Michael T. Coyle
Vice President

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U-603329
8E.100a
October 06, 2000

Docket No. 50-461

10CFR50.90

U.S. Nuclear Regulatory Commission
Document Control Desk
Washington, D.C. 20555

Subject: Clinton Power Station Proposed Amendment of
Facility Operating License No. NPF-62 (LA-98-007)

Dear Madam or Sir:

Pursuant to 10 CFR 50.90, AmerGen Energy Company, LLC (AmerGen) hereby applies for amendment of Facility Operating License No. NPF-62 for Clinton Power Station (CPS). Specifically, AmerGen requests review and approval of proposed changes to Technical Specification (TS) Surveillance Requirement (SR) 3.6.4.1.4 to remove associated Figure 3.6.4.1-1, "Secondary Containment Drawdown Time for 1500 cfm Boundary Leakage." The details associated with this figure, which allows for correcting drawdown test results to various plant conditions under which such testing may be performed, would be relocated to plant-controlled procedures or documents. The licensing basis acceptance criterion on which the figure is based would remain unchanged as the continued intent is to ensure that test results support the assumptions of the plant accident analyses (as described in the CPS Updated Safety Analysis Report).

A description of the proposed changes, justification, Basis for No Significant Hazards Consideration, and Environmental Impact Consideration are provided in Enclosure 2. An annotated copy of the affected page from the current TS is provided in Enclosure 3. Corresponding TS Bases changes are provided in Enclosure 4 and are for information only. Further, an affidavit supporting the facts set forth in this letter and its enclosures is provided in Enclosure 1.

Sincerely yours,

Michael T. Coyle
Vice President

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JEP/JLP/krk

Enclosures

cc: NRC Clinton Licensing Project Manager
Regional Administrator, USNRC Region III
NRC Resident Office, V-690
Illinois Department of Nuclear Safety

AFFIRMATION

Michael T. Coyle, being first duly sworn, deposes and says: That he is Vice President for Clinton Power Station; that this application for amendment of Facility Operating License NPF-62 has been prepared under his supervision and direction; that he knows the contents thereof; and that the letter and the statements made and the facts contained therein are true and correct to the best of his knowledge and belief.

Date: This 5th day of October 2000.

Signed: Michael T. Coyle
Michael T. Coyle
Vice President

STATE OF ILLINOIS)
) SS.
DeWitt COUNTY)

Subscribed and sworn to before me this 5th day of October 2000.

" OFFICIAL SEAL "
Jacqueline S. Matthias
Notary Public, State of Illinois
My Commission Expires 11/24/2001

Jacqueline S. Matthias
(Notary Public)

Revise CPS Technical Specifications Surveillance Requirement (SR) SR 3.6.4.1.4 for Secondary Containment Drawdown Testing

BACKGROUND

The main purpose of the secondary containment design is to contain, dilute, and hold up fission products that may leak from the primary containment following a Design Basis Accident (DBA). Two principal accidents, the loss of coolant accident (LOCA) and the fuel handling accident, credit the secondary containment for accident mitigation. The secondary containment performs no active function in response to either of these limiting events. Its leak tightness, however, is required to ensure that the release of radioactive materials from the primary containment is restricted to those leakage paths and associated leakage rates assumed in the accident analysis. Updated Safety Analysis Report (USAR) Section 6.2.3 describes the design requirements for the secondary containment.

Following a postulated DBA, the Standby Gas Treatment (SGT) System is designed to achieve and maintain 0.25 inches of water gauge negative pressure in the secondary containment with respect to the outdoors. This capability of the SGT System to draw down the secondary containment is required for the secondary containment to perform its intended function for preserving the leakage pathways assumed in the accident analyses. To establish performance criteria for this function of the SGT System, and to establish test acceptance criteria for verifying this capability, consideration was given to the post-LOCA conditions that may be assumed to exist when the SGT System is called upon to draw down the secondary containment. Specifically, an analysis was performed to consider pressure changes or transients in the secondary containment that may occur under such conditions due to (1) inleakage, (2) air expansion from equipment heat, and (3) the starting time required for the SGT System. The analysis was also performed at various wind speeds to determine worst case conditions. The USAR documents this analysis and identifies that the secondary containment is capable of being drawn down within 188 seconds with a maximum inleakage of 1500 cfm at 0.25 inches of water gauge negative pressure considering these pressure transients.

