

10 CFR 50.90

RS-05-007

January 21, 2005

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

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

Subject: Request for Amendment to Technical Specifications Associated With Isolation
Condenser System Heat Removal Capability Surveillance

In accordance with 10 CFR 50.90, "Application for amendment of license or construction permit," Exelon Generation Company, LLC (EGC) requests an amendment to Renewed Facility Operating License Nos. DPR-19 and DPR-25 for Dresden Nuclear Power Station (DNPS) Units 2 and 3. The proposed change permanently revises Isolation Condenser (IC) Technical Specifications (TS) Section 3.5.3, "IC System." Specifically, surveillance requirement SR 3.5.3.4 is modified by the addition of a note which states the IC System heat removal capability surveillance is not required to be performed until 12 hours after adequate reactor power is achieved to perform the test.

Currently, SR 3.5.3.4 requires that DNPS verify the IC capability to remove the design heat load on a 60 month frequency. Performance of this surveillance requires that the reactor be operating in Mode 1 to ensure adequate steam is available to monitor heat removal capability. The addition of this note will permit entry into the TS 3.5.3 applicable modes to achieve the necessary conditions for the surveillance to be performed. A similar note presently modifies other steam dependent Emergency Core Cooling System (ECCS) TS surveillance requirements.

This request is subdivided as follows:

- Attachment 1 provides an evaluation supporting the proposed change.
- Attachment 2 contains the marked up TS page with the proposed change indicated.
- Attachment 3 contains the marked up TS Bases page with the changes indicated. The TS Bases pages are provided for information only and do not require NRC approval.
- Attachment 4 provides the retyped TS page with the proposed change incorporated.

Exelon requests approval of the proposed amendment by October 6, 2005. Approval by this date will support operability testing following system testing and maintenance performed during the DNPS Unit 2 Fall 2005 refueling outage.

The proposed change has been reviewed by the Plant Operations Review Committee, and approved by the Nuclear Safety Review Board in accordance with the Quality Assurance Program.

We are notifying the State of Illinois of this application for a change to the TS by transmitting a copy of this letter and its attachments to the designated State Official.

If you have any questions concerning this letter, please contact Mr. David Gullott at (630) 657-2819.

I declare under penalty of perjury that the foregoing is true and correct. Executed on the 21st day of January 2005.

Respectfully,



Patrick R. Simpson
Manager – Licensing

Attachments:

1. Evaluation of Proposed Change
2. Marked Up Technical Specifications Page
3. Marked Up Technical Specifications Bases Page
4. Retyped Technical Specifications Page

ATTACHMENT 1
Evaluation of Proposed Change

**Subject: Request for Amendment to Technical Specifications Associated With Isolation
Condenser System Heat Removal Capability Surveillance**

1.0 DESCRIPTION

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1.0 DESCRIPTION

In accordance with 10 CFR 50.90, "Application for amendment of license or construction permit," Exelon Generation Company, LLC (EGC) requests an amendment to Renewed Facility Operating License Nos. DPR-19 and DPR-25 for Dresden Nuclear Power Station (DNPS) Units 2 and 3. The proposed change permanently revises Isolation Condenser (IC) Technical Specifications (TS) Section 3.5.3, "IC System." Specifically, surveillance requirement SR 3.5.3.4 is modified by the addition of a note which states the IC System heat removal capability surveillance is not required to be performed until 12 hours after adequate reactor power is achieved to perform the test.

2.0 PROPOSED CHANGE

The proposed change modifies surveillance requirement SR 3.5.3.4 via the addition of a note related to the Isolation Condenser (IC) System heat removal capability surveillance. Specifically, the note added reads as follows:

"-----NOTE-----"
Not required to be performed until 12 hours after adequate reactor power is achieved to perform the test.
-----"

Attachment 2 provides a TS page markup indicating the proposed change. Attachment 4 provides the retyped TS page incorporating the proposed change.

3.0 BACKGROUND

DNPS Units 2 and 3 are General Electric BWR/3 type plants equipped with ICs. The design bases of the IC is to provide reactor core cooling in the event that the reactor becomes isolated from the turbine and the main condenser by closure of the main steam isolation valves (MSIVs). The system is designed to operate automatically or manually to provide adequate core cooling for reactor pressures greater than 150 pounds per square inch (psig).

The isolation condenser consists of two tube bundles immersed in a large water storage tank. The tube bundles are connected to the RPV by a single steam supply line and single condensate return line. In the standby condition, the condensate return line is isolated via a normally closed valve. The isolation condenser is placed in operation by opening the condensate return valve to the RPV.

