

RS-01-164

August 13, 2001

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: Supplement to GE14 Fuel License Amendment Request

- References:
- (1) Letter from R. M. Krich (Commonwealth Edison Company) to U. S. NRC, "Request for Technical Specifications Changes, Transition to General Electric Fuel," dated September 29, 2000
 - (2) Letter from R. M. Krich (Exelon Generation Company, LLC) to U. S. NRC, "Supplement to GE14 Fuel License Amendment Request," dated March 1, 2001
 - (3) Letter from R. M. Krich (Exelon Generation Company, LLC) to U. S. NRC, "Supplemental Information for GE14 Fuel License Amendment Request," dated July 13, 2001

Pursuant to 10 CFR 50.90, "Application for amendment of license or construction permit," Exelon Generation Company (EGC), LLC, formerly Commonwealth Edison (ComEd) Company, is requesting additional changes to the Technical Specifications (TS) relative to the changes requested in Reference 1 for the Dresden Nuclear Power Station (DNPS), Units 2 and 3, and the Quad Cities Nuclear Power Station (QCNP), Units 1 and 2. In Reference 1, ComEd submitted a TS amendment request for DNPS and QCNP to support a change in fuel vendors from Siemens Power Corporation (SPC), now Framatome, to General Electric (GE) Company, and a transition to GE14 fuel. That amendment request proposed changes associated with the change in analysis methodology associated with the change in fuel types and fuel vendors.

In Reference 2, EGC submitted additional proposed TS changes regarding the automatic depressurization system (ADS) in support of the fuel transition. In a teleconference between representatives of EGC and Mr. Jon Hopkins and other

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members of the NRC on June 18, 2001, the NRC requested additional information and requested that EGC propose a TS surveillance requirement (SR) to periodically verify pneumatic header pressure to the Target Rock safety/relief valve accumulator. In Reference 3, EGC provided the requested information and stated that we would provide the proposed SR. The attachments to this letter provide the requested SR and revise some of the proposed changes submitted in Reference 2.

In addition, during a self assessment of instrumentation setpoints for the Low Pressure Coolant Injection (LPCI) system at DNPS, it was discovered that the allowable values contained in TS Table 3.3.5.1-1, "Emergency Core Cooling System Instrumentation," for the Core Spray (CS) pump and the "B" and "D" LPCI pump time delays were non-conservative for operation with GE14 fuel at DNPS, Units 2 and 3. These time delays were incorrectly specified in the recent DNPS conversion to the improved technical specifications (ITS). DNPS has documented this error in a corrective action program condition report and has completed an operability determination that shows that operation under current conditions is acceptable. This letter provides proposed changes to these time delays for DNPS to support the fuel transition.

This supplement to the References 1 and 2 amendment request contains separate enclosures for DNPS and QCNPS. Each enclosure is subdivided as follows.

1. Attachment A contains a detailed description of the additional proposed changes.
2. Attachment B provides the proposed markups to the TS.
3. In addition, Enclosure 1 contains an Attachment C that provides a supplement to the information supporting a finding of no significant hazards consideration in accordance with 10 CFR 50.92(c), "Issuance of Amendment," for DNPS. EGC has reviewed the information in this letter and its attachments and determined that the information does not affect the information supporting a finding of no significant hazards consideration provided for QCNPS in References 1 and 2. The information supporting an environmental assessment in References 1 and 2 is not affected for either DNPS or QCNPS.

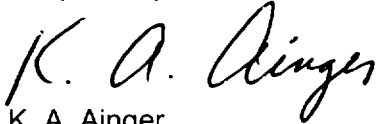
The proposed changes have been reviewed by the Plant Operations Review Committees and approved by the Nuclear Safety Review Boards at DNPS and QCNPS in accordance with the Quality Assurance Program.

EGC is notifying the State of Illinois of this license amendment request by transmitting a copy of this letter and its attachments to the designated State Official.

EGC requests that these proposed changes be approved for DNPS by September 14, 2001, to support core reload with GE14 fuel during the DNPS Unit 2 refueling outage which is currently scheduled to begin October 20, 2001. For QCNPS, EGC requests approval by January 4, 2002, to support core reload with GE14 fuel during the QCNPS Unit 1 refueling outage which is currently scheduled to begin February 2, 2002.

Should you have any questions related to this request, please contact Mr. Allan R. Haeger at (630) 657-2807.

