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10 CFR 50.90

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

Nine Mile Point Nuclear Station, Units 1 and 2
Renewed Facility Operating License Nos. DPR-63 and NPF-69
NRC Docket Nos. 50-220 and 50-410

Subject: License Amendment Request – Proposed Changes to the Technical Specifications to Address Secondary Containment Personnel Access Door Openings

Pursuant to 10 CFR 50.90, "Application for amendment of license, construction permit, or early site permit," Exelon Generation Company, LLC (Exelon), proposes changes to the Technical Specifications (TS), Appendix A of Renewed Facility Operating License Nos. DPR-63 and NPF-69 for Nine Mile Point Nuclear Station (NMPNS), Units 1 (NMP1) and 2 (NMP2), respectively.

The proposed changes to NMP1 and NMP2 TS provide an allowance for brief, inadvertent, simultaneous opening of redundant secondary containment personnel access doors during normal entry and exit conditions. Specifically, NMP1 Limiting Condition for Operation (LCO) 3.4.3 and Surveillance Requirement (SR) 4.4.3 are modified to acknowledge that secondary containment access openings may be open for entry and exit. Further, the definition for Reactor Building Integrity, specified in NMP1 TS Definition 1.12, is revised for consistency to reflect the changes proposed to TS Section 3.4.3 LCO and SR 4.4.3. The NMP2 SR 3.6.4.1.3 is modified to acknowledge that secondary containment access openings may be open for entry and exit.

The proposed changes have been reviewed by the NMPNS Plant Operations Review Committee in accordance with the requirements of the Exelon Quality Assurance Program. This amendment request contains no regulatory commitments.

Attachment 1 provides the evaluation of the proposed changes. Attachment 2 provides a copy of the marked up TS pages that reflect the proposed changes. Attachment 3 provides a copy of the marked up TS Bases pages that reflect the proposed changes (information only). Exelon requests the approval of the proposed amendment by October 8, 2016. Upon NRC approval, the amendment shall be implemented within 60 days of issuance.

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

If you have any questions or require additional information, please contact Laura Lynch at 610-765-5729.

I declare under penalty of perjury that the foregoing is true and correct. This statement was executed on the 8th day of October 2015.

Respectfully,

David T. Gilpin for

James Barstow
Director - Licensing & Regulatory Affairs
Exelon Generation Company, LLC

Attachments:
1. Evaluation of Proposed Changes
2. Markup of Proposed Technical Specifications Pages
3. Markup of Proposed Technical Specifications Bases Pages (Information Only)

cc:	Regional Administrator - NRC Region I	w/ attachments
	NRC Senior Resident Inspector - Nine Mile Point Nuclear Station	"
	NRC Project Manager, NRR - Nine Mile Point Nuclear Station	"
	A. L. Peterson, NYSERDA	"

ATTACHMENT 1

License Amendment Request

Nine Mile Point Nuclear Station, Units 1 and 2

Docket Nos. 50-220 and 50-410

EVALUATION OF PROPOSED CHANGES

Subject: Proposed Changes to the Technical Specifications to Address Secondary Containment Personnel Access Door Openings

1.0 SUMMARY DESCRIPTION

Pursuant to 10 CFR 50.90, "Application for amendment of license, construction permit, or early site permit," Exelon Generation Company, LLC (Exelon), proposes changes to the Technical Specifications (TS), Appendix A of Renewed Facility Operating License Nos. DPR-63 and NPF-69 for Nine Mile Point Nuclear Station (NMPNS), Units 1 (NMP1) and 2 (NMP2), respectively.

The proposed amendment changes NMP1 and NMP2 TS to provide an allowance for brief, inadvertent, simultaneous opening of redundant secondary containment personnel access doors during normal entry and exit conditions.

Specifically, NMP1 LCO 3.4.3 and SR 4.4.3 are modified to acknowledge that secondary containment access openings may be open for entry and exit. Further, the definition for Reactor Building Integrity, specified in NMP1 TS Definition 1.12, is revised for consistency to reflect the changes proposed to TS Section 3.4.3 LCO and SR 4.4.3. The NMP2 SR 3.6.4.1.3 is modified to acknowledge that secondary containment access openings may be open for entry and exit.