The purpose of SR 3.6.4.1.4 is to verify that the SGT System will rapidly establish and maintain a pressure in the secondary containment that is less than the lowest postulated pressure external to the secondary containment boundary. SR 3.6.4.1.4 is performed for each SGT subsystem every 18 months on a STAGGERED TEST BASIS.

Bases for Secondary Containment Drawdown Surveillance Requirement SR 3.6.4.1.4

During the initial licensing of CPS, as identified in Section 6.2.2 of the NRC's Safety Evaluation Report (SER) and Supplemental SER (SSER) 2 and 7 for CPS (NUREG-0853), a single time limit (i.e., 188 seconds) was originally proposed as the acceptance criterion for the secondary containment drawdown test. However, as noted in SSER 7, the NRC had a concern that the value of 188 seconds was inappropriate as a TS

acceptance criterion. The 188-second drawdown time was derived with consideration of conditions following the onset of a LOCA, which would mechanistically increase the drawdown time (e.g., by heat addition to the secondary containment atmosphere). The NRC noted that it would be non-conservative to apply the 188-second value to normal test conditions. In resolving the concern, SSER 7 documented a licensee commitment to analyze the drawdown period under actual or normal test conditions and to provide an appropriate value for the drawdown time limit.

CPS Letter U-601230 dated December 21, 1988, provided the results of the drawdown analysis and proposed the inclusion of TS acceptance criteria in the form of a graph which specifies the drawdown time limit as a function of the system flow observed during the drawdown when a differential pressure of 0.25 inches water gauge is attained. In addition, the following associated TS Bases statement regarding specific acceptance criteria used during testing was proposed for CPS:

> "The acceptance criteria specified in Figure 4.6.6.1-1 for the drawdown test is based on a computer model, verified by actual performance of drawdown tests, in which the drawdown time determined for accident conditions is adjusted to account for performance of the test during normal plant conditions. The acceptance criteria indicated per Figure 4.6.6.1-1 is based on conditions corresponding to power operation (with the turbine building ventilation system in operation) and wind speeds less than or equal to 10 mph. The acceptance criteria for plant conditions other than those assumed will be adjusted as necessary to reflect the conditions which exist during performance of the surveillance test."

The proposed TS Figure and associated Bases wording was approved by the NRC via Amendment No. 21 to the CPS Operating License dated April 10, 1989. The NRC's Safety Evaluation concluded that the proposed testing of the secondary containment was acceptable since it provided a mechanism for establishing testing criteria that reflected actual conditions under which the test would be conducted. Adjustment of the acceptance criteria, to account for the variable test conditions, assured that the systems would perform adequately under assumed accident conditions.

<u>Testing Issue Associated With Surveillance Requirement SR 3.6.4.1.4</u>

Testing performed pursuant to SR 3.6.4.1.4 may be performed in MODES 1, 2, 3, 4 or 5. Test results obtained from performance of the surveillance test during any of these modes may be impacted by specific plant conditions that may exist during the test. Test conditions that impact the performance of the surveillance test include whether the containment is open or closed, the Turbine Building Ventilation System is operating or not operating, and wind speeds are less than or greater than 10 mph. Since these variables impact the SGT System drawdown time test results, adjustment of the acceptance criteria must be made to account for these conditions.

Existing TS Figure 3.6.4.1-1 utilizes acceptance criteria in the form of a single curve that applies to one set of conditions corresponding to power operation (which includes having the containment equipment hatch closed per the normal plant configuration and as required for containment integrity during plant operation), the Turbine Building Ventilation System in operation, and wind speeds less than or equal to 10 mph. However, as noted previously, this set of conditions is only one of several combinations of variables that may be present during testing. Since the approval of Amendment 21, CPS has procedurally controlled the combination of variables and associated acceptance criteria to be met for verifying adequate drawdown capability under different test conditions. This adjustment to the acceptance criteria during testing is procedurally controlled by CPS Surveillance Test Procedure 9065.02, "Secondary Containment Integrity." The test procedure contains a family of SGT System airflow-versus-drawdown time curves similar to TS Figure 3.6.4.1-1. Each curve represents a set of plant conditions that may need to be accounted for during test performance. The curves are supported by a plant calculation, "3C10-1079-001."

