas Treatment System When one Standby Gas Treatment subsystem becomes inoperable, the operable Standby Gas Treatment subsystem shall be verified to be operable immediately and daily thereafter. A demonstration of diesel generator operability is not required by this specification.
F. Core Standby Cooling Systems During a refueling outage, refueling operation with fuel in the reactor vessel may continue with one Core Spray and one LPCI subsystem inoperable, or with both Core Spray subsystems inoperable. Refueling is permitted with the suppression chamber drained provided an operable Core Spray or LPCI subsystem is aligned to take a suction on the condensate storage tank containing at least 150,000 gallons (≥14 ft. indicated level).	

ALL CAPs

assemblies

movement

Core alterations with irradiated fuel in the vessel, and operations with a potential for draining the reactor vessel with irradiated fuel in the vessel

~~9/11/92~~