2.0 DETAILED DESCRIPTION

The proposed changes address issues related to the secondary containment personnel access door openings. The secondary containment is a single system that performs a safety function. There is no redundant train or system that can perform the secondary containment function should the secondary containment be inoperable.

NUREG-1022, Revision 3, "Event Report Guidelines 10 CFR 50.72 and 50.73," discusses the reporting criteria contained in the Code of Federal Regulations (CFR), Title 10, Paragraphs 50.72 and 50.73. The discussion of 50.72(b)(3)(v) and 50.73(a)(2)(v), "Any event or condition that … could have prevented the fulfillment of the safety function …," states, "There are a limited number of single-train systems that perform safety functions (e.g., the HPCI system in BWRs). For such systems, inoperability of the single train is reportable even though the plant TS may allow such a condition to exist for a limited time." Under this guidance, failure to meet the secondary containment SRs for any period of time requires declaring the secondary containment inoperable and, therefore, reporting the condition under 10 CFR 50.72 and 10 CFR 50.73, as applicable. This reporting requirement has resulted in Licensee Event Reports (LERs) in the last several years, even though secondary containment was restored to operable status quickly (i.e., typically in a matter of seconds) and secondary containment continued to be capable of performing its safety function. These reports are an unwarranted use of licensee and NRC resources and could diminish public confidence with unnecessary reporting. To prevent the need for reporting these issues, the following changes are proposed:

Unit 1:

Proposed Revision to LCO 3.4.3 and SR 4.4.3:

The purpose of the proposed change is to provide an allowance for brief, inadvertent, simultaneous opening of both an inner and outer secondary containment personnel access door

during entry and exit conditions. While some plants have interlocks to prevent opening both an inner and outer door, NMP1 does not. NMP1 was not originally designed with these interlocks. Installation of interlocks at all doors is not feasible given the initial design and construction of the doors. The interlocks that have been installed after initial construction do not prevent simultaneous opening if the doors are opened within a half second of each other. Therefore, occasional brief, simultaneous door openings are possible and do not constitute a personnel error or equipment failure. Therefore, declaring secondary containment inoperable for these brief occurrences is not warranted because negative pressure is not impacted. The change to the LCO and SR description would resolve this inconsistency.

Under the NMP1 TS, opening both doors simultaneously in the access way would result in failure to meet LCO 3.4.3 and SR 4.4.3, which require one access door in each access opening to be closed. This situation would require declaring the secondary containment inoperable with the attendant reporting requirements. The BWR/6 ISTS (NUREG-1434) SR 3.6.4.1.3 contains an exception that allows both doors in an access opening to be open simultaneously for normal entry and exit, but the NMP1 SRs do not since it is a BWR/2 Custom TS. The proposed change adds the BWR/6 exception to the NMP1 SR.

Proposed TS Definition Revision:

The definition of Reactor Building Integrity, as specified in NMP1 TS 1.12, is revised by adding the changes described above, as applicable, for consistency with the changes proposed to the TS LCO 3.4.3 and SR 4.4.3.

Proposed Bases Revision:

The NMP1 Bases for 3.4.3 and 4.4.3, Access Control, are revised consistent with the proposed changes to LCO 3.4.3 and SR 4.4.3.

Unit 2:

Proposed Revision to SR 3.6.4.1.3:

The purpose of the proposed change is to provide an allowance for brief, inadvertent, simultaneous opening of both an inner and outer secondary containment personnel access door during entry and exit conditions. While some plants have interlocks to prevent opening both an inner and outer door, NMP2 does not. NMP2 was not originally designed with these interlocks. Installation of interlocks at all doors is not feasible given the initial design and construction. The interlocks that have been installed on some of the secondary containment doors after initial construction do not prevent simultaneous opening if the doors are opened within a half second of each other. Therefore, occasional brief, simultaneous door openings are possible and do not constitute a personnel error or equipment failure. Therefore, declaring secondary containment inoperable for these brief occurrences is not warranted because negative pressure is not impacted. The change to the LCO and SR description would resolve this inconsistency.