During a recent review of the ITS Bases for SR 3.6.4.1.4, a potential conflict was identified between the literal wording of SR 3.6.4.1.4 and the provisions described in the associated Bases regarding the use of adjusted acceptance criteria for test conditions other than those specified per Figure 3.6.4.1-1. SR 3.6.4.1.4, as currently worded, requires verifying that "each standby gas treatment (SGT) subsystem will draw down the secondary containment to $\geq$ 0.25 inch of vacuum water gauge within the time required by Figure 3.6.4.1-1." This SR wording could be interpreted to not allow acceptance criteria appropriate for other test conditions (i.e., other drawdown time curves) to be used, especially when the curves associated with those other test conditions would not lie within the curve currently specified on Figure 3.6.4.1-1. This situation is particularly applicable to any acceptance point on the curve used in the plant procedure for when the drawdown test is performed during shutdown conditions to verify SGTS/secondary containment operability with the containment hatch removed. The curve used for such conditions lies significantly above the curve on TS Figure 3.6.4.1-1. Consequently, each acceptance point (time value) on that drawdown curve is not literally "within the time required by Figure 3.6.4.1-1," even though that curve has been determined to be an appropriate test acceptance criterion for the associated test conditions.

DESCRIPTION OF PROPOSED CHANGE

The proposed change to the Technical Specifications, as reflected in the annotated TS pages provided in Enclosure 3, revises the secondary containment drawdown test requirement (SR 3.6.4.1.4) to clearly allow the application of acceptance criteria adjusted to conditions that may exist during the performance of the surveillance test. Specifically, the proposed change eliminates Figure 3.6.4.1-1 and the reference to this Figure in SR 3.6.4.1.4. Instead of referring to the Figure, the SR will simply require verifying that secondary containment drawdown time is within "the required time." The required limit will be specified in the plant surveillance procedure wherein the applicable test conditions will be identified and taken into account.

With regard to the TS Bases, the proposed change to the associated TS is consistent with the intent of the wording currently in the Bases for SR 3.6.4.1.4. However, changes are needed to remove the reference to TS Figure 3.6.4.1-1, and to eliminate the current discussion that refers only to the test conditions assumed for Figure 3.6.4.1-1. More general discussion is being incorporated to clarify the intent of being able to adjust test acceptance criteria to a variety of plant/test conditions, and to identify that the test acceptance criteria are contained in the associated plant test procedure(s). In support of that, a reference to the plant calculation performed to adjust the test acceptance criteria is being incorporated. Finally, minor editorial changes are being incorporated to enhance readability and for context. As noted in the cover letter, these Bases changes are provided for information, as they are being processed in accordance with the Bases Control Program pursuant to TS 5.5.11.

Current TS SR 3.6.4.1.4:

Verify each standby gas treatment (SGT) subsystem will drawdown the secondary containment to ≥ 0.25 inch of vacuum water gauge within the time required by Figure 3.6.4.1-1.

Proposed TS SR 3.6.4.1.4:

Verify each standby gas treatment (SGT) subsystem will drawdown the secondary containment to ≥ 0.25 inch of vacuum water gauge within the required time.

JUSTIFICATION FOR PROPOSED CHANGES

As noted previously, the current acceptance criteria (i.e., the drawdown curve) specified on TS Figure 3.6.4.1-1 are based upon a particular set of plant and atmospheric conditions assumed to exist at the time of test performance. If other conditions are present at the time of test performance, the Bases allow adjustment of the acceptance criteria to correct for those test conditions.

The proposed change is intended to (1) resolve the noted, existing, potential conflict between the literal wording of SR 3.6.4.1.4 and the testing provisions described in the associated TS Bases (which, as noted above, allow for correction of the test acceptance criteria based on other analyzed plant conditions that may exist at the time testing is performed), and (2) ensure that sufficient flexibility exists to make whatever corrections may be deemed appropriate for other plant conditions not yet analyzed that may exist during testing. The proposed change to eliminate Figure 3.6.4.1-1 meets this intent as it would allow the applicable plant test procedure(s) to specify the secondary containment drawdown test acceptance criteria appropriate to whatever plant/test conditions might apply. The acceptance criteria would continue to be linked to the post-LOCA licensing-basis drawdown requirement (of 188 seconds) as identified in the TS Bases for SR

3.6.4.1.4. No figure in the SR is needed to maintain this link, as the current figure (Figure 3.6.4.1-1) does not explicitly refer to the 188-second basis requirement either.

The placement of control of the secondary containment drawdown test acceptance criteria in the associated plant test procedure(s) is consistent with the provisions approved per Amendment 21. With the proposed change to SR 3.6.4.1.4, the SR would continue to provide a mechanism for establishing testing criteria that reflects actual conditions under which the test would be conducted. The adjustment of the acceptance criteria, to account for applicable test conditions, assures that the testing required per SR 3.6.4.1.4 continues to provide verification that the systems will perform adequately under assumed accident conditions. This proposed change is consistent with other Technical Specification SRs that make reference to limits that are more appropriate to be defined in the TS Bases and controlled by TS 5.5.11, "Technical Specification Bases Control Program."

