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10 CFR 50.90

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SVP-01-090

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

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

Subject: Request for Technical Specifications Changes to Modify Reactor Pressure Vessel Level Instrumentation Surveillance Frequencies and Allowable Values Requirements

Reference: Letter from R. M. Krich (Commonwealth Edison Company) to U. S. NRC, "Proposed Technical Specifications Change - Surveillance Test Intervals and Allowable Outage Times for Protective Instrumentation," dated December 27, 1999

Pursuant to 10 CFR 50.90, "Application for amendment of license or construction permit," Exelon Generation Company (EGC), LLC, requests changes to the Technical Specifications (TS) of Facility Operating License Nos. DPR-29 and DPR-30 for the Quad Cities Nuclear Power Station (QCNPS), Units 1 and 2. The proposed change is to TS Section 3.3.2.2, "Feedwater System and Main Turbine High Water Level Trip Instrumentation," TS Section 3.3.5.1, "ECCS Instrumentation," and TS Section 3.3.5.2, "RCIC System Instrumentation."

The proposed change modifies certain surveillance requirements frequencies and allowable values to reflect a planned upgrade to the reactor pressure vessel (RPV) water level instrumentation. In order to address RPV water level instrumentation performance issues, EGC committed in the referenced letter to upgrade the current level instruments during the upcoming refueling outages (Unit 2, February 2002, and Unit 1, October 2002) at QCNPS.

The plant related modifications are scheduled for implementation during the next refueling outages on Unit 2 and Unit 1 (currently scheduled to begin on February 2, 2002, and October 26, 2002, respectively). Therefore, we request approval of this amendment request by February 2, 2002.

A001

This request is subdivided as follows:

1. Attachment A contains a description and safety analysis of the proposed changes,

2. Attachment B provides the marked-up TS pages with the requested changes indicated,

3. Attachment C provides information supporting a finding of no significant hazards consideration in accordance with 10 CFR 50.92(c), "Issuance of amendment,"

4. Attachment D provides information supporting an Environmental Assessment.

These proposed changes have been reviewed by the Plant Operations Review Committee and the Nuclear Safety Review Board in accordance with the Quality Assurance Topical Report.

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

Should you have any questions concerning this letter, please contact Mr. W. J. Beck at (309) 227-2800.

Respectfully,

Timothy J. Tulon
Site Vice President
Quad Cities Nuclear Power Station

Attachments: Affidavit
Attachment A: Description and Safety Analysis for Proposed Changes
Attachment B: Marked-Up TS Pages for Proposed Changes
Attachment C: Information Supporting a Finding of No Significant Hazards Consideration
Attachment D: Information Supporting an Environmental Assessment

cc: Regional Administrator – NRC Region III
NRC Senior Resident Inspector – Quad Cities Nuclear Power Station
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STATE OF ILLINOIS	)	
COUNTY OF ROCK ISLAND	)	
IN THE MATTER OF	)	
EXELON GENERATION COMPANY, LLC	)	**Docket Numbers**
QUAD CITIES NUCLEAR POWER STATION, UNITS 1 AND 2	)	**50-254 and 50-265**

SUBJECT: **Request for Technical Specifications Changes to Modify Reactor Pressure Vessel Level Instrumentation Surveillance Frequencies and Allowable Values Requirements**

AFFIDAVIT

I affirm that the content of this transmittal is true and correct to the best of my knowledge, information and belief.

Timothy J. Tulon
Site Vice President

Subscribed and sworn to before me, a Notary Public in and

for the State above named, this 13 day of

August, 2001.

Linda Lee Stoermer
Notary Public

OFFICIAL SEAL
LINDA LEE STOERMER
NOTARY PUBLIC STATE OF ILLINOIS
My Commission Expires 05-28-2003

ATTACHMENT A
Proposed Change to Technical Specifications
Quad Cities Nuclear Power Station, Units 1 and 2

DESCRIPTION AND SAFETY ANALYSIS FOR PROPOSED CHANGES

A. SUMMARY OF PROPOSED CHANGES

Pursuant to 10 CFR 50.90, "Application for amendment of license or construction permit," Exelon Generation Company (EGC), LLC, is requesting a change to the Technical Specifications (TS) of Facility Operating License Nos. DPR-29 and DPR-30 for the Quad Cities Nuclear Power Station (QCNPS), Units 1 and 2. The proposed change modifies certain TS Surveillance Requirements (SRs) and Allowable Values (AVs) in TS Sections 3.3.2.2, "Feedwater System and Main Turbine High Water Level Trip Instrumentation," 3.3.5.1, "ECCS Instrumentation," and 3.3.5.2, "RCIC System Instrumentation."

The proposed change is required to support a planned upgrade of the reactor pressure vessel (RPV) water level instrumentation. The Yarway level switches will be replaced with analog transmitter/trip units (ATUs), which have proven reliable in similar applications at QCNPS (e.g., the Reactor Protection System low reactor level scram function). The Yarway level switches have historically exhibited unacceptable drift performance. The upgrade to ATUs will have no impact on the underlying design functions of the instrumentation (i.e., the actuation logic will not be modified).

The upgrade provides sensing devices for RPV water level signals and indications that are more reliable with less drift and less frequent surveillance requirements. In addition, the transmitters supplying the signals will be updated to current models. The modification includes the addition of new analog trip system cabinets and a reconfiguration of certain existing ATUs to improve separation and diversity. The Yarway upgrade is consistent with NEDO-21617-A, "Analog Transmitter/Trip Unit System for Engineered Safeguard Sensor Trip Inputs." NEDO-21617-A was approved by the NRC in a Safety Evaluation Report dated June 27, 1978. In order to support the planned upgrade, certain changes to the TS are proposed. These changes are summarized below.

For the RPV level functions that currently employ Yarway level switches (i.e., TS Sections 3.3.2.2, 3.3.5.1, and 3.3.5.2) the following changes are proposed:

- The Channel Functional Test frequency has been extended from 31-days to 92-days. This frequency is consistent with existing TS functions that employ ATUs (e.g., TS SR 3.3.1.1.10).
- The ATU devices will be calibrated every 92-days. This is consistent with existing TS functions that employ ATUs (e.g., TS SR 3.3.1.1.11).
- The Channel Calibration will be extended to 24-months. This change reflects proven ATU performance and is supported by EGC's setpoint methodology.
- Revised AVs have been determined using EGC's setpoint methodology, which forms the basis for the TS AVs and is described in Reference 1.

The plant design changes are scheduled for implementation during the next refueling outage on Unit 2, scheduled to begin February 2, 2002; therefore, EGC requests approval of this

amendment by February 2, 2002. A similar design change will be implemented on Unit 1 during the 17th refueling outage scheduled to begin in October 2002.

The proposed change is described in detail in Section E of this Attachment. The marked-up TS pages are shown in Attachment B. Note that two separate TS mark-ups have been provided because the upgrades to Unit 2 and Unit 1 will not be performed concurrently. The first mark-up reflects the TS after Unit 2 completes the upgrade in February 2002. The second markup reflects the TS after both Units have been upgraded in October 2002.