Under the NMP2 TS, opening both doors simultaneously in the access way would result in failure to meet LCO SR 3.6.4.1.3, which requires one access door in each access opening to be closed. This situation would require declaring the secondary containment inoperable with the attendant

reporting requirements. NUREG-1434 BWR/6 ISTS SR 3.6.4.1.3 contains an exception that allows both doors in an access opening to be open simultaneously for normal entry and exit, but the NMP2 SRs do not have such an exception. The proposed change adds the BWR/6 exception to the NMP2 SR.

Proposed Bases Revision: The NMP2 TS Secondary Containment Bases are revised consistent with the proposed change to SR 3.6.4.1.3.

3.0 TECHNICAL EVALUATION

The secondary containment is a structure that completely encloses the primary containment and those components that may contain primary system fluid. It is possible for the secondary containment pressure to rise relative to the environmental pressure during design basis events. To prevent ground level exfiltration of radioactive material 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 atmospheric pressure during design basis events. During normal operation, non-accident systems are used to maintain the secondary containment at a negative pressure.

The secondary containment boundary is the combination of walls, floors, roof, ducting, doors, hatches, penetrations and equipment that physically form the secondary containment. For penetrations that consist of a hatch, typically one hatch is provided. For penetrations that contain doors, there exists at least one inner and one outer door. All secondary containment access doors are normally kept closed, except when the access opening is being used for entry and exit of personnel or equipment.

The safety 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) to ensure the control room operator and offsite doses are within the regulatory and NRC-approved limits. In conjunction with operation of the Emergency Ventilation System (NMP1) or the Standby Gas Treatment (SGT) System (NMP2), herein referred to as the SGT System, and closure of certain valves whose lines penetrate the secondary containment, the secondary containment is designed to contain the fission products that bypass or leak from primary containment, or are released from the reactor coolant pressure boundary components located in secondary containment 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 by a single SGT subsystem, when that subsystem is in operation.

The secondary containment and SGT System together ensure radioactive material is contained. As long as a SGT subsystem can draw down and maintain the required vacuum in the affected secondary containment when needed, the secondary containment can perform its safety functions.

In these and similar cases, the secondary containment remains capable of processing fission products that may leak from primary containment following a DBA, which will ensure the control room operator and offsite doses are within the regulatory and NRC-approved limits.

NMP1 and NMP2 have adopted alternative source term (AST) in accordance with 10 CFR 50.67, "Accident source term." Using the methodology described in NRC Regulatory Guide 1.183, Alternative Radiological Source Terms for Evaluating Design Basis Accidents at Nuclear Power Reactors, no activity releases are assumed to occur for the first two minutes following initiation of a Loss of Coolant Accident (LOCA).

NMP1 TS require the reactor building leakage rate shall not exceed 1600 cfm. NMP1 TS SR 4.4.1 assures the capability of the secondary containment to maintain leakage within allowable limits by maintaining an internal pressure of at least 0.25 inches of water less than atmosphere pressure. Because the reactor building to atmosphere differential pressure is greater than the minimum required per NMP1 SR 4.4.1 (typically -0.33 inches water vs -0.25 inches water), substantial margin exists to ensure that the secondary containment remains operable and the functional capability of secondary containment is maintained during brief, inadvertent, simultaneous opening of inner and outer secondary containment personnel access doors.

NMP2 allows a 66.7-second draw down time to ensure the secondary containment is ≥ 0.25 inches of water vacuum. Because the typical draw down time using one SGT subsystem is under 33 seconds, substantial margin exists to ensure that the secondary containment remains operable and the functional capability of secondary containment is maintained during brief, inadvertent, simultaneous opening of inner and outer secondary containment personnel access doors.

