

RS-17-137

10 CFR 50.90

November 8, 2017

U.S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, DC 20555-0001

Clinton Power Station, Unit 1  
Facility Operating License No. NPF-62  
NRC Docket No. 50-461

Dresden Nuclear Power Station, Units 2 and 3  
Renewed Facility Operating License Nos. DPR-19 and DPR-25  
NRC Docket Nos. 50-237 and 50-249

LaSalle County Station, Units 1 and 2  
Renewed Facility Operating License Nos. NPF-11 and NPF-18  
NRC Docket Nos. 50-373 and 50-374

Limerick Generating Station, Units 1 and 2  
Renewed Facility Operating License Nos. NPF-39 and NPF-85  
NRC Docket Nos. 50-352 and 50-353

Nine Mile Point Nuclear Station, Unit 2  
Renewed Facility Operating License No. NPF-69  
NRC Docket No. 50-410

Quad Cities Nuclear Power Station, Units 1 and 2  
Renewed Facility Operating License Nos. DPR-29 and DPR-30  
NRC Docket Nos. 50-254 and 50-265

Subject: Application to Revise Technical Specifications to Adopt TSTF-551, "Revise Secondary Containment Surveillance Requirements"

Reference: Letter from J. M. Whitman (U.S. NRC) to Technical Specifications Task Force, "Final Safety Evaluation of Technical Specifications Task Force Traveler TSTF-551, Revision 3, 'Revise Secondary Containment Surveillance Requirements' (CAC No. MF5125)," dated September 21, 2017

In accordance with 10 CFR 50.90, "Application for amendment of license, construction permit, or early site permit," Exelon Generation Company, LLC (EGC), requests an amendment to Facility Operating License No. NPF-62 for Clinton Power Station, Unit 1, Renewed Facility

Operating License Nos. DPR-19 and DPR-25 for Dresden Nuclear Power Station, Units 2 and 3, Renewed Facility Operating License Nos. NPF-11 and NPF-18 for LaSalle County Station, Units 1 and 2, Renewed Facility Operating License Nos. NPF-39 and NPF-85 for Limerick Generating Station, Units 1 and 2, Renewed Facility Operating License No. NPF-69 for Nine Mile Point Nuclear Station, Unit 2, and Renewed Facility Operating License Nos. DPR-29 and DPR-30 for Quad Cities Nuclear Power Station, Units 1 and 2. The proposed change revises Technical Specifications (TS) Surveillance Requirements (SRs) to address conditions during which the secondary containment pressure may not meet the SR pressure requirements. In addition, for Limerick Generating Station, associated TS definitions are revised for consistency to reflect the changes proposed to the SRs. The proposed change is in response to the recent NRC approval of TSTF-551, "Revise Secondary Containment Surveillance Requirements," contained in the Reference.

Attachment 1 provides a description and assessment of the proposed change. Attachment 2 provides the existing TS pages marked up to show the proposed change. Attachment 3 provides TS Bases pages marked up to show the associated TS Bases changes and is provided for information only.

The proposed change has been reviewed by the Plant Operations Review Committees at each station in accordance with the requirements of the EGC Quality Assurance Program.

EGC requests approval of the proposed change by November 8, 2018. The proposed change eliminates unnecessary reporting in accordance with 10 CFR 50.72 and 50.73, as such, EGC requests that the NRC prioritize the review of this LAR accordingly. Once approved, the amendment shall be implemented within 60 days.

In accordance with 10 CFR 50.91, "Notice for public comment; State consultation," paragraph (b), EGC is notifying the State of Illinois, Commonwealth of Pennsylvania, and State of New York of this application for license amendment by transmitting a copy of this letter and its attachments to the designated State Officials.

There are no regulatory commitments contained in this letter. Should you have any questions concerning this letter, please contact Mr. Kenneth M. Nicely at (630) 657-2803.

I declare under penalty of perjury that the foregoing is true and correct. Executed on the 8th day of November 2017.

Respectfully,



Patrick R. Simpson  
Manager – Licensing

Attachments:

1. Description and Assessment
2. Markup of Proposed Technical Specifications Pages
3. Markup of Proposed Technical Specifications Bases Pages (For Information Only)

cc: NRC Regional Administrator, Region I  
NRC Regional Administrator, Region III  
NRC Senior Resident Inspector – Clinton Power Station  
NRC Senior Resident Inspector – Dresden Nuclear Power Station  
NRC Senior Resident Inspector – LaSalle County Station  
NRC Senior Resident Inspector – Limerick Generating Station  
NRC Senior Resident Inspector – Nine Mile Point Nuclear Station  
NRC Senior Resident Inspector – Quad Cities Nuclear Power Station  
Illinois Emergency Management Agency – Division of Nuclear Safety  
Director, Bureau of Radiation Protection – Pennsylvania Department  
of Environmental Protection  
A. L. Peterson, NYSERDA

# **ATTACHMENT 1**

## **Description and Assessment**

### **1.0 DESCRIPTION**

The proposed change revises Technical Specifications (TS) Surveillance Requirements (SRs) to address conditions during which the secondary containment pressure may not meet the SR pressure requirements. In addition, for Limerick Generating Station, associated TS definitions are revised for consistency to reflect the changes proposed to the SRs.

### **2.0 ASSESSMENT**

#### **2.1 Applicability of Published Safety Evaluation**

Exelon Generation Company, LLC (EGC) has reviewed the safety evaluation for TSTF-551 provided to the Technical Specifications Task Force in a letter dated September 21, 2017. This review included a review of the NRC's evaluation, as well as the information provided in TSTF-551. EGC has concluded that the justifications presented in TSTF-551 and the safety evaluation prepared by the NRC are applicable to Clinton Power Station (CPS) Unit 1, Dresden Nuclear Power Station (DNPS) Units 2 and 3, LaSalle County Station (LSCS) Units 1 and 2, Limerick Generating Station (LGS) Units 1 and 2, Nine Mile Point Nuclear Station (NMP) Unit 2, and Quad Cities Nuclear Power Station (QCNPS) Units 1 and 2, and justify this amendment for the incorporation of the changes to the stations' TS.

#### **2.2 Optional Changes and Variations**

EGC is proposing the following variations from the TS changes described in the TSTF-551 or the applicable parts of the NRC's safety evaluation. These variations do not affect the applicability of TSTF-551 or the NRC's safety evaluation to the proposed license amendment.

The CPS Unit 1, DNPS Units 2 and 3, LSCS Units 1 and 2, LGS Units 1 and 2, NMP Unit 2, and QCNPS Units 1 and 2 TS already contain an allowance similar to that made to the Improved Standard Technical Specifications (ISTS) SR 3.6.4.1.3 regarding use of the access opening for entry and exit. Therefore, the proposed change does not contain this portion of TSTF-551.