Respectfully,



K. A. Ainger
Director – Licensing
Mid-West Regional Operating Group

Attachments:

Affidavit

Enclosure 1: Dresden Nuclear Power Station

Attachment A: Description and Summary 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

Enclosure 2: Quad Cities Nuclear Power Station

Attachment A: Description and Summary Safety Analysis for Proposed Changes

Attachment B: Marked-Up TS Pages for Proposed Changes

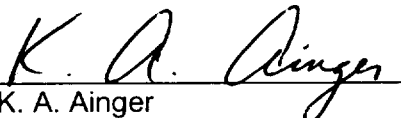
cc: Regional Administrator – NRC Region III
 NRC Senior Resident Inspector – Dresden Nuclear Power Station
 NRC Senior Resident Inspector – Quad Cities Nuclear Power Station
 Office of Nuclear Facility Safety – Illinois Department of Nuclear Safety

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: Supplement to GE14 Fuel License Amendment Request

AFFIDAVIT

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

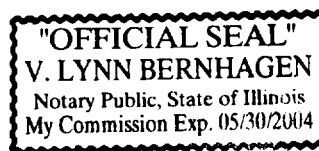

K. A. Ainger
Director – Licensing
Mid-West Regional Operating Group

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

for the State above named, this 13th day of

August, 20 01.


Notary Public



ENCLOSURE 1 - ATTACHMENT A
Supplement to GE14 Fuel License Amendment Request for
Dresden Nuclear Power Station, Units 2 and 3

**DESCRIPTION AND SUMMARY 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 additional changes to various Technical Specifications (TS) relative to the changes requested in References I.1 and I.2 for Dresden Nuclear Power Station (DNPS), Units 2 and 3. The requested changes include a revised surveillance requirement (SR) for the Target Rock safety/relief valve and a change in the allowable values for the time delay for the start of the "B" and "D" Low Pressure Coolant Injection (LPCI) pumps and the Core Spray (CS) pumps.

In Reference I.1, Commonwealth Edison (ComEd) Company, now EGC, submitted a TS amendment request for DNPS to support a change in fuel vendors from Siemens Power Corporation (SPC), now Framatome, to General Electric (GE) Company, and a transition to GE14 fuel. This amendment request proposed changes associated with the change in analysis methodology due to the change in fuel types and fuel vendors.

In Reference I.2, EGC submitted additional proposed TS changes regarding the automatic depressurization system (ADS) in support of the fuel transition. One of these proposed changes was an SR to measure the leakage from the accumulator for the Target Rock safety/relief valve. Subsequently, the NRC requested additional information and requested that EGC propose a TS SR to periodically verify pneumatic header pressure to the Target Rock safety/relief valve accumulator. In Reference I.3, EGC provided the requested information and stated that we would provide the proposed SR. Subsequently, for the reasons described below, we have determined that the requested SR to verify pneumatic header pressure should replace the previously proposed SR for accumulator leakage. Thus, we are providing the requested SR and withdrawing the previously proposed SR for accumulator leakage.

In addition, during a self assessment of instrumentation setpoints for the LPCI system at DNPS, it was discovered that the allowable values contained in TS Table 3.3.5.1-1, "Emergency Core Cooling System Instrumentation," for the CS pump and "B" and "D" LPCI pumps time delays were non-conservative for operation with GE14 fuel at DNPS, Units 2 and 3. These time delays were incorrectly specified in the recent DNPS conversion to the improved technical specifications (ITS). These proposed changes provide the revised time delays.

B. DESCRIPTION OF THE CURRENT REQUIREMENTS

B.1 TS Table 3.3.5.1-1, "Emergency Core Cooling System Instrumentation"
TS Table 3.3.5.1-1, Function 1.e, "Core Spray Pump Start – Time Delay Relay," states that the allowable value for the time delay shall be ≤ 13.8 seconds.

ENCLOSURE 1 - ATTACHMENT A
Supplement to GE14 Fuel License Amendment Request for
Dresden Nuclear Power Station, Units 2 and 3

TS Table 3.3.5.1-1, Function 2.e, "Low Pressure Coolant Injection Pump Start – Time Delay Relay, Pumps "B" and D," states that the allowable value for the time delay shall be ≤ 8.8 seconds.

B.2 Target Rock Safety/Relief Valve

There are no current TS requirements for the Target Rock safety/relief valve regarding its ADS function.

C. BASES FOR THE CURRENT REQUIREMENTS

C.1 TS Table 3.3.5.1-1, "Emergency Core Cooling System Instrumentation"

The purpose of these time delays is to stagger the start of CS and LPCI pumps that are in each of Divisions 1 and 2, thus limiting the starting transients on the 4160 volt emergency buses. These functions are only necessary when power is being supplied from the standby power sources (i.e., the emergency diesel generator (EDG)). The CS and LPCI pump start time delay relays are assumed to be operable in the accident and transient analyses requiring Emergency Core Cooling system (ECCS) initiation. That is, the analyses assume that the pumps will initiate when required and that excess loading will not cause failure of the power sources.

C.2 Target Rock Safety/Relief Valve

For the current fuel types, the ADS is capable of mitigating a small break Loss of Coolant Accident (LOCA), assuming High Pressure Coolant injection (HPCI) failure without the use of the Target Rock safety/relief valve. Thus, there are no current TS requirements related to the ADS function of the Target Rock valve.