With the condensate return valve open, the isolation condenser system operates by natural circulation. The steam flows from the reactor to the tube bundles where it condenses. The heat is transferred to the colder water (i.e., ≤ 210 °F) in the water storage tank. The water in the storage tank boils and vents to the atmosphere. The condensate in the tube bundles returns by gravity to the reactor.

To achieve its objective, the isolation condenser system was designed for a heat removal rate of 252.5×10^6 Btu/hr. The purpose of SR 3.5.3.4 is to verify proper isolation condenser flow path and to verify the system's capacity to remove the design heat load. The SR 3.5.3.4 Bases states that the 60 month frequency for this surveillance requirement is based on engineering judgment, and has been shown to be acceptable through operating experience. Performance of

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the isolation condenser heat removal capability surveillance requires the heat load to be supplied by the reactor vessel.

During upcoming refueling outages DNPS intends to perform eddy current testing of the condenser tubes. This scope of work may result in the need to plug some condenser tubes; an action that could impact the heat removal capability of the IC. As part of the post-tube plug testing to demonstrate IC System operability, the TS heat removal capability surveillance would be required to be performed. In its present form, the IC System TS prevents entering Modes 1, 2, or 3 should the heat removal capability surveillance (i.e., SR 3.5.3.4) be required. Historically, this surveillance has been performed in Mode 1 during the operating cycle and maintained current across outages. Therefore, the allowance provided by this proposed change was not required.

Since the reactor vessel supplies the heat load during the surveillance, the surveillance cannot be performed until adequate reactor steam is available. This requires the unit to be in Mode 1 and at a power level between 60% to 75% reactor power. The lower bound of 60% provides sufficient margin to avoid inadvertent bypassing of the Generator Load Reject-Turbine Stop Valve Closure scram. The upper bound of 75% provides sufficient margin to core thermal limits during the injection of lower temperature water from the Isolation Condenser return.

Thus, the intent of this proposed change is to allow the required Mode changes to achieve reactor conditions necessary to perform the surveillance and demonstrate operability.

4.0 TECHNICAL ANALYSIS

The proposed change modifies SR 3.5.3.4 via the addition of a note which states the IC System heat removal capability surveillance is not required to be performed until 12 hours after adequate reactor power is achieved to perform the test. This amendment will allow DNPS to enter Modes 1, 2, or 3 prior to performing SR 3.5.3.4 to achieve the reactor conditions necessary to perform this operability surveillance.

Surveillance requirement SR 3.5.3.4 verifies the IC System's capability to remove heat consistent with the 252.5×10^6 Btu/hr design requirement. This capacity is equivalent to the decay heat rate at approximately 530 seconds (i.e., 8.8 minutes) after a reactor scram. The decay heat evaluation was based on ANSI/ANS-5.1-1979.

In addition to this heat removal capability surveillance, SR 3.5.3.1 requires DNPS to verify the condenser shellside (i.e., water storage tank) water level and water temperature meet Technical Specifications limits every 24 hours. The minimum level and temperature criteria ensure sufficient decay heat removal capability for 20 minutes of operation without makeup water. The UFSAR analysis allows 20 minutes for operator action to manually initiate makeup water flow to the water storage tank.

These surveillance requirements have previously been evaluated to provide reasonable assurance that the IC System is capable of performing its design function of providing reactor core cooling in the event that the reactor becomes isolated from the turbine and the main condenser by closure of the MSIVs. The proposed change will not alter or modify the requirements, methods, or criteria by which this design function is periodically verified.

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The proposed change will allow DNPS to enter Modes 1, 2, or 3 prior to performing SR 3.5.3.4 to achieve the reactor conditions necessary to perform the operability surveillance. The surveillance note proposed by this change has precedent in other Emergency Core Cooling System (ECCS) TS surveillance requirements (e.g., SR 3.5.1.6, SR 3.5.1.7, SR 3.5.1.10). A note allowing entry into the TS Mode of Applicability, for a period of time, to perform operability testing presently modifies these ECCS surveillances. The note is included in the ECCS TS to ensure the requisite reactor conditions are available to adequately complete the surveillance requirements. Based on the IC System's similar operability testing requirements (i.e., steam dependent), a similar note is proposed to modify the heat removal capacity surveillance.

5.0 REGULATORY ANALYSIS

5.1 No Significant Hazards Consideration

Exelon Generation Company, LLC (EGC) has evaluated this proposed amendment and determined that it involves no significant hazards consideration. According to 10 CFR 50.92, "Issuance of amendment," paragraph (c), a proposed amendment to an operating license involves a no significant hazards consideration if operation of the facility in accordance with the proposed amendment would not:

- (1) Involve a significant increase in the probability of occurrence or consequences of an accident previously evaluated;
- (2) Create the possibility of a new or different kind of accident from any previously analyzed; or
- (3) Involve a significant reduction in a margin of safety.