B. DESCRIPTION OF THE CURRENT REQUIREMENTS

The TS provide surveillance requirements to ensure actuation instrumentation is functional and is maintained at a high degree of reliability. For the Yarway level instruments, the surveillance requirements include a periodic Channel Check, Channel Calibration, Channel Functional Test, and Logic System Functional Test. These requirements are summarized below:

TS Section 3.3.2.2

Surveillance Requirement	*Frequency*
SR 3.3.2.2.1 Perform CHANNEL CHECK	24 hours
SR 3.3.2.2.2 Perform CHANNEL FUNCTIONAL TEST	92 days
SR 3.3.2.2.3 Perform CHANNEL CALIBRATION	12 months
SR 3.3.2.2.4 Perform LOGIC SYSTEM FUNCTIONAL TEST	24 months

TS Section 3.3.5.1

Surveillance Requirement	*Frequency*
SR 3.3.5.1.1 Perform CHANNEL CHECK	12 hours
SR 3.3.5.1.2 Perform CHANNEL FUNCTIONAL TEST	31 days
SR 3.3.5.1.3 Perform CHANNEL CALIBRATION	60 days
SR 3.3.5.1.9 Perform LOGIC SYSTEM FUNCTIONAL TEST	24 months

TS Section 3.3.5.2

Surveillance Requirement	*Frequency*
SR 3.3.5.2.1 Perform CHANNEL CHECK	12 hours
SR 3.3.5.2.2 Perform CHANNEL FUNCTIONAL TEST	31 days
SR 3.3.5.2.3 Perform CHANNEL CALIBRATION	60 days
SR 3.3.5.2.6 Perform LOGIC SYSTEM FUNCTIONAL TEST	24 months

The current TS AVs for the various Yarway Functions are listed below by function:

	Function	*AV*
3.3.2.2	Feedwater System and Main Turbine Level - High Trip	≤ 54.4 inches
3.3.5.1	ECCS Instrumentation	
	Level - Low Low Actuation	≥ -56.78 inches
	Level - High Trip (HPCI)	≤ 54.23 inches
3.3.5.2	RCIC Instrumentation	
	Level - Low Low Actuation	≥ -56.78 inches
	Level - High Trip	≤ 54.23 inches

C. BASES FOR THE CURRENT REQUIREMENTS

The TS provide surveillance requirements to ensure actuation instrumentation is functional and is maintained at a high degree of reliability. For the Yarway level instruments, the surveillance requirements include a periodic Channel Check, Channel Calibration, Channel Functional Test, and Logic System Functional Test. The basis for these requirements is provided below.

Performance of a routine (e.g., every 12 hours) Channel Check ensures that a gross failure of instrumentation has not occurred. A Channel Check is a comparison of the parameter indicated on one channel to a similar parameter on other channels. Significant deviations between instrument channels could be an indication of excessive instrument drift in one of the channels, or something even more serious.

A periodic Channel Functional Test is performed to ensure functionality by injecting a simulated or actual signal into the channel as close to the sensor as practicable to verify operability of all devices in the channel. The Channel Functional Test frequency is based on engineering judgement and the reliability of the equipment.

A Channel Calibration is the periodic adjustment, as necessary, of the channel output such that it responds within the necessary range and accuracy to known values of the parameter that the channel monitors. The current Channel Calibration intervals and AVs are based on EGC's setpoint methodology (i.e., Reference 1). The setpoint methodology accounts for instrument design and performance characteristics.

Finally, a Logic System Functional Test is performed each refueling to test all logic components required for operability of the logic circuit, from as close to the sensor as practicable up to, but not including, the actuated device. The 24 month frequency is based on the need to perform this surveillance under the conditions associated with a plant outage and the potential for an unplanned transient if the surveillance were performed with the reactor at power.

The following provides a functional description of the Yarway instrument actuations.

Feedwater System and Main Turbine High Water Level Trip Instrumentation
The Feedwater System and Main Turbine High Water Level Trip Instrumentation is designed to detect a potential failure of the Feedwater Level Control System that causes excessive feedwater flow. With excessive feedwater flow, the water level in the reactor vessel rises toward the high water level reference point, causing the trip of the three feedwater pumps and the main turbine.

Reactor Vessel Water Level -High signals are currently provided by differential pressure indicating switches that sense the difference between the pressure due to a constant column of water (reference leg) and the pressure due to the actual water level in the reactor vessel (variable leg). Two channels of Reactor Vessel Water Level -High instrumentation are provided as input to a two-out-of-two initiation logic that trips the three feedwater pumps and the main turbine. When the setpoint is exceeded, the channel output relay actuates, which then outputs a feedwater pump and main turbine trip signal to the trip logic.

A trip of the feedwater pumps limits further increase in reactor vessel water level by limiting further addition of feedwater to the reactor vessel. A trip of the main turbine and closure of the stop valves protects the turbine from damage due to water intrusion.

RCIC
Low RPV water level indicates that normal feedwater flow is insufficient to maintain reactor vessel water level and that the capability to cool the fuel may be threatened. Should RPV water level decrease too far, fuel damage could result. Therefore, the RCIC System is initiated at Reactor Vessel Water Level -Low Low to assist in maintaining water level above the top of the active fuel. High RPV water level indicates that sufficient cooling water inventory exists in the reactor vessel such that there is no danger to the fuel. Therefore, the Reactor Vessel Water Level -High signal is used to close the RCIC turbine steam supply valve, to prevent overflow into the main steam lines (MSLs).

ECCS (LPCI, CS, HPCI, and ADS)
Low RPV water level indicates that the capability to cool the fuel may be threatened. Should RPV water level decrease too far, fuel damage could result. The low pressure ECCS and associated Diesel Generators (DGs) are initiated at the low low level signal to ensure that core spray and flooding functions are available to prevent or minimize fuel damage. The Reactor Vessel Water Level -Low Low is one of the Functions assumed to be operable and capable of initiating the ECCS during transient and accident conditions. The core cooling function of the ECCS, along with the scram action of the Reactor Protection System (RPS), ensures that the fuel peak cladding temperature remains below the limits of 10 CFR 50.46. Reactor Vessel Water Level -Low Low signals are currently initiated from four differential pressure switches that sense the difference between the pressure due to a constant column of water (reference leg) and the pressure due to the actual water level (variable leg) in the vessel. The Reactor Vessel Water Level -Low Low AV is chosen to allow time for the low pressure core flooding systems to activate and provide adequate cooling. In addition, a HPCI trip signal on high water level is provided. High RPV water level indicates that sufficient cooling water inventory exists in the reactor vessel such that there is no danger to the fuel. Therefore, the Reactor Vessel Water Level -High Function signal is used to trip the HPCI turbine to prevent overflow into the MSLs. The Reactor Vessel Water Level-High AV is chosen to prevent flow from the HPCI System from overflowing into the MSLs.

D. NEED FOR REVISION OF THE REQUIREMENTS

The proposed change supports an upgrade to the existing RPV water level instrumentation. The Yarway level switches, which are used to actuate various protective features including ECCS functions, will be replaced with ATUs. The ATUs replace the trip function at the sensor level with no corresponding change to the actuation logic. The upgrade will provide sensing devices for RPV water level signals and indication that drift less, are more reliable and require less frequent surveillances. The proposed change also modifies surveillance requirements and instrumentation AVs as necessary to reflect the improved ATU performance and the specific ATU design features.

In order to accommodate the design change, a TS change is required to establish necessary surveillance requirements and instrumentation AVs.