D. NEED FOR REVISION OF THE REQUIREMENTS

D.1 TS Table 3.3.5.1-1, "Emergency Core Cooling System Instrumentation"

The safety analyses for the LOCA with GE14 fuel assumed a start time for the CS pump following a LOCA, concurrent with a loss of offsite power (LOOP). This assumed start time for the pump included time for the EDG to energize the electrical bus that feeds the CS pump, which includes time for the ECCS instrumentation to detect and process the LOCA signal, time for the EDG to attain rated speed and voltage, and time for the undervoltage relays to reset to allow the EDG to energize the bus. The assumed start time for the "B" and "D" LPCI pumps also includes the time for the EDG to energize the bus described above.

The time delay relays for the CS pumps and the "B" and "D" LPCI pumps begin timing when the associated EDG is up to rated speed and voltage and the bus undervoltage relay resets. Thus, the proper time delay for the relays would not include the time for the EDG to achieve rated speed and voltage or for the undervoltage relays to reset. The allowable values corresponding to the proper time delay for the relays were to be included in the recent DNPS conversion to the improved technical specifications (ITS). However, the ITS allowable values for these relay settings incorrectly included the time for the undervoltage relays to reset. This has the effect of extending the initiation times for the CS and LPCI pumps.

ENCLOSURE 1 - ATTACHMENT A

Supplement to GE14 Fuel License Amendment Request for Dresden Nuclear Power Station, Units 2 and 3

To preserve the assumptions in the LOCA analyses for GE14 fuel, the allowable values for the time delay relay settings must be changed to reflect the assumed starting point for the relay timers.

D.2 Target Rock Safety/Relief Valve

The Target Rock safety/relief valve was previously not qualified for use to satisfy the ADS guideline in accordance with NUREG-0737, "Clarification of TMI Action Plan Requirements," Task II.K.3.28, "Verify Qualification of Accumulators on Automatic Depressurization System." In Reference I.2, EGC proposed a surveillance requirement for the pneumatic accumulator for the Target Rock valve actuator. This previously proposed surveillance requirement required that the leakage rate from the accumulator be less than or equal to 0.75 standard cubic feet per hour (scfh) in order to ensure that the valve can operate for a minimum of five cycles for at least 30 minutes following the postulated event, with the primary containment at atmospheric pressure, assuming no makeup to the accumulator. This is equivalent to two cycles of valve operation at with the primary containment at 70% of design pressure.

EGC has determined that a more appropriate TS surveillance requirement is to ensure that the pneumatic supply header pressure to the Target Rock valve is adequate to ensure the capability of the valve to cycle the required number of times. This surveillance requirement is consistent with the ADS SR contained in Reference I.4, the Boiling Water Reactor (BWR) improved standard technical specifications (ISTS).

E. DESCRIPTION OF THE PROPOSED CHANGES

E.1 TS Table 3.3.5.1-1, "Emergency Core Cooling System Instrumentation"

In TS Table 3.3.5.1-1, the allowable value for Function 1.e is revised from ≤ 13.8 seconds to ≤ 11.0 seconds.

In TS Table 3.3.5.1-1, the allowable value for Function 2.e is revised from ≤ 8.8 seconds to ≤ 5.5 seconds.

E.2 Target Rock Safety/Relief Valve

In TS Section 3.5.1, "ECCS – Operating," new SR 3.5.1.12 is included to verify that the ADS pneumatic supply header pressure is ≥ 80 psig at least once every 31 days.

The SR 3.5.1.12 previously proposed in Reference I.2, to verify that the leakage from the Target Rock safety/relief valve accumulator is ≤ 0.75 scfh, is withdrawn.

F. SAFETY ANALYSIS OF THE PROPOSED CHANGES

F.1 TS Table 3.3.5.1-1, "Emergency Core Cooling System Instrumentation"

The proposed changes ensure that the assumed start times in the safety analyses for the CS and LPCI pumps "B" and "D" are met. For the CS pump, the assumed start time in the LOCA analysis is 34.5 seconds following the occurrence of the LOCA event. This includes time for the associated EDG to achieve rated speed and voltage, for the undervoltage relays to reset, and then an additional 11.2 seconds to provide the staggered start function of the time delay relays. To achieve this time delay, the allowable value was calculated to be 11.0 seconds using the Exelon Nuclear Mid-West

ENCLOSURE 1 - ATTACHMENT A

Supplement to GE14 Fuel License Amendment Request for Dresden Nuclear Power Station, Units 2 and 3

Regional Operating Group setpoint methodology procedure NES-EIC-20.04, "Analysis of Instrument Channel Setpoint Error and Instrument Loop Accuracy."

For the "B" and "D" LPCI pumps, the assumed initiation time in the LOCA analysis is 29 seconds following the occurrence of the LOCA event. This includes time for the associated EDG to achieve rated speed and voltage, for the undervoltage relays to reset, and then an additional 5.7 seconds to provide the staggered start function of the time delay relays. To achieve the proper time delay, the allowable value was calculated to be 5.5 seconds, using NES-EIC-20.04.

F.2 Target Rock Safety/Relief Valve

The pneumatic accumulator for the Target Rock safety/relief valve is sized such that, when beginning from a pressure of at least 70 psig, the valve can operate for a minimum of five cycles following the postulated event with the primary containment at atmospheric pressure, assuming no nitrogen makeup is available to the accumulator.