BASIS FOR NO SIGNIFICANT HAZARDS CONSIDERATION DETERMINATION

In accordance with 10 CFR 50.92, a proposed change to the operating license involves no significant hazards consideration if operation of the facility in accordance with the proposed change would not: (1) involve a significant increase in the probability or consequences of any accident previously evaluated, (2) create the possibility of a new or different kind of accident from any accident previously evaluated, or (3) involve a significant reduction in a margin of safety. The proposed change has been evaluated against each of the three criteria and it has been determined that the change does not involve a significant hazard because:

(1) The proposed change does not involve a significant increase in the probability or consequences of any accident previously evaluated.

The proposed Technical Specification (TS) change eliminates an inconsistency between the Secondary Containment surveillance requirement (SR 3.6.4.1.4) and the associated Bases. The proposed change (1) revises the wording of SR 3.6.4.1.4 to verify the time to draw down the secondary containment to $\geq$ 0.25 inch water gauge for each standby gas treatment (SGT) subsystem is within the required time; and (2) relocates the specific acceptance criteria (existing TS Figure 3.6.4.1-1) to plant procedures and the TS Bases.

The scope of the proposed change is thus limited to the affected SR. No changes to plant equipment or the plant design are involved. The affected SR, as are surveillances in general, is not an initiator to any accident previously evaluated. Consequently, the probability of an accident previously evaluated is not significantly increased.

The proposed change impacts SR 3.6.4.1.4 but does not change its intent or the associated acceptance criteria. Thus, the components and structural integrity being tested will still be required to be maintained Operable and capable of performing the accident mitigation functions assumed in the accident analysis. As a result, the consequences of any accident previously evaluated are not significantly effected. Therefore, this change does not

involve a significant increase in the probability or consequences of an accident previously evaluated.

(2) The proposed change would not create the possibility of a new or different kind of accident from any accident previously evaluated.

The proposed Technical Specification (TS) change eliminates an inconsistency between the Secondary Containment surveillance requirement (SR 3.6.4.1.4) and the associated Bases. The proposed change does not involve a physical alteration of the plant (no new or different type of equipment will be installed) or a change in the methods governing normal plant operation. No new failure modes are thus introduced by the proposed change. Therefore, this change does not create the possibility of a new or different kind of accident from any accident previously evaluated.

(3) The proposed change will not involve a significant reduction in the margin of safety.

The proposed Technical Specification (TS) change eliminates an inconsistency between the Secondary Containment Integrity surveillance requirement (SR 3.6.4.1.4) and the associated Bases. The revised wording of the Surveillance Requirement and the relocation of the acceptance criteria to plant procedures and TS Bases have been evaluated to ensure that they are sufficient to verify that the equipment used to meet the LCO can perform its required functions. The relocation of the acceptance criteria is consistent with the Bases previously approved in Amendment 21. Thus, appropriate equipment continues to be tested in a manner that gives confidence that the equipment can perform its assumed safety function. Therefore, this change does not involve a significant reduction in a margin of safety.

Based upon the above analysis, the proposed change will not increase the probability or consequences of any accident previously evaluated, create the possibility of a new or different kind of accident from any accident previously evaluated, or involve a significant reduction in the margin of safety. Therefore, the proposed change meets the requirements of 10 CFR 50.92(c) and involves no significant hazard consideration.

Environmental Impact Consideration

The proposed license amendment was evaluated against the criteria of 10 CFR 51.22 for environmental considerations. Since the proposed change involves no change to the design or operation of the facility, the proposed change (1) does not significantly increase individual or cumulative occupational radiation exposures, (2) does not significantly change the types or significantly increase the amount of effluents that may be released offsite, and (3) as discussed in this enclosure, does not involve a significant hazards consideration. Based on the foregoing, it has been concluded that the proposed Technical Specification change meets the criteria given in 10 CFR 51.22(c)(9) for categorical exclusion from the requirement for an Environmental Impact Statement.

Marked-Up Pages of the Technical Specifications

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3.6 CONTAINMENT SYSTEMS

3.6.4.1 Secondary Containment

LCO 3.6.4.1 The secondary containment shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3,
During movement of irradiated fuel assemblies in the primary or secondary containment,
During CORE ALTERATIONS,
During operations with a potential for draining the reactor vessel (OPDRVs).