E. DESCRIPTION OF THE PROPOSED CHANGES

TS Section 3.3.2.2

Current Surveillance Requirements

	SURVEILLANCE	FREQUENCY
SR 3.3.2.2.1	Perform CHANNEL CHECK.	24 hours
SR 3.3.2.2.2	Perform CHANNEL FUNCTIONAL TEST.	92 days
SR 3.3.2.2.3	Perform CHANNEL CALIBRATION. The Allowable Value shall be ≤ 54.4 inches.	12 months
SR 3.3.2.2.4	Perform LOGIC SYSTEM FUNCTIONAL TEST, including breaker and valve actuation.	24 months

Summary of Proposed Changes:

1) Add new SR to calibrate the analog trip units every 92 days.
2) Change the Channel Calibration frequency from 12 months to 24 months. This change reflects proven performance of ATUs and is supported by EGC's setpoint methodology.
3) Change the AV specified in SR 3.3.2.2.3 from ≤ 54.4 inches to ≤ 50.34 inches. This revised setpoint is based on the EGC setpoint methodology, which was used to generate the TS AVs.

TS Section 3.3.5.1

Current Surveillance Requirements

SURVEILLANCE		FREQUENCY
SR 3.3.5.1.1	Perform CHANNEL CHECK.	12 hours
SR 3.3.5.1.2	Perform CHANNEL FUNCTIONAL TEST.	31 days
SR 3.3.5.1.3	Perform CHANNEL CALIBRATION.	60 days
SR 3.3.5.1.4	Perform CHANNEL FUNCTIONAL TEST.	92 days
SR 3.3.5.1.5	Calibrate the trip unit.	92 days
SR 3.3.5.1.6	Perform CHANNEL CALIBRATION.	92 days
SR 3.3.5.1.7	Perform CHANNEL CALIBRATION.	184 days
SR 3.3.5.1.8	Perform CHANNEL CALIBRATION.	24 months
SR 3.3.5.1.9	Perform LOGIC SYSTEM FUNCTIONAL TEST.	24 months

Summary of Proposed Changes:

For the following ECCS FUNCTIONS provided in TS Table 3.3.5.1-1:

1.a Core Spray (CS) - Reactor Vessel Water Level - Low Low
2.a Low Pressure Coolant Injection (LPCI) - Reactor Vessel Water Level - Low Low
3.a High Pressure Coolant Injection (HPCI) - Reactor Vessel Water Level - Low Low
3.c High Pressure Coolant Injection (HPCI) - Reactor Vessel Water Level - High

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Quad Cities Nuclear Power Station, Units 1 and 2

4.a Automatic Depressurization System A (ADS) - Reactor Vessel Water Level - Low Low
5.a Automatic Depressurization System B (ADS) - Reactor Vessel Water Level - Low Low

The following changes are proposed:

1) Delete the requirement to perform a Channel Functional Test every 31 days. This is replaced with a 92 day Channel Functional Test.
2) Add new SR to calibrate the analog trip units every 92 days.
3) Change the Channel Calibration frequency from 60 days to 24 months. This change reflects proven performance of ATUs and is supported by EGC's setpoint methodology.
4) For function 3.c only, change the AV from ≤ 54.23 inches to ≤ 50.34 inches. This revised setpoint is based on the EGC setpoint methodology, which was used to generate the TS AVs.
5) For the remaining functions 1.a, 2.a, 3.a, 4.a, and 5.a, change the AV from ≥ -56.78 inches to ≥ -55.2 inches. This revised setpoint is based on the EGC setpoint methodology, which was used to generate the TS AVs.
6) The SRs have been re-numbered as necessary to accommodate the proposed changes.

TS Section 3.3.5.2

Current Surveillance Requirements

SURVEILLANCE		FREQUENCY
SR 3.3.5.2.1	Perform CHANNEL CHECK.	12 hours
SR 3.3.5.2.2	Perform CHANNEL FUNCTIONAL TEST.	31 days
SR 3.3.5.2.3	Perform CHANNEL CALIBRATION.	60 days
SR 3.3.5.2.4	Perform CHANNEL FUNCTIONAL TEST.	92 days
SR 3.3.5.2.5	Perform CHANNEL CALIBRATION.	24 months
SR 3.3.5.2.6	Perform LOGIC SYSTEM FUNCTIONAL TEST.	24 months

Summary of Proposed Changes:

For the following ECCS FUNCTIONS provided in TS table 3.3.5.2-1:

1. Reactor Core Isolation Cooling System (RCIC) Reactor Vessel Water Level - Low Low
2. Reactor Core Isolation Cooling System (RCIC) Reactor Vessel Water Level - High

The following changes are proposed:

1) Delete the requirement to perform a Channel Functional Test every 31 days. This is replaced with a 92 day Channel Functional Test.
2) Add new SR to calibrate the analog trip units every 92 days.
3) Change the Channel Calibration frequency from 60 days to 24 months. This change reflects proven performance of ATUs and is supported by EGC's setpoint methodology.

4) For function 1, change the AV from ≥ -56.78 inches to ≥ -55.2 inches. This revised setpoint is based on the EGC setpoint methodology, which was used to generate the TS AVs.
5) For function 2, change the AV from ≤ 54.23 inches to ≤ 50.34 inches. This revised setpoint is based on the EGC setpoint methodology, which was used to generate the TS AVs.
6) The SRs have been re-numbered as necessary to accommodate the proposed changes.

F. SAFETY ANALYSIS OF THE PROPOSED CHANGES

The RPV level instrumentation is designed to detect and mitigate the consequences of an accident or anticipated operational occurrence. The proposed TS change supports an upgrade to the existing RPV water level instrumentation. The Yarway level switches, which are currently used to actuate plant protective features based on low low and high reactor vessel water level conditions, have exhibited unacceptable drift performance. The replacement equipment (i.e., ATUs) provides an equivalent actuation logic scheme while providing additional features such as:

a) Continuous monitoring capability
b) Improved testing procedures and capabilities
c) Improved operational characteristics and performance.

The upgrade replaces the Yarway mechanical switches with a more reliable solid-state electronic device. Such use of ATUs is being employed at QCNPS in similar applications (e.g., reactor protection system scram function on low reactor water level). The ATU "system" is a more sophisticated set of replacement hardware. Implementation of this hardware only affects the system at the sensor level, not at the logic level. The changes are designed to improve instrument performance, which also benefits test and surveillance requirements. Upgrades to ATU systems have been generically reviewed and approved by the NRC (Reference 2). The associated plant design change at QCNPS is consistent with NEDO-21617-A (Reference 2).

The proposed TS changes are broadly divided into the following areas:

1) The Channel Functional Test frequency has been decreased from every 31 days to every 92 days. This frequency is consistent with other TS functions that employ analog trip unit devices (e.g., see TS Table 3.3.1.1, Function 4, Reactor Vessel Water Level - Low). In addition, the change is consistent with recommendations resulting from generic evaluations performed by General Electric supporting increased surveillance test intervals (Reference 3).

2) The Channel Calibration frequency has been decreased to once per 24 months. This change reflects proven performance of ATUs and is supported by EGC's setpoint methodology (i.e., the proposed change in AV considers the 24-month calibration frequency). Note that a new SR has been added which calibrates the analog trip units

every 92 days. This new SR is consistent with other TS functions that employ analog trip unit devices.

3) The associated AVs (AVs) have been established in accordance with EGC's setpoint methodology. The NRC during the conversion to the Improved Technical Specifications reviewed this methodology. The revised AVs have been established using the methodology described in Nuclear Engineering Standard NES-EIC-20.04, "Analysis of Instrument Channel Setpoint Error and Instrument Loop Accuracy." This setpoint methodology is consistent with ANSI/ISA-67.04.01- 2000 and is used to establish instrument setpoints, AVs and instrument loop accuracy. Fundamentally, the methodology provides the procedure for applying instrument uncertainties in the determination of AVs and calculated setpoints at EGC nuclear stations. The methodology establishes TS AVs with sufficient margin to assure that the plant safety analysis assumptions (e.g., certain initiation and trip functions) are maintained.