The proposed SR verifies that pneumatic supply header pressure is greater than 80 psig, and, together with a current DNPS in-service testing (IST) program periodic test, ensures that the accumulator remains pressurized to at least 70 psig for one hour following a loss of makeup to the accumulator. This test is performed each refueling outage. As part of the GE14 fuel transition, the IST test will be revised to ensure that the starting pressure for the test is no greater than 80 psig. Thus, the combination of the proposed TS SR and the revised DNPS IST program test will ensure the capability of the Target Rock valve to operate for at least five cycles for one hour following a loss of makeup. This is equivalent to two cycles of valve operation at with the primary containment at 70% of design pressure.

The capability to operate for five cycles is adequate to ensure successful depressurization for the following reasons. First, the assumption of five valve cycles is conservative. The small break LOCA response requires the valve to open only once initially to depressurize the reactor. Second, subsequent maintenance of low pressure conditions is adequately ensured by the remaining four electromatic relief valves. Third, the five cycle capability was verified with containment pressure near atmospheric pressure. This is equivalent to achieving two valve cycles at 70% of containment design pressure. Two valve cycles are still adequate for depressurization capability. The 70% of design pressure bounds the pressures that would be expected for small break LOCAs.

The one hour time is adequate to depressurize the reactor following a small break LOCA. The longest operability period required for the accumulator for DNPS is during an event which does not pressurize the drywell (e.g., a transient, outside containment line break, or stuck open relief valve) with failure of high pressure makeup. In this case, ADS operation is initiated by the 8.5 minute timer on sustained low reactor level. Even assuming a degraded event in which manual operator action is necessary to initiate ADS, a one hour time period is a conservative bounding value to use for the Target Rock accumulator operability period.

ENCLOSURE 1 - ATTACHMENT A
Supplement to GE14 Fuel License Amendment Request for
Dresden Nuclear Power Station, Units 2 and 3

The 31 day frequency of the proposed SR takes into consideration the availability of control room alarms for low pressure. Specifically, a control room alarm actuates when ADS pneumatic supply header pressure falls to approximately 80 psig. This 31 day frequency is consistent with the frequency specified in Reference I.4, the BWR ISTS.

EGC is withdrawing the SR 3.5.12 proposed in Reference I.2. This proposed SR required measurement of the leakage rate from the accumulator and limiting that leakage rate to 0.75 scfh. This proposed SR is not part of the BWR ISTS. As discussed above, a similar test is currently being performed once each refueling outage (i.e., every two years) at DNPS. This test is not required by the DNPS TS, but will continue to be performed as part of the IST program following the transition to GE14 fuel.

G. IMPACT ON PREVIOUS SUBMITTALS

All submittals currently under review by the NRC were evaluated to determine the impact of this submittal. The proposed changes in this amendment request supplement and revise the proposed changes in References I.1 and I.2.

No other submittals currently under review by the NRC are affected by the information presented in this license amendment request.

H. SCHEDULE REQUIREMENTS

As requested in Reference I.1, EGC plans to begin reloading with GE14 fuel during the next Unit 2 refueling outage, scheduled for October 20, 2001. Therefore, EGC requests that the proposed changes be approved by September 14, 2001.

I. REFERENCES

1. Letter from R. M. Krich (ComEd) to U. S. NRC, "Request for Technical Specifications Change, Transition to General Electric Fuel," dated September 29, 2000
2. Letter from R. M. Krich (EGC) to U. S. NRC, "Supplement to GE14 Fuel License Amendment Request," dated March 1, 2001
3. Letter from R. M. Krich (EGC) to U. S. NRC, "Supplemental Information for GE14 Fuel License Amendment Request," dated July 12, 2001
4. NUREG-1433, "Standard Technical Specifications – General Electric Plants, BWR/4," Revision 1, April 1995

ENCLOSURE 1 - ATTACHMENT B
Supplement to GE14 Fuel License Amendment Request for
Dresden Nuclear Power Station, Units 2 and 3

MARKED-UP TECHNICAL SPECIFICATIONS PAGES FOR PROPOSED CHANGES

The marked-up Technical Specifications are provided in the following pages. The marked-up bases page is also provided for reference.

