

RS-03-038

March 28, 2003

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

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

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 Amendment to Technical Specifications for Main Steam Line Low Pressure Isolation Function

In accordance with 10 CFR 50.90, "Application for amendment of license or construction permit," Exelon Generation Company, LLC (EGC) requests an amendment to the Technical Specifications (TS) for the Facility Operating Licenses listed above. The proposed change revises the allowable value for the Main Steam Line (MSL) Pressure – Low Function of the Primary Containment Isolation System (PCIS) Instrumentation at Dresden Nuclear Power Station (DNPS), Units 2 and 3, and Quad Cities Nuclear Power Station (QCNPS), Units 1 and 2.

EGC requests approval of the proposed amendments by January 14, 2004. Once approved, the amendments shall be implemented within 60 days. This implementation period will provide adequate time for the setpoint and affected station documents to be revised using the appropriate change control mechanisms.

The attachments to this letter provide information supporting this proposed change and are arranged as follows.

1. Attachment 1 provides a description and safety analysis of the proposed change, our evaluation supporting a finding of no significant hazards, and information regarding an Environmental Assessment.
2. Attachment 2 includes the applicable TS pages marked-up with the proposed changes indicated.
3. Attachment 3 contains the revised TS pages including the proposed changes.

APO1

4. Attachment 4 contains the GE proprietary report supporting the proposed changes and affidavit supporting withholding from public disclosure.
5. Attachment 5 contains the GE non-proprietary report supporting the proposed changes.

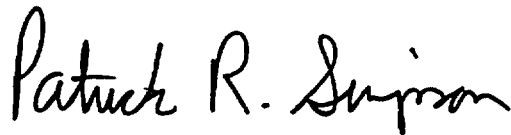
Attachment 4 contains GE proprietary information and is furnished to EGC in confidence. Because these reports contain privileged and confidential trade secrets, they are exempt from disclosure in accordance with 10 CFR 2.790(a)(4), "Public inspections, exemptions, requests for withholding."

The proposed changes have been reviewed by the Plant Operations Review Committees at each of the stations and approved by the respective Nuclear Safety Review Boards in accordance with the requirements of the EGC Quality Assurance Program.

In accordance with 10 CFR 50.91(b), "Notice for public comment; State consultation," EGC is notifying the State of Illinois of this application for changes to the TS 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 Mr. Thomas G. Roddey at (630) 657-2811.

Respectfully,



Patrick R. Simpson
Manager - Licensing
Mid-West Regional Operating Group

- Attachments:
- Notarized Affidavit
 - Attachment 1: Description of Proposed Changes, Technical Analysis, and Regulatory Analysis
 - Attachment 2: Markup of Technical Specification Pages for Proposed Changes
 - Attachment 3: Retyped Technical Specification Pages for Proposed Changes
 - Attachment 4: GE Proprietary Report for Dresden Nuclear Power Station, Units 2 and 3, and Quad Cities Nuclear Power Station, Units 1 and 2
 - Attachment 5: GE Non-Proprietary Report for Dresden Nuclear Power Station, Units 2 and 3, and Quad Cities Nuclear Power Station, Units 1 and 2

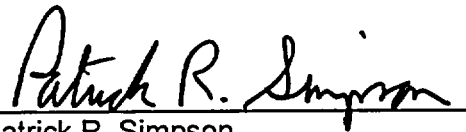
cc: Regional Administrator - NRC Region III
NRC Senior Resident Inspector - Dresden Nuclear Power Station
NRC Senior Resident Inspector - Quad Cities Nuclear Power Station
Office of Nuclear Facility Safety - Illinois Department of Nuclear Safety

STATE OF ILLINOIS)
COUNTY OF DUPAGE)
IN THE MATTER OF)
EXELON GENERATION COMPANY, LLC) Docket Numbers
DRESDEN NUCLEAR POWER STATION, UNITS 2 AND 3) 50-237 and 50-249
QUAD CITIES NUCLEAR POWER STATION, UNITS 1 AND 2) 50-254 and 50-265

SUBJECT: Request for Amendment to Technical Specifications for Main Steam Line Low Pressure Isolation Function

AFFIDAVIT

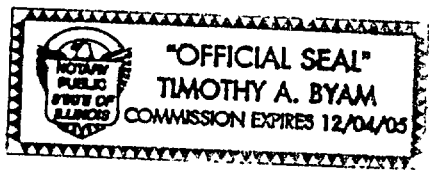
I affirm that the content of this transmittal is true and correct to the best of my knowledge, information and belief.