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. Secondary containment inoperable in MODE 1, 2, or 3.	A.1	Restore secondary containment to OPERABLE status.	4 hours
B. Required Action and associated Completion Time of Condition A not met.	B.1	Be in MODE 3.	12 hours
	AND		
	B.2	Be in MODE 4.	36 hours

(continued)

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ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. Secondary containment inoperable during movement of irradiated fuel assemblies in the primary or secondary containment, during CORE ALTERATIONS, or during OPDRVs.	C.1 --------NOTE--------- LCO 3.0.3 is not applicable. ---------- Suspend movement of irradiated fuel assemblies in the primary and secondary containment.	Immediately
	AND	
	C.2 Suspend CORE ALTERATIONS.	Immediately
	AND	
	C.3 Initiate action to suspend OPDRVs.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.6.4.1.1	Verify secondary containment vacuum is ≥ 0.25 inch of vacuum water gauge.	24 hours
SR 3.6.4.1.2	Verify all secondary containment equipment hatches are closed and sealed.	31 days

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.6.4.1.3	Verify one door in each access to secondary containment is closed, except during normal entry and exit.	31 days
SR 3.6.4.1.4	Verify each standby gas treatment (SGT) subsystem will draw down the secondary containment to ≥ 0.25 inch of vacuum water gauge within the time required ~~by Figure 3.6.4.1-1~~.	18 months on a STAGGERED TEST BASIS
SR 3.6.4.1.5	Verify each SGT subsystem can maintain ≥ 0.25 inch of vacuum water gauge in the secondary containment for 1 hour at a flow rate ≤ 4400 cfm.	18 months on a STAGGERED TEST BASIS

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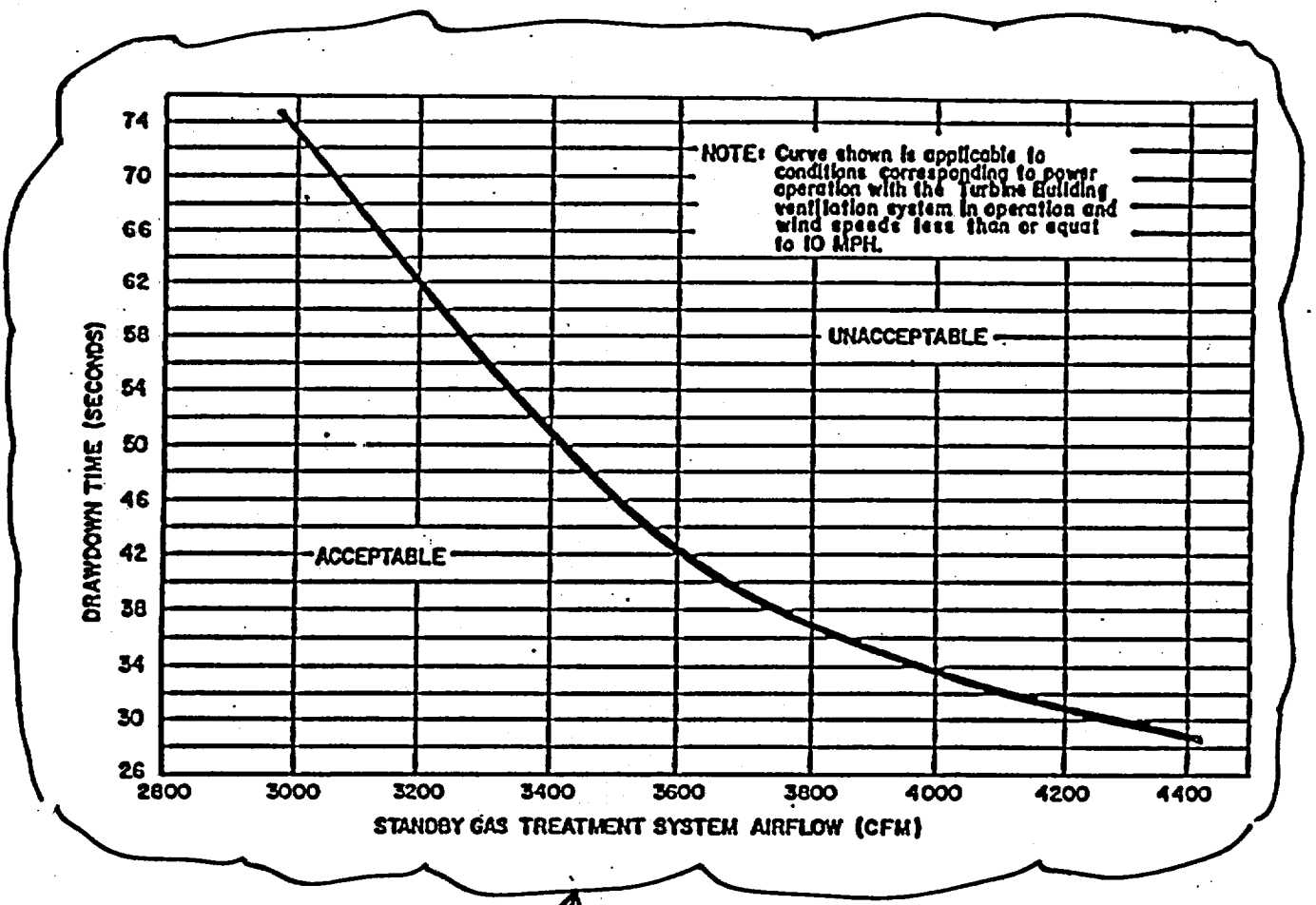