NMP1 LCO 3.4.3 and SR 4.4.3, and NMP2 SR 3.6.4.1.3 require verification that at least one door is closed in each secondary containment penetration. The intent of these requirements is to not breach secondary containment at any time when secondary containment is required. This is achieved by maintaining the inner or outer portion of the barrier closed at all times. All secondary containment access doors are normally kept closed, except when the access opening is being used for entry and exit, or when maintenance is being performed on an access opening.

<u>Proposed NMP1 LCO 3.4.3 and SR 4.4.3 and NMP2 SR 3.6.4.1.3 Revision</u>

NMP1 LCO 3.4.3 and SR 4.4.3, and NMP2 SR 3.6.4.1.3 are proposed to be revised to include the same exception as the NUREG-1434 BWR/6 SR 3.6.4.1.3. The text in italics, below, is proposed to be added.

> NMP1 LCO 3.4.3:
>
> Only one door in each of the double-doored access ways shall be opened at one time, *except when the access opening is being used for entry and exit.*
>
> NMP1 SR 4.4.3:
>
> At least one door in each access to the secondary containment is closed, *except when the access opening is being used for entry and exit.*

NMP2 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.*

NUREG-1434 BWR/6 ISTS SR 3.6.4.1.3 contains an exception that allows both doors in an access opening to be opened simultaneously for normal entry and exit, but the NMP1 and NMP2 TS do not have such exceptions. This allowance is reasonable because the doors will be closed following entry or exit because the doors are under the continuous control of the person(s) accessing the doors, and the doors will be promptly closed following entry and exit, restoring the secondary containment boundary. The phrase "being used for entry and exit" ensures that the time that both doors may be open simultaneously is limited to the time it takes to traverse through a door, which is insignificant.

NMP1 LCO 3.4.3 and SR 4.4.3, and NMP2 SR 3.6.4.1.3 require verification that at least one door is closed in each secondary containment penetration. The intent of these requirements is to not breach secondary containment at any time when secondary containment is required. This is achieved by maintaining the inner or outer portion of the barrier closed at all times. All secondary containment personnel access doors are normally kept closed, except when the access opening is being used for entry and exit. Brief, simultaneous opening of secondary containment personnel access doors is acceptable due to the low probability of an event that requires secondary containment during the short time in which the secondary containment doors are open.

Personnel are trained in Nuclear General Employee Training (NGET) to not open a secondary containment personnel access door if the indicating light is illuminated. Additionally, administrative controls exist specifying that the user verifies an indicating light and pauses for 5 seconds prior to proceeding. The intent of these administrative controls is to allow personnel whom may have entered the airlock at an earlier time to successfully traverse to the exit door prior to the next attempted entry/exit. Occasionally, an individual attempts access through the opposite airlock entry point, resulting in a simultaneous door opening by another individual. Well-intended individuals occasionally end up in this situation, which cannot be prevented under the original licensed design.

From a safety perspective, at NMP1 the AST LOCA analysis considers the reactor building positive pressure period. This is defined as the period when a loss of offsite power (LOOP) causes a loss of reactor building negative pressure relative to the external atmospheric static pressure. The start of the emergency diesel generators followed by the start of the Reactor Building Emergency Ventilation System (RBEVS) returns the reactor building to a negative pressure. The time of positive pressure relative to the atmospheric status pressure is called the drawdown time. The post-LOCA primary containment leakage into the reactor building is assumed to be released directly to the environment during the drawdown period.

From a safety perspective, at NMP2, a Diesel Generator will automatically start on a LOCA signal, or on Degraded or Loss of Bus Voltage, with the SGT system drawing the Reactor Building down to required d/P in less than 33 seconds.

In addition, no credit is taken for any negative pressure in the building at the time of the event. The AST analysis assumptions are such that no credit is taken for secondary containment for the first two minutes following a Design Basis LOCA or fuel handling accident. Based on the original licensed design of the NMP1 and NMP2 secondary containment and the allowances of AST, it can be concluded that brief, inadvertent, simultaneous opening of inner and outer secondary containment personnel access doors are possible within both of the NMPNS secondary containment designs, and therefore, a declaration of inoperability is not warranted.