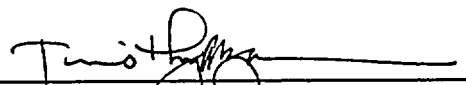

Patrick R. Simpson
Manager - Licensing
Mid-West Regional Operating Group

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

for the State above named, this 28th day of

March, 2003.




Notary Public

Attachment 1

Description of Proposed Changes, Technical Analysis, and Regulatory Analysis

Subject: Main Steam Line (MSL) Pressure – Low Function of Technical Specifications (TS) Section 3.3.6.1, "Primary Containment Isolation Instrumentation," at Dresden Nuclear Power Station, Units 2 and 3, and Quad Cities Nuclear Power Station, Units 1 and 2.

- 1.0 DESCRIPTION
- 2.0 PROPOSED CHANGE
- 3.0 BACKGROUND
- 4.0 TECHNICAL ANALYSIS
- 5.0 REGULATORY ANALYSIS
 - 5.1 No Significant Hazards Consideration
 - 5.2 Applicable Regulatory Requirements/Criteria
- 6.0 ENVIRONMENTAL CONSIDERATION
- 7.0 REFERENCES

Attachment 1

Description of Proposed Changes, Technical Analysis, and Regulatory Analysis

1. DESCRIPTION

This letter is a request to amend Operating License Nos. DPR-19 and DPR-25 for Dresden Nuclear Power Station (DNPS), Units 2 and 3, and Operating License Nos. DPR-29 and DPR-30 for Quad Cities Nuclear Power Station (QCNPS), Units 1 and 2.

The proposed changes would revise the allowable value for the Main Steam Line (MSL) Pressure – Low Function of the Primary Containment Isolation System (PCIS) Instrumentation. The purpose of the proposed change is to prevent spurious isolation of the primary containment during turbine stop valve (TSV) testing.

EGC requests approval of the proposed changes by January 14, 2004, with a 60-day implementation period.

2. PROPOSED CHANGE

The proposed changes are as follows.

For DNPS, Units 2 and 3, and QCNPS, Units 1 and 2, this change request proposes to lower the TS allowable value for the MSL pressure switches of TS Table 3.3.6.1-1, "Primary Containment Isolation Instrumentation," Function 1.b, from 831 psig to 791 psig.

In summary, the proposed changes would reduce the possibility of reaching the main steam line (MSL) low pressure isolation setpoint (LPIS) during normal plant surveillances.

EGC has reviewed the proposed changes and verified that there is no impact on previous submittals awaiting NRC approval.

3. BACKGROUND

For DNPS, Units 2 and 3, and QCNPS, Units 1 and 2, Extended Power Uprate (EPU) reduced turbine throttle pressure from approximately 950 psig to approximately 912 psig. As a result, TSV testing reduces the margin to the MSL LPIS.

The LPIS was analyzed by GE during the EPU project for impact on safety limits and safety margins and determined to be a non-impacted item. EGC performed a review to confirm that the reduced turbine throttle pressure would not affect the post transient margin to this isolation. There was no further analysis of the effects of EPU implementation on the MSL LPIS and its impact during turbine valve testing configurations.

On May 30, 2002, DNPS experienced a Primary Containment Isolation System (PCIS) 1/2 Group 1 isolation during TSV testing. The valve closed to 90%, and then fast closed the remaining 10% as required. When the operator released the push button, the valve reopened and the 1/2 Group 1 isolation signal was generated. With the reduced margin to the LPIS, the pressure decrease resulting from reopening of the TSV caused pressure to momentarily decrease to near the LPIS.

Attachment 1

Description of Proposed Changes, Technical Analysis, and Regulatory Analysis

Given that normal turbine throttle pressure has been lowered, EGC desires to lower the setpoint for the MSL pressure switches that provide the PCIS isolation function at DNPS and QCNPS. A change to the allowable value contained in TS Table 3.3.6.1-1, Function 1.b, is required to implement the setpoint change.