TSTF-551 includes an editorial change to ISTS SR 3.6.4.1.4 that revises the wording from "...standby gas treatment (SGT) subsystem" to "SGT subsystem." The corresponding SR for DNPS and QCNPS (i.e., SR 3.6.4.1.3) already uses the TSTF-551 wording; therefore, no changes are proposed to SR 3.6.4.1.3 for DNPS and QCNPS.

The LGS TS utilize different numbering and titles than the Improved Standard Technical Specifications on which TSTF-551 was based. Specifically, ISTS TS 3.6.4.1, "Secondary Containment," on which TSTF-551 is based, is applicable during Modes 1, 2 and 3, during movement of recently irradiated fuel assemblies in the secondary containment, and during operations with the potential for draining the reactor vessel (OPDRVs). ISTS SR 3.6.4.1.1, which is being modified by the addition of a Note in TSTF-551, requires verifying that secondary containment vacuum is  $\geq$  [0.25] inch of vacuum water gauge. This SR is applicable to all the modes of applicability.

## **ATTACHMENT 1**

### **Description and Assessment**

For LGS, the corresponding TS Section 3.6.5, "Secondary Containment," which covers all the modes of applicability of ISTS TS 3.6.4.1, is split between two separate TS sections. LGS TS 3.6.5.1.1 applies to Reactor Enclosure Secondary Containment Integrity during Operational Conditions (OPCONs) 1, 2 and 3, and TS 3.6.5.1.2 applies to Refueling Area Secondary Containment Integrity when recently irradiated fuel is being handled in the secondary containment, or during operations with a potential for draining the reactor vessel, with the vessel head removed and fuel in the vessel. SRs 4.6.5.1.1.a and 4.6.5.1.2.a require verification that the pressure within each area of secondary containment (i.e., the reactor enclosure and the refuel floor, respectively) is  $\geq$  0.25 inch of vacuum water gauge, which is consistent with ISTS SR 3.6.4.1.1.

In addition, LGS also has two separate TS definitions related to Reactor Enclosure Secondary Containment Integrity and Refueling Floor Secondary Containment Integrity (i.e., TS 1.33 and 1.36, respectively). The definition TS are being revised for consistency to reflect the changes proposed to SRs 4.6.5.1.1.a and 4.6.5.1.2.a, as applicable.

The differences described above are administrative in nature and do not affect the applicability of TSTF-551 to the CPS, DNPS, LSCS, LGS, NMP, and QCNPS TS.

### **3.0 REGULATORY ANALYSIS**

#### **3.1 No Significant Hazards Consideration Determination Analysis**

Exelon Generation Company, LLC (EGC) requests adoption of TSTF-551, "Revise Secondary Containment Surveillance Requirements," which is an approved change to the Standard Technical Specifications (STS), into the Clinton Power Station (CPS) Unit 1, Dresden Nuclear Power Station (DNPS) Units 2 and 3, LaSalle County Station (LSCS) Units 1 and 2, Limerick Generating Station (LGS) Units 1 and 2, Nine Mile Point Nuclear Station (NMP) Unit 2, and Quad Cities Nuclear Power Station (QCNPS) Units 1 and 2, Technical Specifications (TS). The proposed change revises TS Surveillance Requirement (SR) 3.6.4.1.1 for CPS, DNPS, LSCS, NMP, and QCNPS. For LGS, the proposed change revises TS 3.6.5.1.1, "Reactor Enclosure Secondary Containment Integrity," SR 4.6.5.1.1.a, and TS 3.6.5.1.2, "Refueling Area Secondary Containment Integrity," SR 4.6.5.1.2.a. In addition, LGS TS Definitions 1.33, "Reactor Enclosure Secondary Containment Integrity," and 1.36, "Refueling Floor Secondary Containment Integrity," are revised for consistency to reflect the changes proposed to the TS Section 3.6.5 SRs, as applicable. The SRs are revised to permit conditions during which the secondary containment may not meet the SR acceptance criterion for a period of up to 4 hours if an analysis demonstrates that one standby gas treatment (SGT) subsystem remains capable of establishing the required secondary containment vacuum.

EGC has evaluated the proposed change against the criteria of 10 CFR 50.92(c) to determine if the proposed change results in any significant hazards. The following is the evaluation of each of the 10 CFR 50.92(c) criteria:

**ATTACHMENT 1**  
**Description and Assessment**

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

Response: No

The proposed change addresses conditions during which the secondary containment SRs are not met. The secondary containment is not an initiator of any accident previously evaluated. As a result, the probability of any accident previously evaluated is not increased. The consequences of an accident previously evaluated while utilizing the proposed changes are no different than the consequences of an accident while utilizing the existing four-hour Completion Time (i.e., allowed outage time) for an inoperable secondary containment. In addition, the proposed change provides an alternative means to ensure the secondary containment safety function is met. As a result, the consequences of an accident previously evaluated are not significantly increased.

Therefore, the proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

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

Response: No

The proposed change does not alter the protection system design, create new failure modes, or change any modes of operation. The proposed change does not involve a physical alteration of the plant; and no new or different kind of equipment will be installed. Consequently, there are no new initiators that could result in a new or different kind of accident.

Therefore, the proposed change does not create the possibility of a new or different kind of accident from any previously evaluated.

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

Response: No

The proposed change addresses conditions during which the secondary containment SRs are not met. Conditions in which the secondary containment vacuum is less than the required vacuum are acceptable provided the conditions do not affect the ability of the SGT System to establish the required secondary containment vacuum under post-accident conditions within the time assumed in the accident analysis. This condition is incorporated in the proposed change by requiring an analysis of actual environmental and secondary containment pressure conditions to confirm the capability of the SGT System is maintained within the assumptions of the accident analysis. Therefore, the safety function of the secondary containment is not affected.

Therefore, the proposed change does not involve a significant reduction in a margin of safety.

## **ATTACHMENT 1**

### **Description and Assessment**

Based on the above, EGC concludes that the proposed amendment presents no significant hazards consideration under the standards set forth in 10 CFR 50.92(c), and, accordingly, a finding of "no significant hazards consideration" is justified.

#### **3.2 Conclusions**

In conclusion, based on the considerations discussed above, (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

#### **4.0 ENVIRONMENTAL EVALUATION**

The proposed amendment would change a requirement with respect to installation or use of a facility component located within the restricted area, as defined in 10 CFR 20, or would change an inspection or surveillance requirement. However, the proposed amendment does not involve (i) a significant hazards consideration, (ii) a significant change in the types or significant increase in the amounts of any effluents that may be released offsite, or (iii) a significant increase in individual or cumulative occupational radiation exposure. Accordingly, the proposed amendment meets the eligibility criterion for categorical exclusion set forth in 10 CFR 51.22(c)(9). Therefore, pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the proposed amendment.