REVISED PAGES

3.3.5.1-9
3.3.5.1-10
3.5.1-6
B 3.5.1-16

Table 3.3.5.1-1 (page 1 of 5)
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 3.3.5.1.5 SR 3.3.5.1.6	≥ -54.15 inches
b. Drywell Pressure - High	1,2,3	4 ^(b)	B	SR 3.3.5.1.2 SR 3.3.5.1.4 SR 3.3.5.1.6	≤ 1.81 psig
c. Reactor Steam Dome Pressure - Low (Permissive)	1,2,3 4 ^(a) , 5 ^(a)	2 2	C B	SR 3.3.5.1.2 SR 3.3.5.1.4 SR 3.3.5.1.6 SR 3.3.5.1.2 SR 3.3.5.1.4 SR 3.3.5.1.6	≥ 308.5 psig and ≤ 341.7 psig ≥ 308.5 psig and ≤ 341.7 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 3.3.5.1.5 SR 3.3.5.1.6	≥ 802 gpm and ≤ 992 gpm
e. Core Spray Pump Start-Time Delay Relay	1, 2, 3 4 ^(a) , 5 ^(a)	1 per pump	C	SR 3.3.5.1.5 SR 3.3.5.1.6	≤ 1.0 seconds 11.0
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 3.3.5.1.5 SR 3.3.5.1.6	≥ -54.15 inches
b. Drywell Pressure - High	1,2,3	4	B	SR 3.3.5.1.2 SR 3.3.5.1.4 SR 3.3.5.1.6	≤ 1.81 psig
c. Reactor Steam Dome Pressure - Low (Permissive)	1,2,3 4 ^(a) , 5 ^(a)	2 2	C B	SR 3.3.5.1.2 SR 3.3.5.1.4 SR 3.3.5.1.6 SR 3.3.5.1.2 SR 3.3.5.1.4 SR 3.3.5.1.6	≥ 308.5 psig and ≤ 341.7 psig ≥ 308.5 psig and ≤ 341.7 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 2 of 5)
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 3.3.5.1.2 SR 3.3.5.1.5 SR 3.3.5.1.6	≥ 802 psig and ≤ 898 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 3.3.5.1.5 SR 3.3.5.1.6	$\leq \frac{4.7}{5.5}$ seconds
f. Low Pressure Coolant Injection Pump Discharge Flow - Low (Bypass)	1,2,3, 4(a), 5(a)	1 per loop	E	SR 3.3.5.1.2 SR 3.3.5.1.3 SR 3.3.5.1.5 SR 3.3.5.1.6	≥ 1107 gpm
g. Recirculation Pump Differential Pressure - High (Break Detection)	1,2,3	4 per pump	C	SR 3.3.5.1.2 SR 3.3.5.1.5 SR 3.3.5.1.6	≤ 5.9 psid
h. Recirculation Riser Differential Pressure - High (Break Detection)	1,2,3	4	C	SR 3.3.5.1.2 SR 3.3.5.1.5 SR 3.3.5.1.6	≤ 2.0 psid
i. Recirculation Pump Differential Pressure Time Delay - Relay (Break Detection)	1,2,3	2	C	SR 3.3.5.1.5 SR 3.3.5.1.6	≤ 0.53 seconds
j. Reactor Steam Dome Pressure Time Delay - Relay (Break Detection)	1,2,3	2	B	SR 3.3.5.1.5 SR 3.3.5.1.6	≤ 2.12 seconds
k. Recirculation Riser Differential Pressure Time Delay - Relay (Break Detection)	1,2,3	2	C	SR 3.3.5.1.5 SR 3.3.5.1.6	≤ 0.53 seconds

(continued)

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

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
<p>SR 3.5.1.9 -----NOTE----- Valve actuation may be excluded. -----</p> <p>Verify the ADS actuates on an actual or simulated automatic initiation signal.</p>	24 months
<p>SR 3.5.1.10 -----NOTE----- Not required to be performed until 12 hours after reactor steam pressure and flow are adequate to perform the test. -----</p> <p>Verify each required ADS valve opens when manually actuated.</p>	24 months
<p>SR 3.5.1.11 Verify automatic transfer capability of the LPCI swing bus power supply from the normal source to the backup source.</p>	24 months

SR 3.5.1.12 Verify ADS pneumatic supply header pressure is ≥ 80 psig. 31 days

BASES

SURVEILLANCE
REQUIREMENTS

SR 3.5.1.10 (continued)

The Frequency of 24 months is based on the need to perform the Surveillance under the conditions that apply just prior to or during a startup from a plant outage. 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 3.5.1.11

The LPCI System injection valves and recirculation pump discharge valves are powered from the LPCI swing bus, which must be energized after a single failure, including loss of power from the normal source to the swing bus. Therefore, the automatic transfer capability from the normal power source to the backup power source must be verified to ensure the automatic capability to detect loss of normal power and initiate an automatic transfer to the swing bus backup power source. Verification of this capability every 24 months ensures that AC electrical power is available for proper operation of the associated LPCI injection valves and recirculation pump valves. The swing bus automatic transfer scheme must be OPERABLE for both LPCI subsystems to be OPERABLE. The Frequency of 24 months is based on the need to perform the Surveillance under the conditions that apply during a startup from a plant outage. Operating experience has shown that the 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.