4) Administrative changes are proposed as required (such as re-numbering SRs) to facilitate the TS change request.

For these reasons, the proposed change is acceptable and does not involve a reduction in plant safety.

G. IMPACT ON PREVIOUS SUBMITTALS

EGC has reviewed the proposed change for impact on any previous submittals, and has determined that there is no impact on any outstanding previous submittals.

H. SCHEDULE REQUIREMENTS

We request approval of this amendment prior to February 2, 2002, to support activities in the Unit 2 cycle 16 refueling outage scheduled to begin February 2, 2002.

I. REFERENCES

1) R. M. Krich letter to USNRC dated March 24, 2000, "Analysis of Instrument Channel Setpoint Error and Instrument Loop Accuracy Methodology"

2) NEDO-21617-A, General Electric Licensing Topical Report, "Analog Transmitter/Trip Unit System for Engineered Safeguard Sensor Trip Inputs," December 1978

3) Letter from R. M. Krich (Commonwealth Edison Company) to U. S. NRC, "Proposed Technical Specifications Change - Surveillance Test Intervals and Allowable Outage Times for Protective Instrumentation," dated December 27, 1999

ATTACHMENT B, Proposed Change to Technical Specifications
Quad Cities Nuclear Power Station, Units 1 and 2

MARKED-UP TECHNICAL SPECIFICATION PAGES

Unit 2 (following Q2R16)	Unit 1 and 2 (following Q1R17)
3.3.2.2-2	3.3.2.2-2
3.3.5.1-8	3.3.5.1-8
3.3.5.1-10	3.3.5.1-9
3.3.5.1-12	3.3.5.1-10
3.3.5.1-13	3.3.5.1-11
3.3.5.2-3	3.3.5.1-12
3.3.5.2-4	3.3.5.1-13
	3.3.5.2-3
	3.3.5.2-4

ATTACHMENT B

Proposed Change to Technical Specifications

MARKED-UP TS PAGES FOR PROPOSED CHANGES

Unit 2 (Following Q2R16)

3.3.2.2 - 2

3.3.5.1 - 8

3.3.5.1 - 10

3.3.5.1 - 12

3.3.5.1 - 13

3.3.5.2 - 3

3.3.5.2 - 4

SURVEILLANCE REQUIREMENTS

----------NOTE----------
When a channel is placed in an inoperable status solely for performance of required Surveillances, entry into associated Conditions and Required Actions may be delayed for up to 2 hours.

SURVEILLANCE		FREQUENCY
SR 3.3.2.2.1	Perform CHANNEL CHECK.	24 hours
SR 3.3.2.2.2	Perform CHANNEL FUNCTIONAL TEST.	92 days
SR 3.3.2.2.3	Perform CHANNEL CALIBRATION. The Allowable Value shall be ≤ 54.4 inches. (UNIT 1)	12 months
SR 3.3.2.2.4	Perform LOGIC SYSTEM FUNCTIONAL TEST, including breaker and valve actuation.	24 months
SR 3.3.2.2.5	Calibrate the trip unit. (UNIT 2)	92 days
SR 3.3.2.2.6	Perform CHANNEL CALIBRATION. The Allowable Value shall be ≤ 50.34 inches (UNIT 2)	24 months

SURVEILLANCE REQUIREMENTS

----------NOTES----------

1. Refer to Table 3.3.5.1-1 to determine which SRs apply for each ECCS Function.

2. When a channel is placed in an inoperable status solely for performance of required Surveillances, entry into associated Conditions and Required Actions may be delayed as follows: (a) for up to 6 hours for Functions 3.c, 3.f, and 3.g; and (b) for up to 6 hours for Functions other than 3.c, 3.f, and 3.g provided the associated Function or the redundant Function maintains ECCS initiation capability.

SURVEILLANCE		FREQUENCY
SR 3.3.5.1.1	Perform CHANNEL CHECK.	12 hours
SR 3.3.5.1.2	Perform CHANNEL FUNCTIONAL TEST.	31 days (unit 1) 92 days (unit 2)
SR 3.3.5.1.3	Perform CHANNEL CALIBRATION.	60 days (unit 1) 24 months (unit 2)
SR 3.3.5.1.4	Perform CHANNEL FUNCTIONAL TEST.	92 days
SR 3.3.5.1.5	Calibrate the trip unit.	92 days
SR 3.3.5.1.6	Perform CHANNEL CALIBRATION.	92 days
SR 3.3.5.1.7	Perform CHANNEL CALIBRATION.	184 days

(continued)

Table 3.3.5.1-1 (page 1 of 4)
Emergency Core Cooling System Instrumentation

FUNCTION	APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS	REQUIRED CHANNELS PER FUNCTION	CONDITIONS REFERENCED FROM REQUIRED ACTION A.1	SURVEILLANCE REQUIREMENTS	ALLOWABLE VALUE
1. Core Spray System					
a. Reactor Vessel Water Level – Low Low	1,2,3, 4(a), 5(a)	4(b)	B	SR 3.3.5.1.1 SR 3.3.5.1.2 SR 3.3.5.1.3 SR 3.3.5.1.9	≥ -56.78 inches (unit 1) ≥ 55.2 inches (unit 2)
b. Drywell Pressure – High	1,2,3	4(b)	B	SR 3.3.5.1.4 SR 3.3.5.1.6 SR 3.3.5.1.9	≤ 2.43 psig
c. Reactor Steam Dome Pressure – Low (Permissive)	1,2,3	2	C	SR 3.3.5.1.4 SR 3.3.5.1.6 SR 3.3.5.1.9	≥ 306 psig and ≤ 342 psig
	4(a), 5(a)	2	B	SR 3.3.5.1.4 SR 3.3.5.1.6 SR 3.3.5.1.9	≥ 306 psig and ≤ 342 psig
d. Core Spray Pump Discharge Flow – Low (Bypass)	1,2,3, 4(a), 5(a)	1 per pump	E	SR 3.3.5.1.4 SR 3.3.5.1.5 SR 3.3.5.1.8 SR 3.3.5.1.9	≥ 577 gpm and ≤ 830 gpm
e. Core Spray Pump Start – Time Delay Relay	1, 2, 3 4(a), 5(a)	1 per pump	C	SR 3.3.5.1.8 SR 3.3.5.1.9	≤ 11.4 seconds
				SR 3.3.5.1.5 (unit 2)	
2. Low Pressure Coolant Injection (LPCI) System					
a. Reactor Vessel Water Level – Low Low	1,2,3, 4(a), 5(a)	4	B	SR 3.3.5.1.1 SR 3.3.5.1.2 SR 3.3.5.1.3 SR 3.3.5.1.9	≥ -56.78 inches (unit 1) ≥ -55.2 inches (unit 2)
b. Drywell Pressure – High	1,2,3	4	B	SR 3.3.5.1.4 SR 3.3.5.1.6 SR 3.3.5.1.9	≤ 2.43 psig
c. Reactor Steam Dome Pressure – Low (Permissive)	1,2,3	2	C	SR 3.3.5.1.4 SR 3.3.5.1.6 SR 3.3.5.1.9	≥ 306 psig and ≤ 342 psig
	4(a), 5(a)	2	B	SR 3.3.5.1.4 SR 3.3.5.1.6 SR 3.3.5.1.9	≥ 306 psig and ≤ 342 psig

(continued)

(a) When associated ECCS subsystem(s) are required to be OPERABLE per LCO 3.5.2, "ECCS – Shutdown."

(b) Also required to initiate the associated diesel generator (DG).