**ATTACHMENT 2**  
**Markup of Proposed Technical Specifications Pages**

**Clinton Power Station, Unit 1**  
**Facility Operating License No. NPF-62**

**Dresden Nuclear Power Station, Units 2 and 3**  
**Renewed Facility Operating License Nos. DPR-19 and DPR-25**

**LaSalle County Station, Units 1 and 2**  
**Renewed Facility Operating License Nos. NPF-11 and NPF-18**

**Limerick Generating Station, Units 1 and 2**  
**Renewed Facility Operating License Nos. NPF-39 and NPF-85**

**Nine Mile Point Nuclear Station, Unit 2**  
**Renewed Facility Operating License No. NPF-69**

**Quad Cities Nuclear Power Station, Units 1 and 2**  
**Renewed Facility Operating License Nos. DPR-29 and DPR-30**

**REVISED TECHNICAL SPECIFICATIONS PAGES**

*Clinton Power Station,  
Unit 1*

3.6-44  
3.6-45

*Dresden Nuclear Power Station,  
Units 2 and 3*

3.6.4.1-2

*LaSalle County Station,  
Units 1 and 2*

3.6.4.1-3

*Limerick Generating Station,  
Unit 1*

1-6  
1-7  
3/4 6-46  
3/4 6-47

*Limerick Generating Station,  
Unit 2*

1-6  
1-7  
3/4 6-46  
3/4 6-47

*Nine Mile Point Nuclear Station,  
Unit 2*

3.6.4.1-2  
3.6.4.1-3

*Quad Cities Nuclear Power Station,  
Units 1 and 2*

3.6.4.1-2



ACTIONS (continued)

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

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.6.4.1.1 Verify secondary containment vacuum is $\geq 0.25$ inch of vacuum water gauge.	In accordance with the Surveillance Frequency Control Program
SR 3.6.4.1.2 Verify all secondary containment equipment hatches are closed and sealed.	In accordance with the Surveillance Frequency Control Program

(continued)

-----NOTE-----  
Not required to be met for 4 hours if analysis demonstrates one standby gas treatment (SGT) subsystem is capable of establishing the required secondary containment vacuum.  
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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.	In accordance with the Surveillance Frequency Control Program
SR 3.6.4.1.4      Verify the secondary containment can be drawn down to $\geq 0.25$ inch of vacuum water gauge within the time required using one <del>Standby Gas Treatment (SGT)</del> subsystem.	In accordance with the Surveillance Frequency Control Program
SR 3.6.4.1.5      Verify the secondary containment can be maintained $\geq 0.25$ inch of vacuum water gauge for 1 hour using one SGT subsystem at a flow rate $\leq 4400$ cfm.	In accordance with the Surveillance Frequency Control Program

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.6.4.1.1	Verify secondary containment vacuum is $\geq 0.25$ inch of vacuum water gauge.	In accordance with the Surveillance Frequency Control Program
SR 3.6.4.1.2	Verify one secondary containment access door in each access opening is closed, except when the access opening is being used for entry and exit.	In accordance with the Surveillance Frequency Control Program
SR 3.6.4.1.3	Verify the secondary containment can be maintained $\geq 0.25$ inch of vacuum water gauge for 1 hour using one SGT subsystem at a flow rate $\leq 4000$ cfm.	In accordance with the Surveillance Frequency Control Program
SR 3.6.4.1.4	Verify all secondary containment equipment hatches are closed and sealed.	In accordance with the Surveillance Frequency Control Program

-----NOTE-----

Not required to be met for 4 hours if analysis demonstrates one standby gas treatment (SGT) subsystem is capable of establishing the required secondary containment vacuum.

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.6.4.1.1	Verify secondary containment vacuum is $\geq 0.25$ inch of vacuum water gauge.	In accordance with the Surveillance Frequency Control Program
SR 3.6.4.1.2	Verify one secondary containment access door in each access opening is closed, except when the access opening is being used for entry and exit.	In accordance with the Surveillance Frequency Control Program
SR 3.6.4.1.3	Verify the secondary containment can be drawn down to $\geq 0.25$ inch of vacuum water gauge in $\leq 900$ seconds using one <del>standby gas treatment (SGT)</del> subsystem.	In accordance with the Surveillance Frequency Control Program
SR 3.6.4.1.4	Verify the secondary containment can be maintained $\geq 0.25$ inch of vacuum water gauge for 1 hour using one SGT subsystem at a flow rate $\leq 4400$ cfm.	In accordance with the Surveillance Frequency Control Program
SR 3.6.4.1.5	Verify all secondary containment equipment hatches are closed and sealed.	In accordance with the Surveillance Frequency Control Program

NOTE

Not required to be met for 4 hours if analysis demonstrates one standby gas treatment (SGT) subsystem is capable of establishing the required secondary containment vacuum.

## DEFINITIONS

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### PURGE - PURGING

1.31 PURGE or PURGING shall be the controlled process of discharging air or gas from a confinement to maintain temperature, pressure, humidity, concentration or other operating condition, in such a manner that replacement air or gas is required to purify the confinement.

### RATED THERMAL POWER

1.32 RATED THERMAL POWER shall be a total reactor core heat transfer rate to the reactor coolant of 3515 Mwt.

### REACTOR ENCLOSURE SECONDARY CONTAINMENT INTEGRITY

1.33 REACTOR ENCLOSURE SECONDARY CONTAINMENT INTEGRITY shall exist when:

- a. All reactor enclosure secondary containment penetrations required to be closed during accident conditions are either:
  1. Capable of being closed by an OPERABLE secondary containment automatic isolation system, or
  2. Closed by at least one manual valve, blind flange, slide gate damper, or deactivated automatic valve secured in its closed position, except as provided by Specification 3.6.5.2.1.
- b. All reactor enclosure secondary containment hatches and blowout panels are closed and sealed.
- c. The standby gas treatment system is in compliance with the requirements of Specification 3.6.5.3.
- d. The reactor enclosure recirculation system is in compliance with the requirements of Specification 3.6.5.4.
- e. At least one door in each access to the reactor enclosure secondary containment is closed except when the access opening is being used for entry and exit.
- f. The sealing mechanism associated with each reactor enclosure secondary containment penetration, e.g., welds, bellows, or O-rings, is OPERABLE.
- g. The pressure within the reactor enclosure secondary containment is less than or equal to the value required by Specification 4.6.5.1.1a. ← , except as indicated by the footnote for Specification 4.6.5.1.1a.

### REACTOR PROTECTION SYSTEM RESPONSE TIME

1.34 REACTOR PROTECTION SYSTEM RESPONSE TIME shall be the time interval from when the monitored parameter exceeds its trip setpoint at the channel sensor until de-energization of the scram pilot valve solenoids. The response time may be measured by any series of sequential, overlapping or total steps such that the entire response time is measured.