Insert SR 3.5.1.12
→

REFERENCES

1. UFSAR, Section 6.3.2.1.
2. UFSAR, Section 6.3.2.2.
3. UFSAR, Section 6.3.2.3.
4. UFSAR, Section 6.3.2.4.

(continued)

SR 3.5.1.12

Verification every 31 days that ADS pneumatic supply header pressure is ≥ 80 psig ensures adequate nitrogen pressure for reliable Target Rock ADS valve operation. The accumulator on the Target Rock ADS valve provides pneumatic pressure for valve actuation. The design pneumatic supply pressure requirements for the accumulator are such that, following a failure of the pneumatic supply to the accumulator, at least two valve actuations can occur with the drywell at 70% of design pressure. The ECCS safety analysis assumes only one actuation to achieve the depressurization required for operation of the low pressure ECCS. This minimum required pressure of ≥ 80 psig is provided by the ADS pneumatic supply header. The 31 day Frequency takes into consideration administrative controls over operation of the nitrogen system and alarm for low nitrogen pressure.

ENCLOSURE 1 - ATTACHMENT C
Supplement to GE14 Fuel License Amendment Request for
Dresden Nuclear Power Station, Units 2 and 3

**INFORMATION SUPPORTING A FINDING OF
NO SIGNIFICANT HAZARDS CONSIDERATION**

According to 10CFR50.92(c), "Issuance of amendment," 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 10CFR50.92 is provided below regarding the proposed license amendment.

Overview

Exelon Generation Company (EGC), LLC, previously Commonwealth Edison (ComEd) Company, is requesting changes to the Technical Specifications (TS) for Dresden Nuclear Power Station (DNPS), Units 2 and 3. These changes are needed to support a change in fuel vendors from Siemens Power Corporation, now Framatome, to General Electric (GE) Company, and a transition to GE14 fuel. These changes supplement changes previously proposed in a letter from R. M. Krich (ComEd) to U. S. NRC, "Request for Technical Specifications Change, Transition to General Electric Fuel," dated September 29, 2000, and in a letter from R. M. Krich (EGC) to U. S. NRC, "Supplement to GE14 Fuel License Amendment Request," dated March 1, 2001. The additional changes associated with this request that affect the previous information supporting a finding of no significant hazards consideration involve revising the allowable values for the time delay relay settings for the start of the core spray and low pressure coolant injection pumps.

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

The proposed changes do not affect the initiators of analyzed events. Analyzed events are initiated by the failure of plant structures, systems or components. The proposed changes do not impact the condition or performance of these structures, systems, or components. Therefore, the proposed changes do not affect the probability of an accident previously evaluated.

The proposed changes to the time delays for the core spray and low pressure coolant injection pumps ensure that the assumptions in the safety analyses for the Loss of Coolant Accident (LOCA) are met. The safety analyses demonstrate that all of the acceptance criteria continue to be met. As a result, the proposed changes do not involve an increase in the consequences of an accident previously evaluated.

ENCLOSURE 1 - ATTACHMENT C
Supplement to GE14 Fuel License Amendment Request for
Dresden Nuclear Power Station, Units 2 and 3

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

The proposed TS changes do not create the possibility of a new or different kind of accident from any accident previously evaluated.

The proposed changes do not involve a physical alteration of the facility or change the normal facility operation. No new or different equipment is being installed and no installed equipment is being removed. The new setpoints do not alter the parameters within which the plant is normally operated. Consequently, no new failure modes are introduced and the changes therefore do not create the possibility of a new or different kind of accident from any previously evaluated.

The proposed TS changes do not involve a significant reduction in a margin of safety.

The proposed changes to the time delays for the core spray and low pressure coolant injection pumps ensure that the assumptions in the safety analyses for the LOCA are met. The safety analyses demonstrate that all of the acceptance criteria continue to be met. As a result, there is no reduction in the margin of safety.

Conclusion

The proposed changes do not involve a significant hazards consideration.

ENCLOSURE 2 - ATTACHMENT A
Supplement to GE14 Fuel License Amendment Request for
Quad Cities Nuclear Power Station, Units 1 and 2

**DESCRIPTION AND SUMMARY 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 an additional change to the Technical Specifications (TS) relative to the changes requested in References I.1 and I.2 for Quad Cities Nuclear Power Station (QCNPS), Units 1 and 2. The requested change involves a revised surveillance requirement (SR) for the Target Rock safety/relief valve.

In Reference I.1, Commonwealth Edison (ComEd) Company, now EGC, submitted a TS amendment request for QCNPS to support a change in fuel vendors from Siemens Power Corporation (SPC), now Framatome, to General Electric (GE) Company, and a transition to GE14 fuel. This amendment request proposed changes associated with the change in analysis methodology due to the change in fuel types and fuel vendors.

In Reference I.2, EGC submitted additional proposed TS changes regarding the automatic depressurization system (ADS) in support of the fuel transition. One of these proposed changes was an SR to measure the leakage from the accumulator for the Target Rock safety/relief valve. Subsequently, the NRC requested additional information and requested that EGC propose a TS SR to periodically verify pneumatic header pressure to the Target Rock safety/relief valve accumulator. In Reference I.3, EGC provided the requested information and stated that we would provide the proposed SR. Subsequently, for the reasons described below, we have determined that the requested SR to verify pneumatic header pressure should replace the previously proposed SR for accumulator leakage. Thus, we are providing the requested SR and withdrawing the previously proposed SR for accumulator leakage.