Proposed Bases Revisions

The NMP1 Bases for 3.4.3 and 4.4.3, Access Control, and NMP2 TS Secondary Containment Bases are being revised consistent with the proposed changes to Unit 1 LCO 3.4.3 and SR 4.4.3, and Unit 2 SR 3.6.4.1.3.

4.0 REGULATORY EVALUATION

4.1 Applicable Regulatory Requirements/Criteria

The following regulatory requirements have been considered:

- Title 10 of the Code of Federal Regulations (10 CFR), Section 50.36, "Technical specifications," in which the Commission established its regulatory requirements related to the contents of the TS. Specifically, 10 CFR 50.36(c)(2) states, in part, "Limiting conditions for operation are the lowest functional capability or performance levels of equipment required for safe operation of the facility." 10 CFR 50.36(c)(3) states, "Surveillance requirements are requirements relating to test, calibration, or inspection to assure that the necessary quality of systems and components is maintained, that facility operation will be within safety limits, and that the limiting conditions for operation will be met."

The proposed changes to the secondary containment SRs do not affect compliance with these regulations.

The applicable 10 CFR Part 50, Appendix A, General Design Criteria (GDC), was considered as follows:

NMP1:

- Nine Mile Point Unit 1 (NMP1) was not licensed to 10 CFR 50, Appendix A, GDC. The NMP1 equivalent of the referenced GDC is provided in Section IA of the Updated Final Safety Analysis Report (UFSAR). This Section of the NMP1 UFSAR provides an analysis of plant design criteria for NMP1 to the GDC criteria. Based on the analysis performed, Exelon's position is that the plant-specific requirements for NMP1 are sufficiently similar to the Appendix A GDC and represent an adequate technical basis for adopting the proposed change.

Criterion 17 - The containment structure, including access openings and penetrations, must be designed and fabricated to accommodate or dissipate without failure the pressures and temperatures associated with the largest credible energy release including the effects of credible metal-water or other chemical reactions uninhibited by active quenching systems. If part of the primary coolant system is outside the primary reactor containment, appropriate safeguards must be provided for that part if necessary, to protect the health and safety of the public, in case of an accidental rupture in that part of the system. The appropriateness of safeguards such as isolation valves, additional containment, etc., will depend on environmental and population conditions surrounding the site.

NMP2:

- Criterion 16 - Containment Design. Reactor containment and associated systems shall be provided to establish an essentially leak-tight barrier against the uncontrolled release of radioactivity to the environment and to assure that the containment design conditions important to safety are not exceeded for as long as postulated accident conditions require.

The proposed changes do not alter the design of the secondary containment or its ability to establish an essentially leak-tight barrier against the uncontrolled release of radioactivity.

4.2 Precedence

The proposed change to modify NMP1 LCO 3.4.3 and SR 4.4.3 and NMP2 SR 3.6.4.1.3 to allow brief, inadvertent, simultaneous opening of redundant secondary containment personnel access doors for entry and exit conditions is consistent with the improved Standard Technical Specifications endorsed by the NRC in NUREG-1434, Standard Technical Specifications - General Electric BWR/6 Plants, Revision 4 (Reference 1).

4.3 No Significant Hazards Consideration

Exelon Generation Company, LLC (Exelon), proposes changes to the Technical Specifications (TS), Appendix A of Renewed Facility Operating License Nos. DPR-63 and NPF-69 for Nine Mile Point Nuclear Station (NMPNS), Units 1 (NMP1) and 2 (NMP2), respectively.

The proposed changes would revise NMP1 TS 3.4.3 and Surveillance Requirement (SR) 4.4.3 and NMP2 SR 3.6.4.1.3 to allow for brief, inadvertent, simultaneous opening of redundant secondary containment personnel access doors during entry and exit conditions.

Exelon has evaluated whether or not a significant hazards consideration is involved with the proposed amendment by focusing on the three standards set forth in 10 CFR 50.92, “Issuance of amendment,” as discussed below:

1. **Do the proposed changes involve a significant increase in the probability or consequences of an accident previously evaluated?**

   Response: No. The proposed changes address temporary 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 using the proposed changes are not impacted and are bounded by the existing design bases calculations and analyses. As a result, the consequences of an accident previously evaluated are not significantly increased.