### RECENTLY IRRADIATED FUEL

1.35 RECENTLY IRRADIATED FUEL is fuel that has occupied part of a critical reactor core within the previous 24 hours.

### REFUELING FLOOR SECONDARY CONTAINMENT INTEGRITY

1.36 REFUELING FLOOR SECONDARY CONTAINMENT INTEGRITY shall exist when:

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

## DEFINITIONS

### REFUELING FLOOR SECONDARY CONTAINMENT INTEGRITY (Continued)

1. Capable of being closed by an OPERABLE secondary containment automatic isolation system, or
  2. Closed by at least one manual valve, blind flange, slide gate damper, or deactivated automatic valve secured in its closed position, except as provided by Specification 3.6.5.2.2.
- b. All refueling floor secondary containment hatches and blowout panels are closed and sealed.
  - c. The standby gas treatment system is in compliance with the requirements of specification 3.6.5.3.
  - d. At least one door in each access to the refueling floor secondary containment is closed except when the access opening is being used for entry and exit.
  - e. The sealing mechanism associated with each refueling floor secondary containment penetration, e.g., welds, bellows, or O-rings, is OPERABLE.
  - f. The pressure within the refueling floor secondary containment is less than or equal to the value required by Specification 4.6.5.1.2a-

### REPORTABLE EVENT

, except as indicated by the footnote for Specification 4.6.5.1.2a.

- 1.37 A REPORTABLE EVENT shall be any of those conditions specified in Section 50.73 to 10 CFR Part 50.

### RESTRICTED AREA

- 1.37a RESTRICTED AREA means an area, access to which is limited by the licensee for the purpose of protecting individuals against undue risks from exposure to radiation and radioactive materials. RESTRICTED AREA does not include areas used as residential quarters, but separate rooms in a residential building may be set apart as a RESTRICTED AREA.

- 1.38 (Deleted)

### SHUTDOWN MARGIN (SDM)

- 1.39 SDM shall be the amount of reactivity by which the reactor is subcritical or would be subcritical throughout the operating cycle assuming that:
- a. The reactor is xenon free;
  - b. The moderator temperature is  $\geq 68^{\circ}\text{F}$ , corresponding to the most reactive state; and
  - c. All control rods are fully inserted except for the single control rod of highest reactivity worth, which is assumed to be fully withdrawn. With control rods not capable of being fully inserted, the reactivity worth of these control rods must be accounted for in the determination of SDM.

### SITE BOUNDARY

- 1.40 The SITE BOUNDARY shall be that line as defined in Figure 5.1.3-1a.

### SOURCE CHECK

- 1.41 A SOURCE CHECK shall be the qualitative assessment of channel response when the channel sensor is exposed to a radioactive source.

CONTAINMENT SYSTEMS

3/4.6.5 SECONDARY CONTAINMENT

REACTOR ENCLOSURE SECONDARY CONTAINMENT INTEGRITY

LIMITING CONDITION FOR OPERATION

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3.6.5.1.1 REACTOR ENCLOSURE SECONDARY CONTAINMENT INTEGRITY shall be maintained.

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, and 3.


ACTION:


Without REACTOR ENCLOSURE SECONDARY CONTAINMENT INTEGRITY, restore REACTOR ENCLOSURE SECONDARY CONTAINMENT INTEGRITY within 4 hours or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

SURVEILLANCE REQUIREMENTS

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4.6.5.1.1 REACTOR ENCLOSURE SECONDARY CONTAINMENT INTEGRITY shall be demonstrated by:

- a. Verifying in accordance with the Surveillance Frequency Control Program that the pressure within the reactor enclosure secondary containment is greater than or equal to 0.25 inch of vacuum water gauge. 
- b. Verifying in accordance with the Surveillance Frequency Control Program that:
  - 1. All reactor enclosure secondary containment equipment hatches and blowout panels are closed and sealed.
  - 2. At least one door in each access to the reactor enclosure secondary containment is closed, except when the access opening is being used for entry and exit.
  - 3. All reactor enclosure secondary containment penetrations not capable of being closed by OPERABLE secondary containment automatic isolation dampers/valves and required to be closed during accident conditions are closed by valves, blind flanges, slide gate dampers or deactivated automatic dampers/valves secured in position.
- c. In accordance with the Surveillance Frequency Control Program:
  - 1. Verifying that one standby gas treatment subsystem will draw down the reactor enclosure secondary containment to greater than or equal to 0.25 inch of vacuum water gauge in less than or equal to 916 seconds with the reactor enclosure recirc system in operation and
  - 2. Operating one standby gas treatment subsystem for one hour and maintaining greater than or equal to 0.25 inch of vacuum water gauge in the reactor enclosure secondary containment at a flow rate not exceeding 2500 cfm with wind speeds of  $\leq 7.0$  mph as measured on the wind instrument on Tower 1, elevation 30' or, if that instrument is unavailable, Tower 2, elevation 159'.

  
\* Not required to be met for 4 hours if analysis demonstrates one standby gas treatment subsystem is capable of establishing the required secondary containment vacuum.

CONTAINMENT SYSTEMS

3/4.6.5 SECONDARY CONTAINMENT

REFUELING AREA SECONDARY CONTAINMENT INTEGRITY

LIMITING CONDITION FOR OPERATION

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3.6.5.1.2 REFUELING AREA SECONDARY CONTAINMENT INTEGRITY shall be maintained.

APPLICABILITY: When RECENTLY IRRADIATED FUEL is being handled in the secondary containment, or during operations with a potential for draining the reactor vessel, with the vessel head removed and fuel in the vessel.


ACTION:

Without REFUELING AREA SECONDARY CONTAINMENT INTEGRITY, suspend handling of RECENTLY IRRADIATED FUEL in the secondary containment and operations with a potential for draining the reactor vessel. The provisions of Specification 3.0.3 are not applicable.


SURVEILLANCE REQUIREMENTS

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4.6.5.1.2 REFUELING AREA SECONDARY CONTAINMENT INTEGRITY shall be demonstrated by:

- a. Verifying in accordance with the Surveillance Frequency Control Program that the pressure within the refueling area secondary containment is greater than or equal to 0.25 inch of vacuum water gauge. 
- b. Verifying in accordance with the Surveillance Frequency Control Program that:
  1. All refueling area secondary containment equipment hatches and blowout panels are closed and sealed.
  2. At least one door in each access to the refueling area secondary containment is closed, except when the access opening is being used for entry and exit.
  3. All refueling area secondary containment penetrations not capable of being closed by OPERABLE secondary containment automatic isolation dampers/valves and required to be closed during accident conditions are closed by valves, blind flanges, slide gate dampers or deactivated automatic dampers/valves secured in position.
- c. In accordance with the Surveillance Frequency Control Program:

Operating one standby gas treatment subsystem for one hour and maintaining greater than or equal to 0.25 inch of vacuum water gauge in the refueling area secondary containment at a flow rate not exceeding 764 cfm.