B. DESCRIPTION OF THE CURRENT REQUIREMENTS

There are no current TS requirements for the Target Rock safety/relief valve regarding its ADS function.

C. BASES FOR THE CURRENT REQUIREMENTS

For the current fuel types, the ADS is capable of mitigating a small break Loss of Coolant Accident (LOCA), assuming High Pressure Coolant injection (HPCI) failure without the use of the Target Rock safety/relief valve. Thus, there are no current TS requirements related to the ADS function of the Target Rock valve.

D. NEED FOR REVISION OF THE REQUIREMENTS

The Target Rock safety/relief valve was previously not qualified for use to satisfy the ADS guideline in accordance with NUREG-0737, "Clarification of TMI Action Plan Requirements," Task II.K.3.28, "Verify Qualification of Accumulators on Automatic Depressurization System." In Reference I.2, EGC proposed a surveillance requirement for the pneumatic accumulator for the Target Rock valve actuator. This proposed

ENCLOSURE 2 - ATTACHMENT A

Supplement to GE14 Fuel License Amendment Request for Quad Cities Nuclear Power Station, Units 1 and 2

surveillance requirement required that the leakage rate from the accumulator be less than or equal to 0.75 standard cubic feet per hour (scfh) in order to ensure that the valve can operate for a minimum of five cycles for at least 30 minutes following the postulated event with the primary containment at atmospheric pressure, assuming no makeup to the accumulator. This is equivalent to two cycles of valve operation at with the primary containment at 70% of design pressure.

EGC has determined that a more appropriate surveillance requirement is to ensure that the pneumatic supply header pressure to the Target Rock valve is adequate to ensure the capability of the valve to cycle the required number of times. This surveillance requirement is consistent with the ADS SR contained in Reference I.4, the Boiling Water Reactor (BWR) improved standard technical specifications (ISTS).

E. DESCRIPTION OF THE PROPOSED CHANGES

In TS Section 3.5.1, "ECCS – Operating," new SR 3.5.1.12 is included to verify that the ADS pneumatic supply header pressure is ≥ 80 psig at least once every 31 days.

The SR 3.5.1.12 previously proposed in Reference I.2, to verify that the leakage from the Target Rock safety/relief valve accumulator is ≤ 0.75 scfh, is withdrawn.

F. SAFETY ANALYSIS OF THE PROPOSED CHANGES

The pneumatic accumulator for the Target Rock safety/relief valve is sized such that, when beginning from a pressure of at least 70 psig, the valve can operate for a minimum of five cycles following the postulated event with the primary containment at atmospheric pressure, assuming no nitrogen makeup is available to the accumulator.

The proposed SR verifies that pneumatic supply header pressure is greater than 80 psig, and, together with a current QCNPS in-service testing (IST) program periodic test, ensures that the accumulator remains pressurized to at least 70 psig for one hour following a loss of makeup to the accumulator. This test is performed each refueling outage. As part of the GE14 fuel transition, the IST test will be revised to ensure that the starting pressure for the test is no greater than 80 psig. Thus, the combination of the proposed TS SR and the revised QCNPS IST program test will ensure the capability of the Target Rock valve to operate for at least five cycles for one hour following a loss of makeup. This is equivalent to two cycles of valve operation at with the primary containment at 70% of design pressure.

The capability to operate for five cycles is adequate to ensure successful depressurization for the following reasons. First, the assumption of five valve cycles is conservative. The small break LOCA response requires the valve to open only once initially to depressurize the reactor. Second, subsequent maintenance of low pressure conditions is adequately ensured by the remaining four electromatic relief valves. Third, the five cycle capability was verified with containment pressure near atmospheric pressure. This is equivalent to achieving two valve cycles at 70% of containment design pressure. Two valve cycles are still adequate for depressurization capability. The 70% of design pressure bounds the pressures that would be expected for small break LOCAs.

ENCLOSURE 2 - ATTACHMENT A
Supplement to GE14 Fuel License Amendment Request for
Quad Cities Nuclear Power Station, Units 1 and 2

The one hour time is adequate to depressurize the reactor following a small break LOCA. The longest operability period required for the accumulator for QCNPS is during an event which does not pressurize the drywell (e.g., a transient, outside containment line break, or stuck open relief valve) with failure of high pressure makeup. In this case, ADS operation is initiated by the 8.5 minute timer on sustained low reactor level. Even assuming a degraded event in which manual operator action is necessary to initiate ADS, a one hour time period is a conservative bounding value to use for the Target Rock accumulator operability period.

The 31 day frequency of the proposed SR takes into consideration the availability of control room alarms for low pressure. Specifically, a control room alarm actuates when ADS pneumatic supply header pressure falls to approximately 82 psig. This 31 day frequency is consistent with the frequency specified in Reference I.3, the BWR ISTS.