Table 3.3.5.1-1 (page 3 of 4)
Emergency Core Cooling System Instrumentation

FUNCTION	APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS	REQUIRED CHANNELS PER FUNCTION	CONDITIONS REFERENCED FROM REQUIRED ACTION A.1	SURVEILLANCE REQUIREMENTS	ALLOWABLE VALUE
3. High Pressure Coolant Injection (HPCI) System					
a. Reactor Vessel Water Level – Low Low	1, 2(c), 3(c)	4	B	SR 3.3.5.1.1 SR 3.3.5.1.2 SR 3.3.5.1.3 SR 3.3.5.1.9	≥ -56.78 inches (unit 1) ≥ -55.2 inches (unit 2)
b. Drywell Pressure – High	1, 2(c), 3(c)	4	B	SR 3.3.5.1.4 SR 3.3.5.1.6 SR 3.3.5.1.9	≤ 2.43 psig
c. Reactor Vessel Water Level – High	1, 2(c), 3(c)	2	C	SR 3.3.5.1.2 SR 3.3.5.1.3 SR 3.3.5.1.9	≤ 54.23 inches
d. Contaminated Condensate Storage Tank (CCST) Level – Low	1, 2(c), 3(c)	2	D	SR 3.3.5.1.4 SR 3.3.5.1.8 SR 3.3.5.1.9	≥ 598 ft 1 inch
e. Suppression Pool Water Level – High	1, 2(c), 3(c)	2	D	SR 3.3.5.1.4 SR 3.3.5.1.8 SR 3.3.5.1.9	≤ 15 ft 11.25 inches
f. High Pressure Coolant Injection Pump Discharge Flow – Low (Bypass)	1, 2(c), 3(c)	1	E	SR 3.3.5.1.4 SR 3.3.5.1.6 SR 3.3.5.1.9	≥ 634 gpm
g. Manual Initiation	1, 2(c), 3(c)	1	C	SR 3.3.5.1.9	NA
				SR 3.3.5.1.5 (unit 2)	
4. Automatic Depressurization System (ADS) Trip System A					
a. Reactor Vessel Water Level – Low Low	1, 2(c), 3(c)	2	F	SR 3.3.5.1.1 SR 3.3.5.1.2 SR 3.3.5.1.3 SR 3.3.5.1.9	≥ -56.78 inches (unit 1) ≥ -55.2 inches (unit 2)
b. Drywell Pressure – High	1, 2(c), 3(c)	2	F	SR 3.3.5.1.4 SR 3.3.5.1.6 SR 3.3.5.1.9	≤ 2.43 psig
c. Automatic Depressurization System Initiation Timer	1, 2(c), 3(c)	1	G	SR 3.3.5.1.8 SR 3.3.5.1.9	≤ 119 seconds

(continued)

(c) With reactor steam dome pressure > 150 psig.

Table 3.3.5.1-1 (page 4 of 4)
Emergency Core Cooling System Instrumentation

FUNCTION	APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS	REQUIRED CHANNELS PER FUNCTION	CONDITIONS REFERENCED FROM REQUIRED ACTION A.1	SURVEILLANCE REQUIREMENTS	ALLOWABLE VALUE
4. ADS Trip System A (continued)					
d. Core Spray Pump Discharge Pressure – High	1, 2(c), 3(c)	2	G	SR 3.3.5.1.4 SR 3.3.5.1.6 SR 3.3.5.1.9	≥ 101.9 psig and ≤ 148.1 psig
e. Low Pressure Coolant Injection Pump Discharge Pressure – High	1, 2(c), 3(c)	4	G	SR 3.3.5.1.4 SR 3.3.5.1.6 SR 3.3.5.1.9	≥ 101.6 psig and ≤ 148.4 psig
f. Automatic Depressurization System Low Low Water Level Actuation Timer	1, 2(c), 3(c)	1	G	SR 3.3.5.1.8 SR 3.3.5.1.9	≤ 530 seconds
				SR 3.3.5.1.5 (unit 2)	
5. ADS Trip System B					
a. Reactor Vessel Water Level – Low Low	1, 2(c), 3(c)	2	F	SR 3.3.5.1.1 SR 3.3.5.1.2 SR 3.3.5.1.3 SR 3.3.5.1.9	≥ -56.78 inches (unit 1) ≥ -55.2 inches (unit 2)
b. Drywell Pressure – High	1, 2(c), 3(c)	2	F	SR 3.3.5.1.4 SR 3.3.5.1.6 SR 3.3.5.1.9	≤ 2.43 psig
c. Automatic Depressurization System Initiation Timer	1, 2(c), 3(c)	1	G	SR 3.3.5.1.8 SR 3.3.5.1.9	≤ 119 seconds
d. Core Spray Pump Discharge Pressure – High	1, 2(c), 3(c)	2	G	SR 3.3.5.1.4 SR 3.3.5.1.6 SR 3.3.5.1.9	≥ 101.9 psig and ≤ 148.1 psig
e. Low Pressure Coolant Injection Pump Discharge Pressure – High	1, 2(c), 3(c)	4	G	SR 3.3.5.1.4 SR 3.3.5.1.6 SR 3.3.5.1.9	≥ 101.6 psig and ≤ 148.4 psig
f. Automatic Depressurization System Low Low Water Level Actuation Timer	1, 2(c), 3(c)	1	G	SR 3.3.5.1.8 SR 3.3.5.1.9	≤ 530 seconds

(c) With reactor steam dome pressure > 150 psig.

SURVEILLANCE REQUIREMENTS

----------NOTES----------

1. Refer to Table 3.3.5.2-1 to determine which SRs apply for each RCIC Function.

2. When a channel is placed in an inoperable status solely for performance of required Surveillances, entry into associated Conditions and Required Actions may be delayed as follows: (a) for up to 6 hours for Functions 2 and 5; and (b) for up to 6 hours for Functions 1, 3, and 4 provided the associated Function maintains RCIC initiation capability.

SURVEILLANCE		FREQUENCY
SR 3.3.5.2.1	Perform CHANNEL CHECK.	12 hours
SR 3.3.5.2.2	Perform CHANNEL FUNCTIONAL TEST.	31 days (unit 1) 92 days (unit 2)
SR 3.3.5.2.3	Perform CHANNEL CALIBRATION.	60 days (unit 1) 24 months (unit 2)
SR 3.3.5.2.4	Perform CHANNEL FUNCTIONAL TEST.	92 days
SR 3.3.5.2.5	Perform CHANNEL CALIBRATION.	24 months
SR 3.3.5.2.6	Perform LOGIC SYSTEM FUNCTIONAL TEST.	24 months
SR 3.3.5.2.7	Calibrate the trip unit (unit 2).	92 days

Table 3.3.5.2-1 (page 1 of 1)
Reactor Core Isolation Cooling System Instrumentation

FUNCTION	REQUIRED CHANNELS PER FUNCTION	CONDITIONS REFERENCED FROM REQUIRED ACTION A.1	SURVEILLANCE REQUIREMENTS	ALLOWABLE VALUE
1. Reactor Vessel Water Level – Low Low	4	B	SR 3.3.5.2.1 SR 3.3.5.2.2 SR 3.3.5.2.3 SR 3.3.5.2.6	≥ -56.78 inches (Unit 1) ≥ -55.2 inches (Unit 2)
2. Reactor Vessel Water Level – High	2	C	SR 3.3.5.2.1 SR 3.3.5.2.2 SR 3.3.5.2.3 SR 3.3.5.2.6	≤ 54.23 inches (Unit 1) ≤ 50.34 inches (Unit 2)
3. Contaminated Condensate Storage Tank (CCST) Level – Low	2	D	SR 3.3.5.2.4 SR 3.3.5.2.5 SR 3.3.5.2.6	≥ 598 ft 1 inch
4. Suppression Pool Water Level – High	2	D	SR 3.3.5.2.4 SR 3.3.5.2.5 SR 3.3.5.2.6	≤ 15 ft 11.25 inches
5. Manual Initiation	1	C	SR 3.3.5.2.6	NA