 \* Not required to be met for 4 hours if analysis demonstrates one standby gas treatment subsystem is capable of establishing the required secondary containment vacuum.



## DEFINITIONS

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### PURGE - PURGING

1.31 PURGE or PURGING shall be the controlled process of discharging air or gas from a confinement to maintain temperature, pressure, humidity, concentration or other operating condition, in such a manner that replacement air or gas is required to purify the confinement.

### RATED THERMAL POWER

1.32 RATED THERMAL POWER shall be a total reactor core heat transfer rate to the reactor coolant of 3515 MWt.

### REACTOR ENCLOSURE SECONDARY CONTAINMENT INTEGRITY

1.33 REACTOR ENCLOSURE SECONDARY CONTAINMENT INTEGRITY shall exist when:

- a. All reactor enclosure secondary containment penetrations required to be closed during accident conditions are either:
  1. Capable of being closed by an OPERABLE secondary containment automatic isolation system, or
  2. Closed by at least one manual valve, blind flange, slide gate damper or deactivated automatic valve secured in its closed position, except as provided by Specification 3.6.5.2.1.
- b. All reactor enclosure secondary containment hatches and blowout panels are closed and sealed.
- c. The standby gas treatment system is in compliance with the requirements of Specification 3.6.5.3.
- d. The reactor enclosure recirculation system is in compliance with the requirements of Specification 3.6.5.4.
- e. At least one door in each access to the reactor enclosure secondary containment is closed, except when the access opening is being used for entry and exit.
- f. The sealing mechanism associated with each reactor enclosure secondary containment penetration, e.g., welds, bellows, or O-rings, is OPERABLE.
- g. The pressure within the reactor enclosure secondary containment is less than or equal to the value required by Specification 4.6.5.1.1a.

### REACTOR PROTECTION SYSTEM RESPONSE TIME

1.34 REACTOR PROTECTION SYSTEM RESPONSE TIME shall be the time interval from when the monitored parameter exceeds its trip setpoint at the channel sensor until de-energization of the scram pilot valve solenoids. The response time may be measured by any series of sequential, overlapping or total steps such that the entire response time is measured.

, except as indicated by the footnote for Specification 4.6.5.1.1a.

### RECENTLY IRRADIATED FUEL

1.35 RECENTLY IRRADIATED FUEL is fuel that has occupied part of a critical reactor core within the previous 24 hours.

### REFUELING FLOOR SECONDARY CONTAINMENT INTEGRITY

1.36 REFUELING FLOOR SECONDARY CONTAINMENT INTEGRITY shall exist when:

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

## DEFINITIONS

### REFUELING FLOOR SECONDARY CONTAINMENT INTEGRITY (Continued)

1. Capable of being closed by an OPERABLE secondary containment automatic isolation system, or
  2. Closed by at least one manual valve, blind flange, slide gate damper or deactivated automatic valve secured in its closed position, except as provided by Specification 3.6.5.2.2.
- b. All refueling floor secondary containment hatches and blowout panels are closed and sealed.
  - c. The standby gas treatment system is in compliance with the requirements of Specification 3.6.5.3.
  - d. At least one door in each access to the refueling floor secondary containment is closed, except when the access opening is being used for entry and exit.
  - e. The sealing mechanism associated with each refueling floor secondary containment penetration, e.g., welds, bellows, or O-rings, is OPERABLE.
  - f. The pressure within the refueling floor secondary containment is less than or equal to the value required by Specification 4.6.5.1.2a.

### REPORTABLE EVENT

, except as indicated by the footnote for Specification 4.6.5.1.2a.

- 1.37 A REPORTABLE EVENT shall be any of those conditions specified in Section 50.73 to 10 CFR Part 50.

### RESTRICTED AREA

- 1.37a RESTRICTED AREA means an area, access to which is limited by the licensee for the purpose of protecting individuals against undue risks from exposure to radiation and radioactive materials. RESTRICTED AREA does not include areas used as residential quarters, but separate rooms in a residential building may be set apart as a RESTRICTED AREA.

- 1.38 (Deleted)

### SHUTDOWN MARGIN (SDM)

- 1.39 SDM shall be the amount of reactivity by which the reactor is subcritical or would be subcritical throughout the operating cycle assuming that:
- a. The reactor is xenon free;
  - b. The moderator temperature is  $\geq 68^{\circ}\text{F}$ , corresponding to the most reactive state; and
  - c. All control rods are fully inserted except for the single control rod of highest reactivity worth, which is assumed to be fully withdrawn. With control rods not capable of being fully inserted, the reactivity worth of these control rods must be accounted for in the determination of SDM.

### SITE BOUNDARY

- 1.40 The SITE BOUNDARY shall be that line as defined in Figure 5.1.3-1a.

### SOURCE CHECK

- 1.41 A SOURCE CHECK shall be the qualitative assessment of channel response when the channel sensor is exposed to a radioactive source.

CONTAINMENT SYSTEMS

3/4.6.5 SECONDARY CONTAINMENT

REACTOR ENCLOSURE SECONDARY CONTAINMENT INTEGRITY

LIMITING CONDITION FOR OPERATION

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3.6.5.1.1 REACTOR ENCLOSURE SECONDARY CONTAINMENT INTEGRITY shall be maintained.

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, and 3.


ACTION:


Without REACTOR ENCLOSURE SECONDARY CONTAINMENT INTEGRITY, restore REACTOR ENCLOSURE SECONDARY CONTAINMENT INTEGRITY within 4 hours or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

SURVEILLANCE REQUIREMENTS

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4.6.5.1.1 REACTOR ENCLOSURE SECONDARY CONTAINMENT INTEGRITY shall be demonstrated by:

- a. Verifying in accordance with the Surveillance Frequency Control Program that the pressure within the reactor enclosure secondary containment is greater than or equal to 0.25 inch of vacuum water gauge. 
- b. Verifying in accordance with the Surveillance Frequency Control Program that:
  - 1. All reactor enclosure secondary containment equipment hatches and blowout panels are closed and sealed.
  - 2. At least one door in each access to the reactor enclosure secondary containment is closed, except when the access opening is being used for entry and exit.
  - 3. All reactor enclosure secondary containment penetrations not capable of being closed by OPERABLE secondary containment automatic isolation dampers/valves and required to be closed during accident conditions are closed by valves, blind flanges, slide gate dampers or deactivated automatic dampers/valves secured in position.
- c. In accordance with the Surveillance Frequency Control Program:
  - 1. Verifying that one standby gas treatment subsystem will draw down the reactor enclosure secondary containment to greater than or equal to 0.25 inch of vacuum water gauge in less than or equal to 916 seconds with the reactor enclosure recirc system in operation, and
  - 2. Operating one standby gas treatment subsystem for one hour and maintaining greater than or equal to 0.25 inch of vacuum water gauge in the reactor enclosure secondary containment at a flow rate not exceeding 2500 cfm with wind speeds of  $\leq 7.0$  mph as measured on the wind instrument on Tower 1, elevation 30' or, if that instrument is unavailable, Tower 2, elevation 159'.