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~~Figure 3.6.4.1-1 (page 1 of 1)~~
~~Secondary Containment Drawdown Time for 1500 cfm Boundary Leakage~~

Marked-Up Pages of the Technical Specification Bases

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B 3.6 CONTAINMENT SYSTEMS

B 3.6.4.1 Secondary Containment

BASES

BACKGROUND

The function of the secondary containment is to contain, dilute, and hold up fission products that may leak from primary containment following a Design Basis Accident (DBA). In conjunction with operation of the Standby Gas Treatment (SGT) System and closure of certain valves whose lines penetrate the secondary containment, the secondary containment is designed to reduce the activity level of the fission products prior to release to the environment and to isolate and contain fission products that are released during certain operations that take place inside primary containment (e.g., during operations with a potential for draining the reactor vessel (OPDRVs), during CORE ALTERATIONS, or during movement of irradiated fuel assemblies in the primary or secondary containment), when primary containment is not required to be OPERABLE, or that take place outside primary containment.

The secondary containment is a structure that completely encloses the primary containment (except for the upper containment personnel air lock penetration) and those components that may be postulated to contain primary system fluid. This structure forms a control volume that serves to hold up and dilute the fission products. It is possible for the pressure in the control volume to rise relative to the environmental pressure (e.g., due to pump/motor heat load additions). To prevent ground level exfiltration while allowing the secondary containment to be designed as a conventional structure, the secondary containment requires support systems to maintain the control volume pressure at less than the external pressure. Requirements for these systems are specified separately in LCO 3.6.4.2, "Secondary Containment Isolation Dampers (SCIDs)," and LCO 3.6.4.3, "Standby Gas Treatment (SGT) System."

The isolation devices for the penetrations in the secondary containment boundary are a part of the secondary containment barrier. To maintain this barrier:

a. All secondary containment penetrations required to be closed during accident conditions are either:

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BASES

BACKGROUND (continued)

1. capable of being closed by an OPERABLE automatic secondary containment isolation system, or

2. closed by at least one manual valve or damper, blind flange, or de-activated automatic damper secured in the closed position, except as provided in LCO 3.6.4.2, "Secondary Containment Isolation Dampers (SCIDS)";

b. The upper containment personnel air lock is OPERABLE, except as provided in LCO 3.6.1.2, "Primary Containment Air Locks";

c. All secondary containment equipment hatches are closed and sealed;

d. The Standby Gas Treatment System is OPERABLE, except as provided in LCO 3.6.4.3, "Standby Gas Treatment (SGT) System";

e. At least one door in each access to the secondary containment is closed, except when the access penetration is being used for entry or exit;

f. The pressure within the secondary containment is in compliance with SR 3.6.4.1.1, except as provided in this LCO; and

g. At least one SGT subsystem is capable of drawing the secondary containment pressure down to the required pressure within the required time in compliance with SR 3.6.4.1.4, except as provided in this LCO.

APPLICABLE SAFETY ANALYSES

There are two principal accidents for which credit is taken for secondary containment OPERABILITY. These are a LOCA (Ref. 1), and a fuel handling accident (Ref. 2). The secondary containment performs no active function in response to each of these limiting events; however, its leak tightness is required to ensure that the release of radioactive materials from the primary containment is restricted to those leakage paths and associated leakage rates assumed in the accident analysis, and that fission products entrapped within the secondary containment structure will be treated by the SGT System prior to discharge to the environment.