SR 3.3.5.2.7

ATTACHMENT B

Proposed Change to Technical Specifications

MARKED-UP TS PAGES FOR PROPOSED CHANGES

Unit 1 and 2 (Following Q1R17)

3.3.2.2 - 2

3.3.5.1 - 8

3.3.5.1 - 9

3.3.5.1 - 10

3.3.5.1 - 11

3.3.5.1 - 12

3.3.5.1 - 13

3.3.5.2 - 3

3.3.5.2 - 4

SURVEILLANCE REQUIREMENTS

----------NOTE----------
When a channel is placed in an inoperable status solely for performance of required Surveillances, entry into associated Conditions and Required Actions may be delayed for up to 2 hours.

SURVEILLANCE		FREQUENCY
SR 3.3.2.2.1	Perform CHANNEL CHECK.	24 hours
SR 3.3.2.2.2	Perform CHANNEL FUNCTIONAL TEST.	92 days
INSERT		INSERT
SR 3.3.2.2.~~3~~ 4	Perform CHANNEL CALIBRATION. The Allowable Value shall be ≤ ~~84.4~~ 50.34 inches.	~~12~~ 24 months
SR 3.3.2.2.~~4~~ 5	Perform LOGIC SYSTEM FUNCTIONAL TEST, including breaker and valve actuation.	24 months

92 days

SR 3.3.2.2.3 Calibrate the trip unit.

SURVEILLANCE REQUIREMENTS

----------NOTES----------

1. Refer to Table 3.3.5.1-1 to determine which SRs apply for each ECCS Function.

2. When a channel is placed in an inoperable status solely for performance of required Surveillances, entry into associated Conditions and Required Actions may be delayed as follows: (a) for up to 6 hours for Functions 3.c, 3.f, and 3.g; and (b) for up to 6 hours for Functions other than 3.c, 3.f, and 3.g provided the associated Function or the redundant Function maintains ECCS initiation capability.

SURVEILLANCE		FREQUENCY
SR 3.3.5.1.1	Perform CHANNEL CHECK.	12 hours
~~SR 3.3.5.1.2~~	~~Perform CHANNEL FUNCTIONAL TEST.~~	~~31 days~~ Delete
~~SR 3.3.5.1.3~~	~~Perform CHANNEL CALIBRATION.~~	~~60 days~~ Delete
SR 3.3.5.1.~~4~~ 2	Perform CHANNEL FUNCTIONAL TEST.	92 days
SR 3.3.5.1.~~5~~ 3	Calibrate the trip unit.	92 days
SR 3.3.5.1.~~6~~ 4	Perform CHANNEL CALIBRATION.	92 days
SR 3.3.5.1.~~7~~ 5	Perform CHANNEL CALIBRATION.	184 days

(continued)

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.3.5.1.~~8~~ 6 Perform CHANNEL CALIBRATION.	24 months
SR 3.3.5.1.~~9~~ 7 Perform LOGIC SYSTEM FUNCTIONAL TEST.	24 months

Table 3.3.5.1-1 (page 1 of 4)
Emergency Core Cooling System Instrumentation

FUNCTION	APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS	REQUIRED CHANNELS PER FUNCTION	CONDITIONS REFERENCED FROM REQUIRED ACTION A.1	SURVEILLANCE REQUIREMENTS	ALLOWABLE VALUE
1. Core Spray System					
a. Reactor Vessel Water Level – Low Low	1,2,3. 4(a), 5(a)	4(b)	B	SR 3.3.5.1.1 SR 3.3.5.1.2 SR 3.3.5.1.3 SR 3.3.5.1.6	≥ 56/78 inches -55.2
b. Drywell Pressure – High	1,2,3	4(b)	B	SR 3.3.5.1.2 SR 3.3.5.1.4 SR 3.3.5.1.7	≤ 2.43 psig
c. Reactor Steam Dome Pressure – Low (Permissive)	1,2,3	2	C	SR 3.3.5.1.2 SR 3.3.5.1.4 SR 3.3.5.1.7	≥ 306 psig and ≤ 342 psig
	4(a), 5(a)	2	B	SR 3.3.5.1.2 SR 3.3.5.1.4 SR 3.3.5.1.7	≥ 306 psig and ≤ 342 psig
d. Core Spray Pump Discharge Flow – Low (Bypass)	1,2,3. 4(a), 5(a)	1 per pump	E	SR 3.3.5.1.2 SR 3.3.5.1.3 SR 3.3.5.1.6 SR 3.3.5.1.7	≥ 577 gpm and ≤ 830 gpm
e. Core Spray Pump Start – Time Delay Relay	1, 2, 3 4(a), 5(a)	1 per pump	C	SR 3.3.5.1.6 SR 3.3.5.1.7	≤ 11.4 seconds
2. Low Pressure Coolant Injection (LPCI) System					
a. Reactor Vessel Water Level – Low Low	1,2,3. 4(a), 5(a)	4	B	SR 3.3.5.1.1 SR 3.3.5.1.2 SR 3.3.5.1.3 SR 3.3.5.1.6	≥ 56/78 inches -55.2
b. Drywell Pressure – High	1,2,3	4	B	SR 3.3.5.1.2 SR 3.3.5.1.4 SR 3.3.5.1.7	≤ 2.43 psig
c. Reactor Steam Dome Pressure – Low (Permissive)	1,2,3	2	C	SR 3.3.5.1.2 SR 3.3.5.1.4 SR 3.3.5.1.7	≥ 306 psig and ≤ 342 psig
	4(a), 5(a)	2	B	SR 3.3.5.1.2 SR 3.3.5.1.4 SR 3.3.5.1.7	≥ 306 psig and ≤ 342 psig

SR 3.3.5.1.7

(continued)

(a) When associated ECCS subsystem(s) are required to be OPERABLE per LCO 3.5.2, "ECCS – Shutdown."

(b) Also required to initiate the associated diesel generator (DG).