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

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

   Response: No. The proposed changes do not alter the protection system design, create new failure modes, or change any modes of operation. The proposed changes do 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 changes do not create the possibility of a new or different kind of accident from any accident previously evaluated.

3. **Do the proposed changes involve a significant reduction in a margin of safety?**

   Response: No. The proposed changes would provide an allowance for brief, inadvertent, simultaneous opening of redundant secondary containment personnel access doors during normal entry and exit conditions. The allowance for both an inner and outer secondary containment access door to be open simultaneously for entry and exit does not affect the safety function of secondary containment as the doors are promptly closed after entry or exit, thereby restoring the secondary containment boundary. In addition, brief, inadvertent, simultaneous opening and closing of redundant secondary containment personnel access doors during entry and exit conditions does not affect the ability of the Emergency Ventilation System (NMP1) or the Standby Gas Treatment (SGT) System (NMP2) to establish the required secondary containment vacuum. Therefore, the safety function of the secondary containment is not affected.

   Therefore, the proposed changes do not involve a significant reduction in a margin of safety.

Based on the above, Exelon 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.

4.4 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.

5.0 ENVIRONMENTAL CONSIDERATION

A review has determined that 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 effluent 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.

6.0 REFERENCES

1. NUREG-1434, "Standard Technical Specifications, General Electric BWR/6 Plants," Revision 4.0, dated April 2012.

ATTACHMENT 2

License Amendment Request

Nine Mile Point Nuclear Station, Units 1 and 2
Docket Nos. 50-220 and 50-410

Proposed Changes to the Technical Specifications to Address Secondary Containment Personnel Access Door Openings

Markup of Proposed Technical Specifications Pages

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Unit 2 TS Page
3.6.4.1-3

c. All automatic containment isolation valves are operable or are secured in the closed position.

d. All blind flanges and manways are closed.

Insert

1.12 Reactor Building Integrity

Reactor Building Integrity means that the reactor building is closed and the following conditions are met:

a. At least one door at each access opening is closed, except when the access opening is being used for entry and exit.

b. The standby gas treatment system is operable.

c. All Reactor Building ventilation system automatic isolation valves are operable or are secured in the closed position.

1.13 Core Alteration

A core alteration is the addition, removal, relocation, or other manual movement of fuel or controls in the reactor core. Control rod movement with the control rod drive hydraulic system is not considered to be a core alteration.

1.14 Rated Flux

Rated flux is the neutron flux that corresponds to a steady-state power level of 1850 thermal megawatts. The use of the term 100 percent also refers to the 1850 thermal megawatt power level.

1.15 Surveillance

Surveillance means that process whereby systems and components which are essential to plant nuclear safety during all modes of operation or which are necessary to prevent or mitigate the consequences of incidents are checked, tested, calibrated and/or inspected, as warranted, to verify performance and availability at optimum intervals.

LIMITING CONDITION FOR OPERATION

3.4.3 ACCESS CONTROL

Applicability:

Applies to the access control to the reactor building.

Objective:

To specify the requirements necessary to assure the integrity of the secondary containment system.

Specification:

a. At all times when secondary containment integrity is required, the following conditions will be met:

1. Only one door in each of the double-doored access ways shall be opened at one time, except when the access opening is being used for entry or exit.

2. Only one door or closeup of the railroad bay shall be opened at one time.

3. The core spray and containment spray pump compartments' doors shall be closed at all times except during passage in order to consider the core spray system and the containment spray system operable.

SURVEILLANCE REQUIREMENT

4.4.3 ACCESS CONTROL

Applicability:

Applies to the periodic checking of the condition of portions of the reactor building.

Objective:

To assure that pump compartments are properly closed at all times and to assure the integrity of the secondary containment system by verifying that reactor building access doors are closed, as required by Specifications 3.4.3.a.1 and 3.4.3.a.2.