EGC is withdrawing the SR 3.5.12 proposed in Reference I.2. This proposed SR required measurement of the leakage rate from the accumulator and limiting that leakage rate to 0.75 scfh. This proposed SR is not part of the BWR ISTS. As discussed above, a similar test is currently being performed once each refueling outage (i.e., every two years) at QCNPS. This test is not required by the QCNPS TS, but will continue to be performed as part of the IST program following the transition to GE14 fuel.

G. IMPACT ON PREVIOUS SUBMITTALS

All submittals currently under review by the NRC were evaluated to determine the impact of this submittal. The proposed change in this amendment request supplement and revise the proposed changes in References I.1 and I.2.

No other submittals currently under review by the NRC are affected by the information presented in this license amendment request.

H. SCHEDULE REQUIREMENTS

As requested in Reference I.1, EGC plans to begin reloading with GE14 fuel during the next Unit 2 refueling outage, scheduled for October 20, 2001. Therefore, EGC requests that the proposed changes be approved by September 14, 2001.

I. REFERENCES

1. Letter from R. M. Krich (ComEd) to U. S. NRC, "Request for Technical Specifications Change, Transition to General Electric Fuel," dated September 29, 2000
2. Letter from R. M. Krich (EGC) to U. S. NRC, "Supplement to GE14 Fuel License Amendment Request," dated March 1, 2001
3. Letter from R. M. Krich (EGC) to U. S. NRC, "Supplemental Information for GE14 Fuel License Amendment Request," dated July 12, 2001

ENCLOSURE 2 - ATTACHMENT A

Supplement to GE14 Fuel License Amendment Request for Quad Cities Nuclear Power Station, Units 1 and 2

4. NUREG-1433, "Standard Technical Specifications – General Electric Plants, BWR/4," Revision 1, April 1995

ENCLOSURE 2 - ATTACHMENT B
Supplement to GE14 Fuel License Amendment Request for
Quad Cities Nuclear Power Station, Units 1 and 2

MARKED-UP TECHNICAL SPECIFICATIONS PAGES FOR PROPOSED CHANGES

The marked-up Technical Specifications are provided in the following pages. The marked-up bases page is also provided for reference.

REVISED PAGES

3.5.1-6
B 3.5.1-17

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
<p>SR 3.5.1.8 -----NOTE----- Vessel injection/spray may be excluded. -----</p> <p>Verify each ECCS injection/spray subsystem actuates on an actual or simulated automatic initiation signal.</p>	24 months
<p>SR 3.5.1.9 -----NOTE----- Valve actuation may be excluded. -----</p> <p>Verify the ADS actuates on an actual or simulated automatic initiation signal.</p>	24 months
<p>SR 3.5.1.10 -----NOTE----- Not required to be performed until 12 hours after reactor steam pressure and flow are adequate to perform the test. -----</p> <p>Verify each required ADS valve opens when manually actuated.</p>	24 months
<p>SR 3.5.1.11 Verify automatic transfer capability of the LPCI swing bus power supply from the normal source to the backup source.</p>	24 months

SR 3.5.1.12 Verify ADS pneumatic supply header pressure is ≥ 80 psig. 31 days

BASES

SURVEILLANCE
REQUIREMENTS

SR 3.5.1.11 (continued)

to perform the Surveillance under the conditions that apply during a startup from a plant outage. Operating experience has shown that the 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.

Insert SR 3.5.1.12 →

REFERENCES

1. UFSAR, Section 6.3.2.1.
 2. UFSAR, Section 6.3.2.2.
 3. UFSAR, Section 6.3.2.3.
 4. UFSAR, Section 6.3.2.4.
 5. Letter from J.A. Zwolinski (NRC) to D.L. Farrar (Commonwealth Edison Company), "Resolution of NUREG-0737 Item II.K.3.28, Verify Qualification of Accumulators on Automatic Depressurization Valves," dated June 16, 1986.
 6. UFSAR, Section 15.6.4.
 7. UFSAR, Section 15.6.5.
 8. 10 CFR 50, Appendix K.
 9. UFSAR, Section 6.3.3.
 10. 10 CFR 50.46.
 11. Memorandum from R.L. Baer (NRC) to V. Stello, Jr. (NRC), "Recommended Interim Revisions to LCOs for ECCS Components," December 1, 1975.
 12. UFSAR, Section 6.3.3.1.4.
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SR 3.5.1.12

Verification every 31 days that ADS pneumatic supply header pressure is ≥ 80 psig ensures adequate nitrogen pressure for reliable Target Rock ADS valve operation. The accumulator on the Target Rock ADS valve provides pneumatic pressure for valve actuation. The design pneumatic supply pressure requirements for the accumulator are such that, following a failure of the pneumatic supply to the accumulator, at least two valve actuations can occur with the drywell at 70% of design pressure. The ECCS safety analysis assumes only one actuation to achieve the depressurization required for operation of the low pressure ECCS. This minimum required pressure of ≥ 80 psig is provided by the ADS pneumatic supply header. The 31 day Frequency takes into consideration administrative controls over operation of the nitrogen system and alarm for low nitrogen pressure.