Table 3.3.5.1-1 (page 2 of 4)
Emergency Core Cooling System Instrumentation

FUNCTION	APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS	REQUIRED CHANNELS PER FUNCTION	CONDITIONS REFERENCED FROM REQUIRED ACTION A.1	SURVEILLANCE REQUIREMENTS	ALLOWABLE VALUE
2. LPCI System (continued)					
d. Reactor Steam Dome Pressure – Low (Break Detection)	1,2,3	4	B	SR 3.3.5.1.~~4~~ 2 SR 3.3.5.1.~~7~~ 5 SR 3.3.5.1.~~9~~ 7	≥ 868 psig and ≤ 891 psig
e. Low Pressure Coolant Injection Pump Start – Time Delay Relay Pumps B and D	1,2,3, 4[a], 5[a]	1 per pump	C	SR 3.3.5.1.~~8~~ 6 SR 3.3.5.1.~~9~~ 7	≤ 6.7 seconds
f. Low Pressure Coolant Injection Pump Discharge Flow – Low (Bypass)	1,2,3, 4[a], 5[a]	1 per loop	E	SR 3.3.5.1.~~4~~ 2 SR 3.3.5.1.~~5~~ 3 SR 3.3.5.1.~~8~~ 6 SR 3.3.5.1.~~9~~ 7	≥ 2526 gpm
g. Recirculation Pump Differential Pressure – High (Break Detection)	1, 2, 3	4 per pump	C	SR 3.3.5.1.~~4~~ 2 SR 3.3.5.1.~~8~~ 6 SR 3.3.5.1.~~9~~ 7	≥ 2.3 psid
h. Recirculation Riser Differential Pressure – High (Break Detection)	1, 2, 3	4	C	SR 3.3.5.1.~~4~~ 2 SR 3.3.5.1.~~8~~ 6 SR 3.3.5.1.~~9~~ 7	≤ 2.15 psid
i. Recirculation Pump Differential Pressure Time Delay – Relay (Break Detection)	1, 2, 3	2	C	SR 3.3.5.1.~~8~~ 6 SR 3.3.5.1.~~9~~ 7	≤ 0.82 seconds
j. Reactor Steam Dome Pressure Time Delay – Relay (Break Detection)	1, 2, 3	2	B	SR 3.3.5.1.~~8~~ 6 SR 3.3.5.1.~~9~~ 7	≤ 2.26 seconds
k. Recirculation Riser Differential Pressure Time Delay – Relay (Break Detection)	1, 2, 3	2	C	SR 3.3.5.1.~~8~~ 6 SR 3.3.5.1.~~9~~ 7	≤ 0.82 seconds

(continued)

(a) When associated ECCS subsystem(s) are required to be OPERABLE per LCO 3.5.2.

Table 3.3.5.1-1 (page 3 of 4)
Emergency Core Cooling System Instrumentation

FUNCTION	APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS	REQUIRED CHANNELS PER FUNCTION	CONDITIONS REFERENCED FROM REQUIRED ACTION A.1	SURVEILLANCE REQUIREMENTS	ALLOWABLE VALUE
3. High Pressure Coolant Injection (HPCI) System					
a. Reactor Vessel Water Level – Low Low	1. 2(c), 3(c)	4	B	SR 3.3.5.1.1 SR 3.3.5.1.2 SR 3.3.5.1.3 SR 3.3.5.1.6	≥ ~~-58.78~~ -55.2 inches
b. Drywell Pressure – High	1. 2(c), 3(c)	4	B	SR 3.3.5.1.2 SR 3.3.5.1.4 SR 3.3.5.1.7	≤ 2.43 psig
c. Reactor Vessel Water Level – High	1. 2(c), 3(c)	2	C	SR 3.3.5.1.2 SR 3.3.5.1.3 SR 3.3.5.1.6	≤ ~~54.23 inches~~ 50.34 inches
d. Contaminated Condensate Storage Tank (CCST) Level – Low	1. 2(c), 3(c)	2	D	SR 3.3.5.1.2 SR 3.3.5.1.6 SR 3.3.5.1.7	≥ 598 ft 1 inch
e. Suppression Pool Water Level – High	1. 2(c), 3(c)	2	D	SR 3.3.5.1.2 SR 3.3.5.1.6 SR 3.3.5.1.7	≤ 15 ft 11.25 inches
f. High Pressure Coolant Injection Pump Discharge Flow – Low (Bypass)	1. 2(c), 3(c)	1	E	SR 3.3.5.1.2 SR 3.3.5.1.4 SR 3.3.5.1.7	≥ 634 gpm
g. Manual Initiation	1. 2(c), 3(c)	1	C	SR 3.3.5.1.7	NA
SR 3.3.5.1.7					
4. Automatic Depressurization System (ADS) Trip System A					
a. Reactor Vessel Water Level – Low Low	1. 2(c), 3(c)	2	F	SR 3.3.5.1.1 SR 3.3.5.1.2 SR 3.3.5.1.3 SR 3.3.5.1.6	≥ ~~-56.18~~ -55.2 inches
b. Drywell Pressure – High	1. 2(c), 3(c)	2	F	SR 3.3.5.1.2 SR 3.3.5.1.4 SR 3.3.5.1.7	≤ 2.43 psig
c. Automatic Depressurization System Initiation Timer	1. 2(c), 3(c)	1	G	SR 3.3.5.1.6 SR 3.3.5.1.7	≤ 119 seconds

(continued)

(c) With reactor steam dome pressure > 150 psig.

Table 3.3.5.1-1 (page 4 of 4)
Emergency Core Cooling System Instrumentation

FUNCTION	APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS	REQUIRED CHANNELS PER FUNCTION	CONDITIONS REFERENCED FROM REQUIRED ACTION A.1	SURVEILLANCE REQUIREMENTS	ALLOWABLE VALUE
4. ADS Trip System A (continued)					
d. Core Spray Pump Discharge Pressure – High	1. 2(c), 3(c)	2	G	SR 3.3.5.1.2 SR 3.3.5.1.4 SR 3.3.5.1.7	≥ 101.9 psig and ≤ 148.1 psig
e. Low Pressure Coolant Injection Pump Discharge Pressure – High	1. 2(c), 3(c)	4	G	SR 3.3.5.1.2 SR 3.3.5.1.4 SR 3.3.5.1.7	≥ 101.6 psig and ≤ 148.4 psig
f. Automatic Depressurization System Low Low Water Level Actuation Timer	1. 2(c), 3(c)	1	G	SR 3.3.5.1.6 SR 3.3.5.1.7	≤ 530 seconds
5. ADS Trip System B					
a. Reactor Vessel Water Level – Low Low	1. 2(c), 3(c)	2	F	SR 3.3.5.1.1 SR 3.3.5.1.2 SR 3.3.5.1.3 SR 3.3.5.1.6	≥ ~~-86.78~~ -55.2 inches
b. Drywell Pressure – High	1. 2(c), 3(c)	2	F	SR 3.3.5.1.2 SR 3.3.5.1.4 SR 3.3.5.1.7	≤ 2.43 psig
c. Automatic Depressurization System Initiation Timer	1. 2(c), 3(c)	1	G	SR 3.3.5.1.6 SR 3.3.5.1.7	≤ 119 seconds
d. Core Spray Pump Discharge Pressure – High	1. 2(c), 3(c)	2	G	SR 3.3.5.1.2 SR 3.3.5.1.4 SR 3.3.5.1.7	≥ 101.9 psig and ≤ 148.1 psig
e. Low Pressure Coolant Injection Pump Discharge Pressure – High	1. 2(c), 3(c)	4	G	SR 3.3.5.1.2 SR 3.3.5.1.4 SR 3.3.5.1.7	≥ 101.6 psig and ≤ 148.4 psig
f. Automatic Depressurization System Low Low Water Level Actuation Timer	1. 2(c), 3(c)	1	G	SR 3.3.5.1.6 SR 3.3.5.1.7	≤ 530 seconds

SR 3.3.5.1.7

(c) With reactor steam dome pressure > 150 psig.

SURVEILLANCE REQUIREMENTS

----------NOTES----------

1. Refer to Table 3.3.5.2-1 to determine which SRs apply for each RCIC Function.

2. When a channel is placed in an inoperable status solely for performance of required Surveillances, entry into associated Conditions and Required Actions may be delayed as follows: (a) for up to 6 hours for Functions 2 and 5; and (b) for up to 6 hours for Functions 1, 3, and 4 provided the associated Function maintains RCIC initiation capability.