Specification:

a. The core and containment spray pump compartments shall be checked once per week and after each entry.

, except when the access opening is being used for entry or exit.

LIMITING CONDITION FOR OPERATION

b. If these conditions cannot be met, then the actions listed below shall be taken:

1. If in the power operating condition, restore reactor building integrity within 4 hours or be in at least the hot shutdown condition within the next 12 hours and in the cold shutdown condition within the following 24 hours.

OR

If the reactor coolant system temperature is above 215°F, restore reactor building integrity within 4 hours or be in cold shutdown within the following 24 hours.

2. Suspend any of the following activities:

a. Handling of recently irradiated fuel in the reactor building,

b. Irradiated fuel cask handling operations in the reactor building,

c. Operations with a potential for draining the reactor vessel (OPDRVs).

SURVEILLANCE REQUIREMENT

b. Verify at least once per 31 days that:

1. At least one door in each access to the secondary containment is closed.

2. At least one door or closeup of the railroad bay is closed.

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.6.4.1.3	Verify one secondary containment access door in each access opening is closed.	31 days
SR 3.6.4.1.4	Verify the secondary containment can be drawn down to ≥ 0.25 inch of vacuum water gauge in ≤ 66.7 seconds using one standby gas treatment (SGT) subsystem.	24 months on a STAGGERED TEST BASIS for each SGT subsystem
SR 3.6.4.1.5	Verify the secondary containment can be maintained ≥ 0.25 inch of vacuum water gauge for 1 hour using one SGT subsystem at a flow rate ≤ 2670 cfm.	24 months on a STAGGERED TEST BASIS for each SGT subsystem

, except when the access opening is being used for entry or exit.

ATTACHMENT 3

License Amendment Request

Nine Mile Point Nuclear Station, Units 1 and 2
Docket Nos. 50-220 and 50-410

Proposed Changes to the Technical Specifications to Address Secondary Containment Personnel Access Door Openings

Markup of Proposed Technical Specifications Bases Pages (Information Only)

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Unit 2 TS Bases Pages
B 3.6.4.1-4
B 3.6.4.1-5

The secondary containment is designed to minimize any ground level release of radioactive materials that might result from a serious accident. The reactor building provides secondary containment during reactor operation, when the drywell is sealed and in service. The reactor building provides primary containment during periods when the reactor is shutdown, the drywell is open, and activities are ongoing that require secondary containment to be in effect.

There are two principal accidents for which credit is taken for reactor building (secondary containment) integrity. These are a loss of coolant accident (LOCA) and a refueling accident involving "recently irradiated" fuel. The reactor building 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 is restricted to those leakage paths and associated leakage rates assumed in the accident analysis and that fission products entrapped within the reactor building structure will be treated by the Reactor Building Emergency Ventilation System (RBEVS) prior to discharge to the environment.

In addition to these limiting events, events occurring during handling of an irradiated fuel cask and operations with a potential for draining the reactor vessel (OPDRVs) can be postulated to cause a fission product release. During these events, the reactor building would be the only barrier to a release to the environment. Thus, reactor building integrity is required during handling of an irradiated fuel cask and during OPDRVs.

The Refueling Accident analysis is based on an alternative source term (AST) methodology (10 CFR 50.67 and Regulatory Guide 1.183). This analysis concluded that the calculated total effective dose equivalent (TEDE) values to the control room occupants, the exclusion area boundary, and the low population zone are well below the TEDE criteria established in 10 CFR 50.67 without crediting reactor building integrity, operation of the RBEVS, or operation of the Control Room Air Treatment System (CRATS), as long as the fuel is allowed to decay for at least 24 hours following reactor shutdown. As a result, "recently irradiated" fuel is defined as fuel that has occupied part of a critical reactor core within 24 hours; i.e., reactor fuel that has decayed less than 24 hours following reactor shutdown. Therefore, reactor building integrity is not required during movement of decayed irradiated fuel that is no longer considered "recently irradiated." Conversely, reactor building integrity is required during movement of recently irradiated fuel assemblies.