  
\* Not required to be met for 4 hours if analysis demonstrates one standby gas treatment subsystem is capable of establishing the required secondary containment vacuum.

CONTAINMENT SYSTEMS

3/4.6.5 SECONDARY CONTAINMENT

REFUELING AREA SECONDARY CONTAINMENT INTEGRITY

LIMITING CONDITION FOR OPERATION

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3.6.5.1.2 REFUELING AREA SECONDARY CONTAINMENT INTEGRITY shall be maintained.

APPLICABILITY: When RECENTLY IRRADIATED FUEL is being handled in the secondary containment, or during operations with a potential for draining the reactor vessel, with the vessel head removed and fuel in the vessel.


ACTION:

Without REFUELING AREA SECONDARY CONTAINMENT INTEGRITY, suspend handling of RECENTLY IRRADIATED FUEL in the secondary containment, and operations with a potential for draining the reactor vessel. The provisions of Specification 3.0.3 are not applicable.


SURVEILLANCE REQUIREMENTS

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4.6.5.1.2 REFUELING AREA SECONDARY CONTAINMENT INTEGRITY shall be demonstrated by:

- a. Verifying in accordance with the Surveillance Frequency Control Program that the pressure within the refueling area secondary containment is greater than or equal to 0.25 inch of vacuum water gauge. 
- b. Verifying in accordance with the Surveillance Frequency Control Program that:
  - 1. All refueling area secondary containment equipment hatches and blowout panels are closed and sealed.
  - 2. At least one door in each access to the refueling area secondary containment is closed, except when the access opening is being used for entry and exit.
  - 3. All refueling area secondary containment penetrations not capable of being closed by OPERABLE secondary containment automatic isolation dampers/valves and required to be closed during accident conditions are closed by valves, blind flanges, slide gate dampers or deactivated automatic dampers/valves secured in position.
- c. In accordance with the Surveillance Frequency Control Program:

Operating one standby gas treatment subsystem for one hour and maintaining greater than or equal to 0.25 inch of vacuum water gauge in the refueling area secondary containment at a flow rate not exceeding 764 cfm.

 \* Not required to be met for 4 hours if analysis demonstrates one standby gas treatment subsystem is capable of establishing the required secondary containment vacuum.

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. Secondary containment inoperable during movement of recently irradiated fuel assemblies in the secondary containment or during OPDRVs.	C.1 -----NOTE----- LCO 3.0.3 is not applicable. -----  Suspend movement of recently irradiated fuel assemblies in the secondary containment.	Immediately
	<u>AND</u> C.2 Initiate action to suspend OPDRVs.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.6.4.1.1 Verify secondary containment vacuum is $\geq 0.25$ inch of vacuum water gauge.	In accordance with the Surveillance Frequency Control Program
SR 3.6.4.1.2 Verify all secondary containment equipment hatches are closed and sealed.	In accordance with the Surveillance Frequency Control Program

(continued)

-----NOTE-----  
Not required to be met for 4 hours if analysis demonstrates one standby gas treatment (SGT) subsystem is capable of establishing the required secondary containment vacuum.  
-----

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.6.4.1.3	Verify one secondary containment access door in each access opening is closed, except when the access opening is being used for entry and exit.	In accordance with the Surveillance Frequency Control Program
SR 3.6.4.1.4	Verify the secondary containment can be drawn down to $\geq 0.25$ inch of vacuum water gauge in $\leq 66.7$ seconds using one <del>standby gas treatment (SGT)</del> subsystem.	In accordance with the Surveillance Frequency Control Program
SR 3.6.4.1.5	Verify the secondary containment can be maintained $\geq 0.25$ inch of vacuum water gauge for 1 hour using one SGT subsystem at a flow rate $\leq 2670$ cfm.	In accordance with the Surveillance Frequency Control Program

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.6.4.1.1	Verify secondary containment vacuum is $\geq 0.10$ inch of vacuum water gauge.	In accordance with the Surveillance Frequency Control Program
SR 3.6.4.1.2	Verify one secondary containment access door in each access opening is closed, except when the access opening is being used for entry and exit.	In accordance with the Surveillance Frequency Control Program
SR 3.6.4.1.3	Verify the secondary containment can be maintained $\geq 0.25$ inch of vacuum water gauge for 1 hour using one SGT subsystem at a flow rate $\leq 4000$ cfm.	In accordance with the Surveillance Frequency Control Program
SR 3.6.4.1.4	Verify all secondary containment equipment hatches are closed and sealed.	In accordance with the Surveillance Frequency Control Program

-----NOTE-----  
 Not required to be met for 4 hours if analysis demonstrates one standby gas treatment (SGT) subsystem is capable of establishing the required secondary containment vacuum.  
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**ATTACHMENT 3**  
**Markup of Proposed Technical Specifications Bases Pages**  
**(For Information Only)**

**Clinton Power Station, Unit 1**  
**Facility Operating License No. NPF-62**

**Dresden Nuclear Power Station, Units 2 and 3**  
**Renewed Facility Operating License Nos. DPR-19 and DPR-25**

**LaSalle County Station, Units 1 and 2**  
**Renewed Facility Operating License Nos. NPF-11 and NPF-18**

**Limerick Generating Station, Units 1 and 2**  
**Renewed Facility Operating License Nos. NPF-39 and NPF-85**

**Nine Mile Point Nuclear Station, Unit 2**  
**Renewed Facility Operating License No. NPF-69**

**Quad Cities Nuclear Power Station, Units 1 and 2**  
**Renewed Facility Operating License Nos. DPR-29 and DPR-30**

**REVISED TECHNICAL SPECIFICATIONS BASES PAGES**

*Clinton Power Station,  
Unit 1*

B 3.6-88

*Dresden Nuclear Power Station,  
Units 2 and 3*

B 3.6.4.1-4

*LaSalle County Station,  
Units 1 and 2*

B 3.6.4.1-4

*Limerick Generating Station,  
Unit 1*

B 3/4 6-5a

*Limerick Generating Station,  
Unit 2*

B 3/4 6-5a

*Nine Mile Point Nuclear Station,  
Unit 2*

B 3.6.4.1-4

*Quad Cities Nuclear Power Station,  
Units 1 and 2*

B 3.6.4.1-4



BASES

ACTIONS

C.1 and C.2 (continued)

movement of recently 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 Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

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. 4).