GE Service Information Letter (SIL) No. 130, "Main Steam Line Low Pressure Isolation Limit Change," dated March 31, 1975, recommended lowering the MSL LPIS and provided justification for a revision to TS. GE explained that the noise level of the MSL pressure switch hydraulic lines, or small pressure transients in the main steam lines, might initiate reactor isolation and a resulting scram. An analysis was performed to determine that the limiting safety setting could be safely lowered to 825 psig. DNPS and QCNPS revised their TS to correspond to the new analytical limit. Both facilities installed time delay relays in their isolation logic circuitry to mitigate potential isolations caused by pressure perturbations.

Further guidance in the SIL suggested establishing an operational limit of no more than 100 psi below turbine inlet pressure, and a nominal instrument setpoint of at least 25 psi above the safety limit. Due to the performance characteristics of the installed instruments, the facilities could not provide for the 100 psi margin between the safety limit and turbine inlet pressure. However, operational limits were established that satisfied the 25 psi margin between the analytical limit and the operational setpoint. At this combination of analytical limit, plant configuration and nominal operational setpoint, DNPS and QCNPS did not experience spurious isolations prior to EPU operation.

4. TECHNICAL ANALYSIS

GE performed an evaluation of the impact of lowering the MSL pressure switch isolation function analytical limit from 825 psig to 785 psig for DNPS, Units 2 and 3, and QCNPS, Units 1 and 2. The evaluation considered impact on ATWS, transient, and accident analyses and on application of the GE Critical Quality Correlation at lower pressures. Impact on equipment out of service evaluations were included. The evaluation is contained in Attachments 4 and 5.

Based upon the results of the GE evaluation, it is concluded that current licensing bases events remain bounding for ATWS, transient, and accident analyses. Also, the revised analytical limit falls within the Safety Limit Minimum Critical Power Ratio design basis parameters and is acceptable.

The EGC methodology submitted in Reference 1 was used to establish the proposed TS allowable values. The NRC approved this methodology in Reference 2.

5. REGULATORY ANALYSIS

5.1 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:

Attachment 1

Description of Proposed Changes, Technical Analysis, and Regulatory Analysis

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

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

For Dresden Nuclear Power Station (DNPS), Units 2 and 3, and Quad Cities Nuclear Power Station (QCNPS), Units 1 and 2, this change request proposes to lower the Technical Specifications (TS) allowable value for the main steam line (MSL) pressure switches of TS Table 3.3.6.1-1, "Primary Containment Isolation Instrumentation," Function 1.b, from 831 psig to 791 psig.

MSL break and other safety events were evaluated for the impact of reducing the Main Steam Isolation Valve (MSIV) closure Low Pressure Isolation Setpoint (LPIS). The accidents evaluated were the Emergency Core Cooling System – Loss of Coolant Accident (ECCS-LOCA) performance, containment system response, subcompartment pressurization, 10 CFR 50 Appendix R fire protection, station blackout, high energy line breaks, and the radiological consequences resulting from the pipe break accidents.

Based on these evaluations, it was concluded that a reduction in the MSIV LPIS would not have an adverse impact on plant accident analyses, on plant system response to accidents, or on the radiological consequences of such events.

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

Response: No

Current licensing bases events remain bounding for ATWS, transient, and accident analyses. For the bounding events, a reduction in the allowable value for the MSL LPIS produces no significant change in the limiting results with respect to the acceptance criteria. The proposed change does not alter the response of plant equipment to transient conditions, nor does it introduce any new equipment, modes of system operation or failure mechanisms. The proposed change does not adversely impact structures, systems, or components.

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

Attachment 1

Description of Proposed Changes, Technical Analysis, and Regulatory Analysis

ECCS-LOCA Performance

In the analyses used to evaluate the ECCS-LOCA performance, the MSIVs are assumed to close at the start of the accident for all break locations. Therefore, the low pressure isolation trip is not used in the LOCA analyses and the LOCA analysis results are not affected by the reduction in the LPIS.

For large breaks in the MSL (both inside and outside containment), the MSIV closure is initiated by a high steam line flow signal at the beginning of the event, well before the LPIS is reached. For these cases, the ECCS performance is not affected by the reduction in the LPIS.