In support of this determination, an evaluation of each of the three criteria set forth in 10 CFR 50.92 is provided below regarding the proposed license amendment.

Overview

Exelon Generation Company, LLC (EGC) requests an amendment to Renewed Facility Operating License Nos. DPR-19 and DPR-25 for Dresden Nuclear Power Station (DNPS) Units 2 and 3. The proposed change permanently revises Isolation Condenser (IC) Technical Specifications (TS) Section 3.5.3, "IC System." Specifically, surveillance requirement SR 3.5.3.4 is modified by the addition of a note which states the IC System heat removal capability surveillance is not required to be performed until 12 hours after adequate reactor power is achieved to perform the test.

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

Response: No

The design function of the Isolation Condenser (IC) System is to provide reactor core cooling in the event that the reactor becomes isolated from the turbine and the main condenser by closure of the main steam isolation valves (MSIVs). Although the system is an Engineered Safety Feature System, no credit for IC System operation is taken in the accident analysis. The IC System is designed and installed to provide adequate core cooling, thereby mitigating the consequences of this reactor isolation transient (e.g.,

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inadvertent closure of the MSIVs). This transient has been evaluated in the Updated Final Safety Analysis Report (UFSAR) as an event of moderate frequency. The IC system is designed to operate automatically or manually to perform its design function for reactor pressures greater than 150 psig. Since the IC System is not credited, this TS change does not impact any of the assumptions, inputs, or results of the UFSAR reactor isolation analysis.

The addition of the note to the Technical Specifications surveillance requirement does not alter the IC System design function or the processes and parameters by which the system and its components perform its function. The addition of this note allows the plant to enter an operating mode necessary to allow performance of the heat removal capability surveillance. The purpose of this heat removal capability surveillance is to verify proper flow path and the ability to remove a design heat load. The proposed change does not alter the ability or methods used to verify flow path or heat removal capability. Nor does the change alter the acceptance criteria for satisfactory performance. Therefore, the change does not result in an increase in the consequences of a reactor isolation transient. Additionally, there are no IC System malfunctions or component failures that could initiate a reactor isolation transient. The proposed change does not alter the system or its operation and will not change the IC System's impact on initiating accidents or transients. Therefore, this change, and any associated impacts, will not increase the probability of the occurrence of an accident or transient.

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

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

Response: No

The addition of the note to the Technical Specifications surveillance requirement does not alter the IC System design function or the processes and parameters by which the system and its components perform its function. The existing Technical Specification does not provide any limitations on when the IC System heat removal capability surveillance may be performed. Present plant procedures perform this surveillance at between 60% and 75% reactor power to ensure sufficient steam is available to simulate design heat loads. The addition of the note to the Technical Specification does not create any constraints on plant operating conditions associated with performance of the IC System heat removal capability surveillance. Operation of the IC System to perform the required surveillance in operating Modes 1, 2, or 3 has been previously evaluated and is presently allowed.

The proposed change does not modify the procedural steps for performing the Technical Specification required surveillance. Nor does the change alter the methodology for evaluating acceptable performance. No physical or operational changes are made that could result in plant or system operation in conditions not previously evaluated.

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

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

Response: No

Technical Specification surveillance requirement SR 3.5.3.4 requires verification of the IC System's heat removal capability every 60 months. This surveillance ensures the proper system flow path and ability to remove decay heat following a reactor isolation. The methodology and acceptance criteria for this surveillance are not impacted by this change. Technical Specifications presently allow performance of this surveillance in Modes 1, 2, or 3 and plant procedures presently perform this surveillance in Mode 1. The surveillance is still required to demonstrate the IC System design basis capability of removing the design requirement of 252.5×10^6 Btu/hr. Other IC System surveillance requirements are not directly or indirectly impacted by this change. Additionally, this amendment request results in no change to the system's actuation response, operation, or setpoints for performance.

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

5.2 Applicable Regulatory Requirements/Criteria

10 CFR 50.36 provides the regulatory requirements for the content required by a licensee's Technical Specifications. The IC System is part of the Technical Specifications based on its contribution to the reduction of overall plant risk. This basis is consistent with Criterion 4 of 10 CFR 50.36(c)(2)(ii). 10 CFR 50.36(c)(3) requires that the TS include surveillance requirements. The surveillance requirements assure the quality of systems and components is maintained, facility operation will be within safety limits, and limiting conditions for operation (LCO) will be met.