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 Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

(continued)

The SR is modified by a Note which states the SR is not required to be met for up to 4 hours if an analysis demonstrates that one SGT subsystem remains capable of establishing the required secondary containment vacuum. Use of the Note is expected to be infrequent but may be necessitated by situations in which secondary containment vacuum may be less than the required containment vacuum, such as, but not limited to, wind gusts or failure or change of operating normal ventilation subsystems. These conditions do not indicate any change in the leak tightness of the secondary containment boundary. The analysis should consider the actual conditions (equipment configuration, temperature, atmospheric pressure, wind conditions, measured secondary containment vacuum, etc.) to determine whether, if an accident requiring secondary containment to be OPERABLE were to occur, one train of SGT could establish the assumed secondary containment vacuum within the time assumed in the accident analysis. If so, the SR may be considered met for a period up to 4 hours. The 4 hour limit is based on the expected short duration of the situations when the Note would be applied.

BASES

ACTIONS  
(continued)

C.1 and C.2

Movement of recently irradiated fuel assemblies in the secondary containment and OPDRVs can be postulated to cause significant 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. Therefore, movement of recently irradiated fuel assemblies must be immediately suspended if the secondary containment is inoperable.

Suspension of this activity 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 recently irradiated fuel assemblies while in MODE 4 or 5, LCO 3.0.3 would not specify any action. If moving recently 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 movement of recently 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 Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

(continued)

The SR is modified by a Note which states the SR is not required to be met for up to 4 hours if an analysis demonstrates that one SGT subsystem remains capable of establishing the required secondary containment vacuum. Use of the Note is expected to be infrequent but may be necessitated by situations in which secondary containment vacuum may be less than the required containment vacuum, such as, but not limited to, wind gusts or failure or change of operating normal ventilation subsystems. These conditions do not indicate any change in the leak tightness of the secondary containment boundary. The analysis should consider the actual conditions (equipment configuration, temperature, atmospheric pressure, wind conditions, measured secondary containment vacuum, etc.) to determine whether, if an accident requiring secondary containment to be OPERABLE were to occur, one train of SGT could establish the assumed secondary containment vacuum within the time assumed in the accident analysis. If so, the SR may be considered met for a period up to 4 hours. The 4 hour limit is based on the expected short duration of the situations when the Note would be applied.

BASES

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

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 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. The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

SR 3.6.4.1.2

Verifying that one secondary containment access door in each access opening is closed provides adequate assurance that exfiltration from the secondary containment will not occur. An access opening contains at least one inner and one outer door. In some cases a secondary containment barrier contains multiple inner or multiple outer doors. For these cases, the access openings share the inner door or the outer door, i.e., the access openings have a common inner door or outer door. The intent is to not breach the secondary containment, which is achieved by maintaining the inner or outer portion of the barrier closed except when the access opening is being used for entry and exit; i.e., all inner doors closed or all outer doors closed. Thus each access opening has one door closed. The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

(continued)

The SR is modified by a Note which states the SR is not required to be met for up to 4 hours if an analysis demonstrates that one SGT subsystem remains capable of establishing the required secondary containment vacuum. Use of the Note is expected to be infrequent but may be necessitated by situations in which secondary containment vacuum may be less than the required containment vacuum, such as, but not limited to, wind gusts or failure or change of operating normal ventilation subsystems. These conditions do not indicate any change in the leak tightness of the secondary containment boundary. The analysis should consider the actual conditions (equipment configuration, temperature, atmospheric pressure, wind conditions, measured secondary containment vacuum, etc.) to determine whether, if an accident requiring secondary containment to be OPERABLE were to occur, one train of SGT could establish the assumed secondary containment vacuum within the time assumed in the accident analysis. If so, the SR may be considered met for a period up to 4 hours. The 4 hour limit is based on the expected short duration of the situations when the Note would be applied.

## CONTAINMENT SYSTEMS

### BASES

#### SECONDARY CONTAINMENT (Continued)

← Surveillances 4.6.5.1.1.b.2 and 4.6.5.1.2.b.2 require verifying that one secondary containment personnel access door in each access opening is closed which provides adequate assurance that exfiltration from the secondary containment will not occur. An access opening contains at least one inner and one outer door. The intent is to not breach the secondary containment, which is achieved by maintaining the inner or outer personnel access door closed. Surveillances 4.6.5.1.1.b.2 and 4.6.5.1.2.b.2 provide an allowance for brief, inadvertent, simultaneous openings of redundant secondary containment personnel access doors for normal entry and exit conditions.

Although the safety analyses assumes that the reactor enclosure secondary containment draw down time will take 930 seconds, these surveillance requirements specify a draw down time of 916 seconds. This 14 second difference is due to the diesel generator starting and sequence loading delays which is not part of this surveillance requirement.

The reactor enclosure secondary containment draw down time analyses assumes a starting point of 0.25 inch of vacuum water gauge and worst case SGTS dirty filter flow rate of 2800 cfm. The surveillance requirements satisfy this assumption by starting the drawdown from ambient conditions and connecting the adjacent reactor enclosure and refueling area to the SGTS to split the exhaust flow between the three zones and verifying a minimum flow rate of 2800 cfm from the test zone. This simulates the worst case flow alignment and verifies adequate flow is available to drawdown the test zone within the required time. The Technical Specification Surveillance Requirement 4.6.5.3.b.3 is intended to be a multi-zone air balance verification without isolating any test zone.

The SGTS fans are sized for three zones and therefore, when aligned to a single zone or two zones, will have excess capacity to more quickly drawdown the affected zones. There is no maximum flow limit to individual zones or pairs of zones and the air balance and drawdown time are verified when all three zones are connected to the SGTS.

The three zone air balance verification and drawdown test will be done after any major system alteration, which is any modification which will have an effect on the SGTS flowrate such that the ability of the SGTS to drawdown the reactor enclosure to greater than or equal to 0.25 inch of vacuum water gage in less than or equal to 916 seconds could be affected.

Surveillances 4.6.5.1.1.a and 4.6.5.1.2.a are each modified by a footnote (\*) which states the surveillance is not required to be met for up to 4 hours if an analysis demonstrates that one standby gas treatment subsystem remains capable of establishing the required secondary containment vacuum. Use of the footnote is expected to be infrequent but may be necessitated by situations in which secondary containment vacuum may be less than the required containment vacuum, such as, but not limited to, wind gusts or failure or change of operating normal ventilation subsystems. These conditions do not indicate any change in the leak tightness of the secondary containment boundary. The analysis should consider the actual conditions (equipment configuration, temperature, atmospheric pressure, wind conditions, measured secondary containment vacuum, etc.) to determine whether, if an accident requiring secondary containment to be OPERABLE were to occur, one train of standby gas treatment could establish the assumed secondary containment vacuum within the time assumed in the accident analysis. If so, the surveillance may be considered met for a period up to 4 hours. The 4-hour limit is based on the expected short duration of the situations when the footnote would be applied.