If the steam line break is too small to result in a high flow isolation signal, MSIV closure may be initiated by another signal (e.g., high steam line tunnel temperature or low reactor water level) or it may occur due to the LPIS trip. In either case, steam line breaks of any size are not the limiting events with respect to ECCS performance, and a 40 psi reduction in the LPIS will not affect compliance with the acceptance criteria of 10 CFR 50.46, "Acceptance criteria for emergency core cooling systems for light-water nuclear power reactors."

Based on the above discussions, the reduction of the MSIV LPIS has no adverse impact on the plant response to a LOCA or on compliance with the acceptance criteria of 10 CFR 50.46.

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

Containment System Response

In evaluating containment response to pipe breaks inside containment, the MSIVs are assumed to close at the start of the accident for all break locations in the containment system response analyses. Therefore, the low pressure isolation trip is not assumed and the analysis results are not affected by the reduction in the LPIS.

In the event that MSIV closure does not occur at the beginning of the accident, MSL isolation is effectively achieved as the pressure regulator closes the turbine control and bypass valves in an attempt to maintain turbine throttle pressure at the regulator setpoint of approximately 925 psig. Thus, for events other than breaks in the main steam line, isolation occurs before the LPIS is reached.

For large breaks in the MSL (both inside and outside containment), the MSIV closure is initiated by a high steam line flow signal at the beginning of the event, well before the LPIS is reached. For these cases, the containment system response is not affected by the reduction in the LPIS. For a steam line break too small to result in a high flow isolation signal, MSIV closure may be initiated by another signal (e.g., low reactor water level) or it may occur due to the LPIS trip. Small breaks do not determine the peak drywell shell temperature and equipment qualification (EQ) envelope. Large breaks, as characterized in Section 3.3.2 of Attachment 4, are large enough to depressurize the reactor irrespective of the MSIV closure. Hence, a 40-psi reduction in the LPIS will not affect the peak drywell shell temperature or the drywell temperature EQ envelope.

Attachment 1

Description of Proposed Changes, Technical Analysis, and Regulatory Analysis

Based on the above discussions, the reduction of the MSIV LPIS has no adverse impact on the containment system response.

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

Subcompartment Pressurization

The MSL break mass and energy release used in the evaluation are based on steady-state reactor operating conditions. Therefore, the low pressure isolation trip is not used in the subcompartment pressurization analysis. In addition, the peak annulus pressurization loads occur at the beginning of the event, well before MSIV closure can occur.

The subcompartment pressurization results are not affected by the reduction in the MSL LPIS.

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

Appendix R Fire Protection

The reactor system response for the Appendix R fire protection analysis was performed during the Extended Power Uprate (EPU) project. The sequence of events for the analysis shows that closure of the MSIVs is initiated on low-low reactor water level. However, before the LPIS setpoint is reached, the turbine control valves closing on low inlet pressure effectively isolate steam flow following a scram. The revised LPIS has no adverse impact on the reactor system response to an Appendix R fire protection event.

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

Station Blackout

The initiating event for a station blackout, a loss of off-site power, results in MSIV closure at the beginning of the event. The reduction of the MSL LPIS has no adverse impact on the reactor system response during a station blackout.

Therefore, the proposed change does not involve a significant increase in the probability or consequences of a previously evaluated station blackout event.

High Energy Line Break

The steam line break analysis assumes closure of the MSIVs due to high steam line flow at the beginning of the event. Thus, the low pressure isolation trip is not used in the analyses and the results are not adversely affected by the reduced LPIS.

The steam line break case determines the short-term peak steam tunnel temperature. However, the range of break sizes for which the low pressure isolation trip initiates MSIV

Attachment 1

Description of Proposed Changes, Technical Analysis, and Regulatory Analysis

closure is limited. Such a break must be large enough to depressurize the vessel below the pressure regulator setpoint, approximately 925 psig, but small enough such that high steam line flow trip does not result. Although such cases could result in an increase in the mass and energy released, similar to a larger line break, isolation will still occur before the LPIS is reached. The isolation will occur as a result of Main Steam Line Tunnel Temperature – High for any leak greater than 1% rated steam flow. Thus, a 40 psig reduction in the LPIS will not adversely affect the peak temperature in the steam tunnel. In addition, the dynamic effects (e.g., pipe whip and jet impingement) on other structures, systems and components are unaffected by the reduced LPIS.