The concept of allowing entry into a TS mode of applicability to allow necessary surveillance conditions to be achieved is permitted via notes for other TS surveillance requirements (e.g., TS surveillance requirements SR 3.5.1.6, SR 3.5.1.7, and SR 3.5.1.10). These surveillance requirements recognize that certain system functions and performance objectives can only be demonstrated under specific plant conditions. The 12 hour allowance to perform the surveillance, once conditions are reached, is considered sufficient to achieve stable testing conditions and provides a reasonable time to complete the surveillance requirement.

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.

6.0 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, "Standards for Protection Against Radiation," or would change an inspection or

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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.

ATTACHMENT 2

Marked Up Technical Specifications Page

ATTACHMENT 3

Marked Up Technical Specifications Bases Pages

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.5.3.1 Verify the IC System: a. Shellside water level \geq 6 feet; and b. Shellside water temperature \leq 210°F.	24 hours
SR 3.5.3.2 Verify each IC System manual, power operated, and automatic valve in the flow path, that is not locked, sealed, or otherwise secured in position, is in the correct position.	31 days
SR 3.5.3.3 Verify the IC System actuates on an actual or simulated automatic initiation signal.	24 months
SR 3.5.3.4 → Verify IC System heat removal capability to remove design heat load.	60 months

-----NOTE-----
 Not required to be performed until 12 hours after adequate reactor power is achieved to perform the test.

BASES

SURVEILLANCE
REQUIREMENTS

SR 3.5.3.3 (continued)

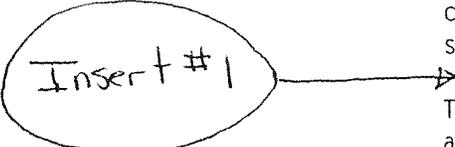
operate as designed; that is, actuation of all automatic valves to their required positions. The LOGIC SYSTEM FUNCTIONAL TEST performed in LCO 3.3.5.2 overlaps this Surveillance to provide complete testing of the assumed design function.

The 24 month Frequency is based on the need to perform the Surveillance under the conditions that apply during a plant outage and the potential for an unplanned transient if the Surveillance were performed with the reactor at power. Operating experience has shown that these components usually pass the SR when performed at the 24 month Frequency, which is based on the refueling cycle. Therefore, the Frequency was concluded to be acceptable from a reliability standpoint.

SR 3.5.3.4

Verifying the proper flow path and heat exchange capacity for IC System operation ensures the capability of the IC System to remove the design heat load. This SR verifies the IC System capability to remove heat consistent with the design requirements of 252.5×10^6 Btu/hr. The IC System capacity is equivalent to the decay heat rate about 530 seconds (8.8 minutes) after a reactor scram.

Insert #1



The 60 month Frequency is based on engineering judgement, and has been shown to be acceptable through operating experience.

REFERENCES

1. UFSAR, Section 5.4.6.
 2. Memorandum from R.L. Baer (NRC) to V. Stello, Jr. (NRC), "Recommended Interim Revisions to LCOs for ECCS Components," December 1, 1975.
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Insert #1

The required heat load to perform this surveillance should come from the RPV. Adequate reactor steam pressure and flow must be available to perform this test. Therefore, sufficient time is allowed after adequate pressure and flow are achieved to perform the test. Adequate steam pressure and flow is represented by reactor power greater than 60%. Reactor startup is allowed prior to performing the heat removal capability test, provided an engineering evaluation has been performed which demonstrates reasonable assurance of the IC System's design heat removal capability. Therefore, SR 3.5.3.4 is modified by Note that states the Surveillance is not required to be performed until 12 hours after reactor power is adequate to perform the test. The 12 hours allowed for performing the heat removal capability test, after the required power level is reached, is sufficient to achieve stable conditions for testing and provides reasonable time to complete the SR.

ATTACHMENT 4

Retyped Technical Specifications Page

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.5.3.1	Verify the IC System: a. Shellside water level \geq 6 feet; and b. Shellside water temperature \leq 210°F.	24 hours
SR 3.5.3.2	Verify each IC System manual, power operated, and automatic valve in the flow path, that is not locked, sealed, or otherwise secured in position, is in the correct position.	31 days
SR 3.5.3.3	Verify the IC System actuates on an actual or simulated automatic initiation signal.	24 months
SR 3.5.3.4	-----NOTE----- Not required to be performed until 12 hours after adequate reactor power is achieved to perform the test. ----- Verify IC System heat removal capability to remove design heat load.	60 months