SECONDARY CONTAINMENT (Continued)

← Surveillances 4.6.5.1.1.b.2 and 4.6.5.1.2.b.2 require verifying that one secondary containment personnel access door in each access opening is closed which provides adequate assurance that exfiltration from the secondary containment will not occur. An access opening contains at least one inner and one outer door. The intent is to not breach the secondary containment, which is achieved by maintaining the inner or outer personnel access door closed. Surveillances 4.6.5.1.1.b.2 and 4.6.5.1.2.b.2 provide an allowance for brief, inadvertent, simultaneous openings of redundant secondary containment personnel access doors for normal entry and exit conditions.

Although the safety analyses assumes that the reactor enclosure secondary containment draw down time will take 930 seconds, these surveillance requirements specify a draw down time of 916 seconds. This 14 second difference is due to the diesel generator starting and sequence loading delays which is not part of this surveillance requirement.

The reactor enclosure secondary containment draw down time analyses assumes a starting point of 0.25 inch of vacuum water gauge and worst case SGTS dirty filter flow rate of 2800 cfm. The surveillance requirements satisfy this assumption by starting the drawdown from ambient conditions and connecting the adjacent reactor enclosure and refueling area to the SGTS to split the exhaust flow between the three zones and verifying a minimum flow rate of 2800 cfm from the test zone. This simulates the worst case flow alignment and verifies adequate flow is available to drawdown the test zone within the required time. The Technical Specification Surveillance Requirement 4.6.5.3.b.3 is intended to be a multi-zone air balance verification without isolating any test zone.

The SGTS is common to Unit 1 and 2 and consists of two independent subsystems. The power supplies for the common portions of the subsystems are from Unit 1 safeguard busses, therefore the inoperability of these Unit 1 supplies are addressed in the SGTS ACTION statements in order to ensure adequate onsite power sources to SGTS for its Unit 2 function during a loss of offsite power event. The allowable out of service times are consistent with those in the Unit 1 Technical Specifications for SGTS and AC electrical power supply out of service condition combinations.

Surveillances 4.6.5.1.1.a and 4.6.5.1.2.a are each modified by a footnote (\*) which states the surveillance is not required to be met for up to 4 hours if an analysis demonstrates that one standby gas treatment subsystem remains capable of establishing the required secondary containment vacuum. Use of the footnote is expected to be infrequent but may be necessitated by situations in which secondary containment vacuum may be less than the required containment vacuum, such as, but not limited to, wind gusts or failure or change of operating normal ventilation subsystems. These conditions do not indicate any change in the leak tightness of the secondary containment boundary. The analysis should consider the actual conditions (equipment configuration, temperature, atmospheric pressure, wind conditions, measured secondary containment vacuum, etc.) to determine whether, if an accident requiring secondary containment to be OPERABLE were to occur, one train of standby gas treatment could establish the assumed secondary containment vacuum within the time assumed in the accident analysis. If so, the surveillance may be considered met for a period up to 4 hours. The 4-hour limit is based on the expected short duration of the situations when the footnote would be applied.

BASES

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ACTIONS

C.1 and C.2 (continued)

reactor operations. Therefore, in either case, inability to suspend movement of recently irradiated fuel assemblies would not be a sufficient reason to require a reactor shutdown.

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SURVEILLANCE  
REQUIREMENTS

SR 3.6.4.1.1

This SR ensures that the secondary containment boundary is sufficiently leak tight to preclude exfiltration. The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

SR 3.6.4.1.2

Verifying that secondary containment equipment hatches are closed ensures that the infiltration of outside air of such magnitude as to prevent maintaining the desired negative pressure does not occur and provides adequate assurance that exfiltration from the secondary containment will not occur. In this application, the term "sealed" has no connotation of leak tightness. The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

SR 3.6.4.1.3

Verifying that one secondary containment access door in each opening is closed provides adequate assurance that exfiltration from the secondary containment will not occur. An access opening contains at least one inner and one outer door. The intent is to not breach the secondary containment, which is achieved by maintaining the inner or outer portion of the barrier closed except when the access opening is being used for entry and exit. The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

The SR is modified by a Note which states the SR is not required to be met for up to 4 hours if an analysis demonstrates that one SGT subsystem remains capable of establishing the required secondary containment vacuum. Use of the Note is expected to be infrequent but may be necessitated by situations in which secondary containment vacuum may be less than the required containment vacuum, such as, but not limited to, wind gusts or failure or change of operating normal ventilation subsystems. These conditions do not indicate any change in the leak tightness of the secondary containment boundary. The analysis should consider the actual conditions (equipment configuration, temperature, atmospheric pressure, wind conditions, measured secondary containment vacuum, etc.) to determine whether, if an accident requiring secondary containment to be OPERABLE were to occur, one train of SGT could establish the assumed secondary containment vacuum within the time assumed in the accident analysis. If so, the SR may be considered met for a period up to 4 hours. The 4 hour limit is based on the expected short duration of the situations when the Note would be applied.

(continued)

BASES

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ACTIONS  
(continued)

C.1 and C.2

Movement of recently irradiated fuel assemblies in the secondary containment and OPDRVs can be postulated to cause significant 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. Therefore, movement of recently irradiated fuel assemblies must be immediately suspended if the secondary containment is inoperable.

Suspension of this activity 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 recently irradiated fuel assemblies while in MODE 4 or 5, LCO 3.0.3 would not specify any action. If moving recently 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 movement of recently irradiated fuel assemblies would not be a sufficient reason to require a reactor shutdown.

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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 Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

(continued)

The SR is modified by a Note which states the SR is not required to be met for up to 4 hours if an analysis demonstrates that one SGT subsystem remains capable of establishing the required secondary containment vacuum. Use of the Note is expected to be infrequent but may be necessitated by situations in which secondary containment vacuum may be less than the required containment vacuum, such as, but not limited to, wind gusts or failure or change of operating normal ventilation subsystems. These conditions do not indicate any change in the leak tightness of the secondary containment boundary. The analysis should consider the actual conditions (equipment configuration, temperature, atmospheric pressure, wind conditions, measured secondary containment vacuum, etc.) to determine whether, if an accident requiring secondary containment to be OPERABLE were to occur, one train of SGT could establish the assumed secondary containment vacuum within the time assumed in the accident analysis. If so, the SR may be considered met for a period up to 4 hours. The 4 hour limit is based on the expected short duration of the situations when the Note would be applied.