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

Radiological Consequences

The MSIVs are assumed to close due to high steam line flow at the start of an accident in the analysis. The low pressure isolation trip is not used in the mass release analysis and the radiological consequences are not affected by the reduction of the LPIS.

If the steam line break is too small to cause a high flow isolation signal, MSIV closure may be initiated by another signal (e.g., high steam tunnel temperature or low reactor water level) or it may result from the low pressure isolation trip. Thus, a 40 psig reduction in the LPIS will have no adverse impact on the radiological consequences. The radiological consequences of a reduction in the MSL LPIS are addressed further in Section 6 of this attachment.

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

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

Response: No

General Electric Company (GE) evaluated the impact of reducing the LPIS analytical limit from 825 to 785 psig, including analysis of transient and safety related licensing bases for DNPS, Units 2 and 3, and QCNPS, Units 1 and 2. Current licensing bases events remain bounding for ATWS, transient, and accident analyses. The proposed change revises the allowable value of TS Table 3.3.6.1-1, Function 1.b, but does not alter the instrumentation or control logic of the Primary Containment Isolation System.

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

Attachment 1

Description of Proposed Changes, Technical Analysis, and Regulatory Analysis

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

Response: No

The revised LPIS does not change the current licensing bases events, which remain bounding for ATWS, transient and accident analyses. The conclusion that a reduction in the MSIV LPIS will not have an adverse impact on plant accident analyses is valid. The LPIS was analyzed by GE during the EPU project for impact on safety limits and safety margins and was determined to be a non-impacted item.

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

Conclusion

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

5.2 Applicable Regulatory Requirements/Criteria

Low MSL pressure indicates a potential problem with turbine regulation that could result in a low reactor vessel water level condition and the reactor pressure vessel exceeding the TS allowable cooldown rate of 100°F per hour if the pressure loss is allowed to continue. The MSL Pressure – Low Function is directly assumed in the analysis of a pressure regulator failure open accident. For this event with the revised 785 psig LPIS analytical limit, MSIV closure provides assurance that the reactor pressure vessel TS cooldown limit is not exceeded.

A secondary design basis for the LPIS is to meet the requirement of the Safety Limit Minimum Critical Power Ratio.

Therefore, the MSL Pressure – Low Function must be included in the DNPS and QCNPS TS in accordance with 10 CFR 50.36(c)(2)(ii), "Limiting conditions for operation."

6. ENVIRONMENTAL CONSIDERATION

EGC has evaluated these proposed changes in accordance with 10 CFR 51.21, "Criteria for and identification of licensing and regulatory actions requiring environmental assessments." EGC has determined that these proposed changes meet the criteria for a categorical exclusion concurrent with 10 CFR 51.22, "Criterion for categorical exclusion identification of licensing and regulatory actions eligible for categorical exclusion or otherwise not requiring environmental review," paragraph (c)(9). As such, no irreversible consequences exist in accordance with 10 CFR 50.92, "Issuance of amendment," paragraph (b). This determination is based on the fact that these changes are being proposed as an amendment to a license issued in accordance with 10 CFR 50, "Domestic Licensing of Production 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," and the amendment meets the following specific criteria.

Attachment 1

Description of Proposed Changes, Technical Analysis, and Regulatory Analysis

- (1) The proposed changes involve no significant hazards consideration.**

As demonstrated in Section 5.1, the proposed changes do not involve a significant hazards consideration.

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

The impact of reducing the LPIS analytical limit from 825 to 785 psig was evaluated, including analysis of transient and safety related licensing bases for DNPS, Units 2 and 3, and QCNS, Units 1 and 2. Current licensing bases events remain bounding for ATWS, transient, and accident analyses. There will be no significant increase in the amounts of any effluents released offsite. The proposed changes do not result in an increase in power level, do not increase the production, nor alter the flow path or method of disposal of radioactive waste or byproducts.

Therefore, the proposed change will not affect the types or increase the amounts of any effluents released offsite.

- (3) There is no significant increase in individual or cumulative occupational radiation exposure.**

The proposed change will not result in functional changes in the configuration 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, nor will the proposal 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.