SURVEILLANCE	FREQUENCY
SR 3.3.5.2.1 Perform CHANNEL CHECK.	12 hours
~~SR 3.3.5.2.2 Perform CHANNEL FUNCTIONAL TEST.~~	~~31 days~~ Delete
SR 3.3.5.2.~~2~~ 2 ~~Perform CHANNEL CALIBRATION.~~	~~60~~ 92 days
SR 3.3.5.2.~~4~~ 3 Perform CHANNEL FUNCTIONAL TEST.	92 days
SR 3.3.5.2.~~5~~ 4 Perform CHANNEL CALIBRATION.	24 months
SR 3.3.5.2.~~6~~ 5 Perform LOGIC SYSTEM FUNCTIONAL TEST.	24 months

Calibrate the trip unit

Table 3.3.5.2-1 (page 1 of 1)
Reactor Core Isolation Cooling System Instrumentation

FUNCTION	REQUIRED CHANNELS PER FUNCTION	CONDITIONS REFERENCED FROM REQUIRED ACTION A.1	SURVEILLANCE REQUIREMENTS	ALLOWABLE VALUE
1. Reactor Vessel Water Level – Low Low	4	B	SR 3.3.5.2.1 SR 3.3.5.2.2 SR 3.3.5.2.3 SR 3.3.5.2.6	≥ ~~-56.78~~ inches -55.2
2. Reactor Vessel Water Level – High	2	C	SR 3.3.5.2.1 SR 3.3.5.2.2 SR 3.3.5.2.3 SR 3.3.5.2.6	≤ ~~64.23~~ inches 50.34
3. Contaminated Condensate Storage Tank (CCST) Level – Low	2	D	SR 3.3.5.2.4 SR 3.3.5.2.5 SR 3.3.5.2.6	≥ 598 ft 1 inch
4. Suppression Pool Water Level – High	2	D	SR 3.3.5.2.4 SR 3.3.5.2.5 SR 3.3.5.2.6	≤ 15 ft 11.25 inches
5. Manual Initiation	1	C	SR 3.3.5.2.6	NA

SR 3.3.5.2.7

INFORMATION SUPPORTING A FINDING OF NO SIGNIFICANT HAZARDS CONSIDERATION

According to 10 CFR 50.92, "Issuance of amendment," paragraph (c), a proposed amendment to an operating license involves no significant hazards consideration if operation of the facility in accordance with the proposed amendment would not:

> Involve a significant increase in the probability or consequences of an accident previously evaluated; or
>
> Create the possibility of a new or different kind of accident from any accident previously evaluated; or
>
> 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.

Exelon Generating Company (EGC), LLC, is requesting changes to the Technical Specifications (TS) to support a planned upgrade to the reactor water level instrumentation. Currently, many low-level actuation functions use Yarway level indicating switches. This includes Emergency Core Cooling (ECCS), Reactor Core Isolation Cooling (RCIC) and Feedwater systems. The Yarways will be replaced with more reliable analog level transmitters and additional electronic trip units. The upgrade will provide sensing devices for reactor vessel water level signals and indication that are more reliable with less drift and will require less frequent surveillance requirements. The proposed changes align the TS Surveillance Requirements with the instrumentation upgrades. This includes changes to calibration frequencies, functional testing and allowable values.

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

During the upcoming refueling outages at Quad Cities Nuclear Power Station (Unit 1 and Unit 2), a design change will be implemented that upgrades the existing reactor vessel level trip instrumentation used in various applications at Quad Cities Nuclear Power Station, including the Emergency Core Cooling System (ECCS), Reactor Core Isolation Cooling System (RCIC) and Feedwater systems.

Technical Specification (TS) requirements that govern operability or routine testing of plant instruments are not assumed to be initiators of any analyzed event because these instruments are intended to prevent, detect, or mitigate accidents. Therefore, these changes will not involve an increase in the probability of occurrence of an accident previously evaluated. Additionally, these changes will not increase the consequences of an accident previously evaluated because the proposed change does not adversely impact structures, systems, or components (SSCs). The planned instrument upgrade is a more reliable design than existing equipment. The proposed TS change maintains existing requirements that ensure components are operable when necessary for the prevention or mitigation of accidents or transients. Revised allowable values for the associated functions have been

established in accordance with EGC's setpoint methodology, which is consistent with industry standards. The setpoint methodology establishes TS allowable values that assure systems structures and components (including initiation and trip functions) respond in a manner consistent with the plant safety analysis. Furthermore, there will be no change in the types or significant increase in the amounts of any effluents released offsite. For these reasons, the proposed changes do not involve a significant increase in the probability or consequences of an accident previously evaluated.

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

The proposed changes support a planned instrumentation upgrade. The change provides revised Surveillance Requirements to ensure operability. The change does not adversely impact the manner in which the instrument will operate under normal and abnormal operating conditions. These changes reflect the improved performance of the instrumentation upgrade and provide an equivalent level of safety. The changes in methods governing normal plant operation are consistent with the current safety analysis assumptions. Therefore, these changes will not create the possibility of a new or different kind of accident from any accident previously evaluated

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

The proposed change supports a planned instrumentation upgrade. The proposed change does not affect the probability of failure or availability of the affected instrumentation. The change to an analog trip system to monitor reactor vessel level provides for increased reliability. The change has no impact on the underlying design functions. The proposed TS surveillance requirements are consistent with current TS requirements for functions that employ analog trip unit devices. The proposed allowable values have been established in accordance with *EGC's* setpoint methodology, which considers instrument design and performance characteristics. The methodology establishes TS allowable values with sufficient margin to assure that the plant safety analysis assumptions (e.g., certain initiation and trip functions) are maintained. As such, the trip and actuation functions continue to ensure design basis requirements are maintained. Therefore, it is concluded that the proposed changes will not result in a reduction in the margin of safety.

Conclusion
For the reasons stated above, we have concluded that the three criteria of 10 CFR 50.92(c) are satisfied and that the proposed changes to the TS involve no significant hazards consideration.

ATTACHMENT D

INFORMATION SUPPORTING AN ENVIRONMENTAL ASSESSMENT

Exelon Generating Company (EGC), LLC, has evaluated this proposed change against the criteria for identification of licensing and regulatory actions requiring environmental assessment in accordance with 10 CFR 51.21, "Criteria for identification of licensing and regulatory actions requiring environmental assessments." EGC has determined that this proposed change meets the criteria for a categorical exclusion set forth in 10 CFR 51.22(c)(9), "Criterion for categorical exclusion; identification of licensing and regulatory actions eligible for categorical exclusion or otherwise not requiring environmental review," and as such, has determined that no irreversible consequences exist in accordance with 10 CFR 50.92, "Issuance of amendment," paragraph (b). This determination is based on the fact that this change is being proposed as an amendment to a license issued pursuant to 10 CFR 50, "Domestic Licensing of Prodution and Utilization Facilities," which changes 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 that changes an inspection or a surveillance requirement, and the amendment meets the following specific criteria:

(i) The amendment involves no significant hazards consideration.

As demonstrated in Attachment C, this proposed amendment does not involve a significant hazards consideration.

(ii) There is no significant change in the types or significant increase in the amounts of any effluent that may be released offsite.

The proposed change does not allow for an increase in the unit power level, does not increase the production, nor alter the flow path or method of disposal of radioactive waste or byproducts. Therefore, the proposed change does not affect actual unit effluents.

(iii) There is no significant increase in individual or cumulative occupational radiation exposure.

The proposed change will not result in changes in the operation of the facility. There will be no change in the level of controls or methodology used for processing of radioactive effluents or handling of solid radioactive waste. The proposed change will not result in any change in the normal radiation levels within the plant. Therefore, there will be no increase in individual or cumulative occupational radiation exposure resulting from this change.