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BASES

APPLICABLE SAFETY ANALYSES (continued)	Secondary containment satisfies Criterion 3 of the NRC Policy Statement.
LCO	An OPERABLE secondary containment provides a control volume into which fission products that bypass or leak from primary containment, or are released from the reactor coolant pressure boundary components located in secondary containment, can be diluted and processed prior to release to the environment. For the secondary containment to be considered OPERABLE, it must have adequate leak tightness to ensure that the required vacuum can be established and maintained.
APPLICABILITY	In MODES 1, 2, and 3, a LOCA could lead to a fission product release to primary containment that leaks to secondary containment. Therefore, secondary containment OPERABILITY is required during the same operating conditions that require primary containment OPERABILITY. In MODES 4 and 5, the probability and consequences of the LOCA are reduced due to the pressure and temperature limitations in these MODES. Therefore, maintaining secondary containment OPERABLE is not required in MODE 4 or 5 to ensure a control volume, except for other situations for which significant releases of radioactive material can be postulated, such as during operations with a potential for draining the reactor vessel (OPDRVs), during CORE ALTERATIONS, or during movement of irradiated fuel assemblies in the primary or secondary containment.
ACTIONS	A.1 If secondary containment is inoperable, it must be restored to OPERABLE status within 4 hours. The 4 hour Completion Time provides a period of time to correct the problem that is commensurate with the importance of maintaining secondary

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BASES

ACTIONS

A.1 (continued)

containment during MODES 1, 2, and 3. This time period also ensures that the probability of an accident (requiring secondary containment OPERABILITY) occurring during periods where secondary containment is inoperable is minimal.

B.1 and B.2

If the secondary containment cannot be restored to OPERABLE status within the required Completion Time, the plant must be brought to a MODE in which the LCO does not apply. To achieve this status, the plant must be brought to at least MODE 3 within 12 hours and to MODE 4 within 36 hours. The allowed Completion Times are reasonable, based on operating experience, to reach the required plant conditions from full power conditions in an orderly manner and without challenging plant systems.

C.1, C.2, and C.3

Movement of irradiated fuel assemblies in the primary or secondary containment, CORE ALTERATIONS, and OPDRVs can be postulated to cause fission product release to the secondary containment. In such cases, the secondary containment is the only barrier to release of fission products to the environment. CORE ALTERATIONS and movement of irradiated fuel assemblies must be immediately suspended if the secondary containment is inoperable.

Suspension of these activities shall not preclude completing an action that involves moving a component to a safe position. Also, action must be immediately initiated to suspend OPDRVs to minimize the probability of a vessel draindown and subsequent potential for fission product release. Actions must continue until OPDRVs are suspended.

Required Action C.1 has been modified by a Note stating that LCO 3.0.3 is not applicable. If moving irradiated fuel assemblies while in MODE 4 or 5, LCO 3.0.3 would not specify any action. If moving irradiated fuel assemblies while in MODE 1, 2, or 3, the fuel movement is independent of reactor operations. Therefore, in either case, inability to suspend

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BASES

ACTIONS

C.1, C.2, and C.3 (continued)

movement of irradiated fuel assemblies would not be a sufficient reason to require a reactor shutdown.

SURVEILLANCE REQUIREMENTS

SR 3.6.4.1.1

This SR ensures that the secondary containment boundary is sufficiently leak tight to preclude exfiltration under expected wind conditions. The 24 hour Frequency of this SR was developed based on operating experience related to secondary containment vacuum variations during the applicable MODES and the low probability of a DBA occurring between surveillances.

Furthermore, the 24 hour Frequency is considered adequate in view of other indications available in the control room, including alarms, to alert the operator to an abnormal secondary containment vacuum condition.

With regard to secondary containment vacuum values obtained pursuant to this SR, as read from plant indication instrumentation, the specified limit is considered to be a nominal value and therefore does not require compensation for instrument indication uncertainties (Ref. 3).

SR 3.6.4.1.2 and SR 3.6.4.1.3

Verifying that secondary containment equipment hatches and access doors are closed ensures that the infiltration of outside air of such a magnitude as to prevent maintaining the desired negative pressure does not occur. Verifying that all such openings are closed provides adequate assurance that exfiltration from the secondary containment will not occur. In this application the term "sealed" has no connotation of leak tightness. Maintaining secondary containment OPERABILITY requires verifying one door in the access opening is closed, except when the access opening is being used for entry and exit. The 31 day Frequency for these SRs has been shown to be adequate based on operating experience, and is considered adequate in view of the other controls on secondary containment access openings.