7. REFERENCES

1. Letter from R. M. Krich (Commonwealth Edison Company) to U. S. NRC, "Request for Technical Specifications Changes to Dresden Nuclear Power Station, Units 2 and 3, LaSalle County Station, Units 1 and 2, and Quad Cities Nuclear Power Station, Units 1 and 2, to Implement Improved Standard Technical Specifications," dated March 3, 2000
2. Letter from U. S. NRC to O. D. Kingsley (Exelon Generation Company, LLC), "Issuance of Amendments," dated March 30, 2001

Attachment 2

Markup of Technical Specification Pages for Proposed Changes

REVISED TS PAGE

3.3.6.1-5 (Dresden 2 and 3)
3.3.6.1-5 (Quad Cities 1 and 2)

Primary Containment Isolation Instrumentation
3.3.6.1

Table 3.3.6.1-1 (page 1 of 3)
Primary Containment Isolation Instrumentation

FUNCTION	APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS	REQUIRED CHANNELS PER TRIP SYSTEM	CONDITIONS REFERENCED FROM REQUIRED ACTION C.1	SURVEILLANCE REQUIREMENTS	ALLOWABLE VALUE
1. Main Steam Line Isolation					
a. Reactor Vessel Water Level-Low Low	1,2,3	2	D	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.3 SR 3.3.6.1.6 SR 3.3.6.1.7	≥ -56.34 inches
b. Main Steam Line Pressure-Low	1	2	E	SR 3.3.6.1.2 SR 3.3.6.1.4 SR 3.3.6.1.7	≥ 831 psig
c. Main Steam Line Pressure-Timer		2	E	SR 3.3.6.1.2 SR 3.3.6.1.6 SR 3.3.6.1.7	≤ 0.280 seconds (Unit 2) ≤ 0.236 seconds (Unit 3)
d. Main Steam Line Flow-High	1,2,3	2 per MSL	D	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.4 SR 3.3.6.1.7	≤ 259.2 psid (Unit 2) ≤ 252.6 psid (Unit 3)
e. Main Steam Line Tunnel Temperature-High	1,2,3	2 per trip string	D	SR 3.3.6.1.5 SR 3.3.6.1.6 SR 3.3.6.1.7	≤ 200°F
2. Primary Containment Isolation					
a. Reactor Vessel Water Level-Low	1,2,3	2	G	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.3 SR 3.3.6.1.6 SR 3.3.6.1.7	≥ 2.65 inches
b. Drywell Pressure-High	1,2,3	2	G	SR 3.3.6.1.2 SR 3.3.6.1.4 SR 3.3.6.1.7	≤ 1 94 psig
c. Drywell Radiation-High	1,2,3	1	F	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.6 SR 3.3.6.1.7	≤ 77 R/hr

(continued)

Primary Containment Isolation Instrumentation
3.3.6.1

Table 3.3.6.1-1 (page 1 of 3)
Primary Containment Isolation Instrumentation

FUNCTION	APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS	REQUIRED CHANNELS PER TRIP SYSTEM	CONDITIONS REFERENCED FROM REQUIRED ACTION C 1	SURVEILLANCE REQUIREMENTS	ALLOWABLE VALUE
1. Main Steam Line Isolation					
a. Reactor Vessel Water Level-Low Low	1,2,3	2	D	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.3 SR 3.3.6.1.6 SR 3.3.6.1.7	≥ -55.2 inches
b. Main Steam Line Pressure-Low	1	2	E	SR 3.3.6.1.2 SR 3.3.6.1.4 SR 3.3.6.1.7	≥ 831 psig
c. Main Steam Line Pressure-Timer	1	2	E	SR 3.3.6.1.2 SR 3.3.6.1.6 SR 3.3.6.1.7	≤ 0.331 seconds
d. Main Steam Line Flow-High	1,2,3	2 per MSL	D	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.6 SR 3.3.6.1.7	≤ 254.3 psid
e. Main Steam Line Tunnel Temperature-High	1,2,3	2 per trip string	D	SR 3.3.6.1.5 SR 3.3.6.1.6 SR 3.3.6.1.7	≤ 198°F
2. Primary Containment Isolation					
a. Reactor Vessel Water Level-Low	1,2,3	2	G	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.3 SR 3.3.6.1.6 SR 3.3.6.1.7	≥ 3.8 inches
b. Drywell Pressure-High	1,2,3	2	G	SR 3.3.6.1.2 SR 3.3.6.1.4 SR 3.3.6.1.7	≤ 2.43 psig
c. Drywell Radiation-High	1,2,3	1	F	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.6 SR 3.3.6.1.7	≤ 70 R/hr