As discussed in Section VI-F* all access openings of the reactor building have as a minimum two doors in series. Appropriate local alarms and control room indicators are provided to always insure that reactor building integrity is maintained. Surveillance of the reactor building access doors provides additional assurance that reactor building integrity is maintained.

Maintaining closed doors on the pump compartments ensures that suction to the core and containment spray pumps is not lost in case of a gross leak from the suppression chamber.

INSERT NOTE 1

*FSAR

NOTE 1:

The intent is to not breach the secondary containment, which is achieved by maintaining the inner or outer portion of the barrier closed. An exception is provided to allow brief, unintentional, simultaneous opening of the inner and outer secondary containment doors for personnel entry and exit.

BASES

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.

SURVEILLANCE REQUIREMENTS

SR 3.6.4.1.1

This SR ensures that the secondary containment boundary is sufficiently leak tight to preclude exfiltration. 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.

SR 3.6.4.1.2 ~~and SR 3.6.4.1.3~~ and

Verifying that secondary containment equipment hatches ~~and one access door in each access opening~~ are closed ensures that the infiltration of outside air of such 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. An access opening contains 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 not to breach the secondary containment at any time when secondary containment is required. This is achieved by maintaining the inner or outer portion of the barrier closed at all times; i.e., all inner doors closed or all outer doors closed. Thus, each access opening has one door closed. However all secondary containment access doors are normally kept closed, except when the access opening is being used for entry and exit or when maintenance is being~~

(continued)

BASES

SURVEILLANCE REQUIREMENTS

SR 3.6.4.1.2 ~~and SR 3.6.4.1.3~~ (continued)

~~performed on an access opening~~. The 31 day Frequency for ~~these SRs~~ this SR has been shown to be adequate based on operating experience, and is considered adequate in view of the other indications of door and hatch status that are available to the operator.

INSERT NOTE 1

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. Each SGT subsystem is designed to draw down pressure in the secondary containment to ≥ 0.25 inches of vacuum water gauge in ≤ 66.7 seconds and maintain pressure in the secondary containment at ≥ 0.25 inches of vacuum water gauge for 1 hour at a flow rate of ≤ 2670 cfm. To ensure that all fission products released to the secondary containment are treated, SR 3.6.4.1.4 and SR 3.6.4.1.5 verify that a pressure in the secondary containment that is less than the lowest postulated pressure external to the secondary containment boundary can rapidly be established and maintained. When the SGT System is operating as designed, the establishment and maintenance of secondary containment pressure cannot be accomplished if the secondary containment boundary is not intact. Establishment of this pressure is confirmed by SR 3.6.4.1.4, which demonstrates that the secondary containment can be drawn down to ≥ 0.25 inches of vacuum water gauge in ≤ 66.7 seconds with the initial secondary containment pressure ≥ 0 psig, using one SGT subsystem. SR 3.6.4.1.5 demonstrates that the pressure in the secondary containment can be maintained ≥ 0.25 inches of vacuum water gauge for 1 hour using one SGT subsystem at a flow rate ≤ 2670 cfm. This flow rate is the assumed secondary containment leak rate during the drawdown period. The 1 hour test period allows secondary containment to be in thermal equilibrium at steady state conditions. The drawdown test conditions must be adjusted based on the methodology in Reference 5 to compensate for actual inleakage flow and initial conditions during the test. The primary purpose of these SRs is to ensure secondary containment boundary integrity. The secondary purpose of these SRs is to ensure that the SGT subsystem being tested functions as designed. There is a separate LCO with Surveillance Requirements that serves the primary purpose of

(continued)

NOTE 1:

SR 3.6.4.1.3

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. The intent is to not breach the secondary containment, which is achieved by maintaining the inner or outer portion of the barrier closed. SR 3.6.4.1.3 provides an exception to allow brief, unintentional, simultaneous opening of both an inner and out secondary containment access door for entry and exit.

The 31 day Frequency for this SR has been shown to be adequate, based on operating experience, and is considered adequate in view of the other indications of door status that are available to the operator.