(continued)

BASES

SURVEILLANCE REQUIREMENTS

SR 3.6.4.1.4 and SR 3.6.4.1.5

The SGT System exhausts the secondary containment atmosphere to the environment through appropriate treatment equipment. To ensure that all fission products are treated, SR 3.6.4.1.4 verifies that the SGT System will rapidly establish and maintain a pressure in the secondary containment that is less than the lowest postulated pressure external to the secondary containment boundary. This is confirmed by demonstrating that one SGT subsystem will draw down the secondary containment to ≥ 0.25 inches of vacuum water gauge within the ~~time~~ required ~~by Figure 3.6.4.1-1~~ time. ~~These time limits account for differences between testing conditions and anticipated LOCA conditions. The acceptance criteria specified in Figure 3.6.4.1-1 for the drawdown test is based on a computer model, verified by actual performance of drawdown tests, in which the drawdown time determined for accident conditions is adjusted to account for performance of the test during normal plant conditions (acfm). The acceptance criteria indicated per Figure 3.6.4.1-1 is based on conditions corresponding to power operation (with the turbine building ventilation system in operation) and wind speeds less than or equal to 10 mph. The acceptance criteria for plant conditions other than those assumed will be adjusted as necessary to reflect the conditions which exist during performance of the surveillance test (e.g., via the use of separate figures for different plant operating conditions, such as for those corresponding to plant shutdown with and without the turbine building ventilation system in operation). This ensures that ≥ 0.25 inches of vacuum water gauge will be established in ≤ 188 seconds under LOCA conditions. This cannot be accomplished if the secondary containment boundary is not intact.~~ SR 3.6.4.1.5 demonstrates that each SGT subsystem can maintain ≥ 0.25 inches of vacuum water gauge for 1 hour at a flow rate ≤ 4400 acfm. The 1-hour test period allows secondary containment to be in thermal equilibrium at steady state conditions. Therefore, ~~these two~~ tests are ~~used~~ to ensure secondary containment boundary integrity. Since these SRs are secondary containment tests, they need not be performed with each SGT subsystem, and an inoperable SGT subsystem does not result in this SR being not met. The SGT subsystems are tested on a STAGGERED TEST BASIS, however, to ensure that in addition to the requirements of LCO 3.6.4.3, either SGT subsystem ~~will perform~~ this test. Operating experience has

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REPLACE WITH ATTACHED, NEW PARAGRAPH

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required per SR 3.6.4.1.4 and SR 3.6.4.1.5

performed

can satisfy

(continued)

New Paragraph for Bases Page B 3.6-88

Specifically, the required drawdown time limit is based on ensuring that the SGT system will draw down the secondary containment pressure to ≥ 0.25 inches of vacuum water gauge within 188 seconds under LOCA conditions. Typically, however, the conditions under which drawdown testing is performed pursuant to SR 3.6.4.1.4 are different than those assumed for LOCA conditions. For this reason, and because test results are dependent on or influenced by certain plant and/or atmospheric conditions that may be in effect at the time testing is performed, it is necessary to adjust the test acceptance criteria (i.e., the required drawdown time) to account for such test conditions. Conditions or factors that may impact the test results include wind speed, whether the turbine building ventilation system is running, and whether the containment equipment hatch is open (when the test is performed during plant shutdown/outage conditions). The acceptance criteria for the drawdown test are thus based on a computer model (Ref. 6), verified by actual performance of drawdown tests, in which the drawdown time determined for accident conditions is adjusted to account for performance of the test during normal but certain plant conditions. The test acceptance criteria are specified in the applicable plant test procedure(s). Since the drawdown time is dependent upon secondary containment integrity, the drawdown requirement cannot be met if the secondary containment boundary is not intact.

BASES

SURVEILLANCE REQUIREMENTS

SR 3.6.4.1.4 and SR 3.6.4.1.5 (continued)

shown these components usually pass the Surveillance when performed at the 18 month Frequency. Therefore, the Frequency was concluded to be acceptable from a reliability standpoint.

With regard to drawdown time values obtained pursuant to this SR, as read from plant indication instrumentation, the specified limit is considered to be a nominal value and therefore does not require compensation for instrument indication uncertainties (Refs. 4, 5).

REFERENCES

1. USAR, Section 15.6.5.
2. USAR, Section 15.7.4.
3. Calculation IP-0-0082.
4. Calculation IP-0-0083.
5. Calculation IP-0-0084.
6. Calculation 3C10-1079-001.