(continued)

791

Attachment 3

Retyped Technical Specification Pages for Proposed Changes

REVISED TS PAGE

3.3.6.1-5 (Dresden 2 and 3)
3.3.6.1-5 (Quad Cities 1 and 2)

Primary Containment Isolation Instrumentation
3.3.6.1

Table 3.3.6.1-1 (page 1 of 3)
Primary Containment Isolation Instrumentation

FUNCTION	APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS	REQUIRED CHANNELS PER TRIP SYSTEM	CONDITIONS REFERENCED FROM REQUIRED ACTION C.1	SURVEILLANCE REQUIREMENTS	ALLOWABLE VALUE
1. Main Steam Line Isolation					
a. Reactor Vessel Water Level-Low	1,2,3	2	D	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.3 SR 3.3.6.1.6 SR 3.3.6.1.7	≥ -56.34 inches
b. Main Steam Line Pressure-Low	1	2	E	SR 3.3.6.1.2 SR 3.3.6.1.4 SR 3.3.6.1.7	≥ 791 psig
c. Main Steam Line Pressure-Timer		2	E	SR 3.3.6.1.2 SR 3.3.6.1.6 SR 3.3.6.1.7	≤ 0.280 seconds (Unit 2) ≤ 0.236 seconds (Unit 3)
d. Main Steam Line Flow-High	1,2,3	2 per MSL	D	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.4 SR 3.3.6.1.7	≤ 259.2 psid (Unit 2) ≤ 252.6 psid (Unit 3)
e. Main Steam Line Tunnel Temperature-High	1,2,3	2 per trip string	D	SR 3.3.6.1.5 SR 3.3.6.1.6 SR 3.3.6.1.7	≤ 200°F
2. Primary Containment Isolation					
a. Reactor Vessel Water Level-Low	1,2,3	2	G	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.3 SR 3.3.6.1.6 SR 3.3.6.1.7	≥ 2.65 inches
b. Drywell Pressure-High	1,2,3	2	G	SR 3.3.6.1.2 SR 3.3.6.1.4 SR 3.3.6.1.7	≤ 1.94 psig
c. Drywell Radiation-High	1,2,3	1	F	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.6 SR 3.3.6.1.7	≤ 77 R/hr

(continued)

Primary Containment Isolation Instrumentation
3.3.6.1

Table 3.3.6.1-1 (page 1 of 3)
Primary Containment Isolation Instrumentation

FUNCTION	APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS	REQUIRED CHANNELS PER TRIP SYSTEM	CONDITIONS REFERENCED FROM REQUIRED ACTION C.1	SURVEILLANCE REQUIREMENTS	ALLOWABLE VALUE
1. Main Steam Line Isolation					
a. Reactor Vessel Water Level-Low Low	1,2,3	2	D	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.3 SR 3.3.6.1.6 SR 3.3.6.1.7	≥ -55.2 inches
b. Main Steam Line Pressure-Low	1	2	E	SR 3.3.6.1.2 SR 3.3.6.1.4 SR 3.3.6.1.7	≥ 791 psig
c. Main Steam Line Pressure-Timer	1	2	E	SR 3.3.6.1.2 SR 3.3.6.1.6 SR 3.3.6.1.7	≤ 0.331 seconds
d. Main Steam Line Flow-High	1,2,3	2 per MSL	D	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.6 SR 3.3.6.1.7	≤ 254.3 psid
e. Main Steam Line Tunnel Temperature-High	1,2,3	2 per trip string	D	SR 3.3.6.1.5 SR 3.3.6.1.6 SR 3.3.6.1.7	≤ 198°F
2. Primary Containment Isolation					
a. Reactor Vessel Water Level-Low	1,2,3	2	G	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.3 SR 3.3.6.1.6 SR 3.3.6.1.7	≥ 3.8 inches
b. Drywell Pressure-High	1,2,3	2	G	SR 3.3.6.1.2 SR 3.3.6.1.4 SR 3.3.6.1.7	≤ 2.43 psig
c. Drywell Radiation-High	1,2,3	1	F	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.6 SR 3.3.6.1.7	≤ 70 R/hr

(continued)