



UNITED STATES
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20545-0001

September 23, 1999

Mr. Oliver D. Kingsley, President
Nuclear Generation Group
Commonwealth Edison Company
Executive Towers West III
1400 Opus Place, Suite 500
Downers Grove, IL 60515

SUBJECT: ISSUANCE OF AMENDMENTS (TAC NOS. MA5415 AND MA5416)

Dear Mr. Kingsley:

The U.S. Nuclear Regulatory Commission (Commission) has issued the enclosed Amendment No. 173 to Facility Operating License No. DPR-19 and Amendment No. 169 to Facility Operating License No. DPR-25 for Dresden, Units 2 and 3. The amendments are in response to your application dated May 3, 1999, as supplemented by letter dated September 10, 1999.

The amendments relocate the requirements of Technical Specification (TS) Section 3/4.6.I, "Chemistry," and the associated bases to the Updated Final Safety Analysis Report (UFSAR). TS Section 3/4.6.I contains reactor coolant chemistry limiting conditions for operation and surveillance requirements for conductivity, chloride concentration, and pH.

Our review identified that your application dated May 3, 1999, did not adequately describe the controls for the relocated requirements. The enclosed license conditions reflect the commitment made by your staff that the TS and associated bases relocated by this Amendment would be relocated to the UFSAR. We note that the control of relocated TS requirements was also an issue during our review of the application for Dresden Amendments 170 and 165 and Quad Cities Amendments 183 and 180, issued February 8, 1999. Please bring this issue to the attention of your staff and review committees since they will be preparing and reviewing future amendment requests involving relocated requirements, including amendments for conversion to Improved Standard Technical Specifications.

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O. Kingsley

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A copy of the Safety Evaluation is also enclosed. The Notice of Issuance will be included in the Commission's biweekly Federal Register notice.

Sincerely,

Original Signed By

Lawrence W. Rossbach, Project Manager, Section 2
Project Directorate III
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket Nos. 50-237 and 50-249

- Enclosures: 1. Amendment No. 173 to DPR-19
- 2. Amendment No. 169 to DPR-25
- 3. Safety Evaluation

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

COMMONWEALTH EDISON COMPANY

DOCKET NO. 50-237

DRESDEN NUCLEAR POWER STATION, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 173
License No. DPR-19

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by the Commonwealth Edison Company (the licensee) dated May 3, 1999, as supplemented by letter dated September 10, 1999, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment and paragraph 2.C.(2) of Facility Operating License No. DPR-19 is hereby amended to read as follows:

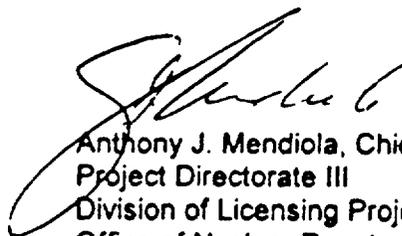
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(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 173 , are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of the date of its issuance and shall be implemented within 30 days including relocation of the removed Technical Specifications and associated bases to the licensee's Updated Final Safety Analysis Report (UFSAR) pending change file. In addition, the licensee shall include the relocated information in the UFSAR submitted to the NRC, pursuant to 10 CFR 50.71(e), except for any information that has been changed in accordance with 10 CFR 50.59 and described in the change summaries submitted to NRC pursuant to 10 CFR 50.59.

FOR THE NUCLEAR REGULATORY COMMISSION



Anthony J. Mendiola, Chief, Section 2
Project Directorate III
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: September 23, 1999



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20545-0001

COMMONWEALTH EDISON COMPANY

DOCKET NO. 50-249

DRESDEN NUCLEAR POWER STATION, UNIT 3

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 169
License No. DPR-25

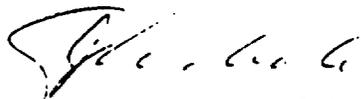
1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by the Commonwealth Edison Company (the licensee) dated May 3, 1999, as supplemented by letter dated September 10, 1999, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment and paragraph 3.B. of Facility Operating License No. DPR-25 is hereby amended to read as follows:

B. Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 169 , are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of the date of its issuance and shall be implemented within 30 days including relocation of the removed Technical Specifications and associated bases to the licensee's Updated Final Safety Analysis Report (UFSAR) pending change file. In addition, the licensee shall include the relocated information in the UFSAR submitted to the NRC, pursuant to 10 CFR 50.71(e), except for any information that has been changed in accordance with 10 CFR 50.59 and described in the change summaries submitted to NRC pursuant to 10 CFR 50.59.

FOR THE NUCLEAR REGULATORY COMMISSION



Anthony J. Mendiola, Chief, Section 2
Project Directorate III
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: September 23, 1999

ATTACHMENT TO LICENSE AMENDMENT NOS. 173 AND 169

FACILITY OPERATING LICENSE NOS. DPR-19 AND DPR-25

DOCKET NOS. 50-237 AND 50-249

Revise the Appendix "A" Technical Specifications by replacing the pages identified below with the enclosed pages. The revised pages are identified by amendment number and contain a vertical line indicating the area of change.

REMOVE

VIII

XXI

3/4.6-13

3/4.6-14

3/4.6-15

B 3/4.6-4

B 3/4.6-5

INSERT

VIII

XXI

3/4.6-13

3/4.6-14

3/4.6-15

B 3/4.6-4

B 3/4.6-5

LIMITING CONDITIONS FOR OPERATION AND SURVEILLANCE REQUIREMENTS

<u>SECTION</u>	<u>PAGE</u>
3/4.6	<u>PRIMARY SYSTEM BOUNDARY</u>
3/4.6.A	Recirculation Loops 3/4.6-1
3/4.6.B	Jet Pumps 3/4.6-3
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3/4.6.D	Idle Recirculation Loop Startup 3/4.6-6
3/4.6.E	Safety Valves 3/4.6-7
3/4.6.F	Relief Valves 3/4.6-8
3/4.6.G	Leakage Detection Systems 3/4.6-10
3/4.6.H	Operational Leakage 3/4.6-11
3/4.6.I	Deleted 3/4.6-13
3/4.6.J	Specific Activity 3/4.6-16
3/4.6.K	Pressure/Temperature Limits 3/4.6-19
	Figure 3.6.K-1, Pressure-Temperature Limits for Pressure Testing - Valid to 18 EFPY
	Figure 3.6.K-2, Pressure-Temperature Limits for Pressure Testing - Valid to 20 EFPY
	Figure 3.6.K-3, Pressure-Temperature Limits for Pressure Testing - Valid to 22 EFPY
	Figure 3.6.K-4, Pressure-Temperature Limits for Non-Nuclear Heatup/Cooldown Valid to 22 EFPY
	Figure 3.6.K-5, Pressure- Temperature Limits for Critical Core Operations - Valid to 22 EFPY
3/4.6.L	Reactor Steam Dome Pressure 3/4.6-22
3/4.6.M	Main Steam Line Isolation Valves 3/4.6-23
3/4.6.N	Structural Integrity 3/4.6-24
3/4.6.O	Shutdown Cooling - HOT SHUTDOWN 3/4.6-25
3/4.6.P	Shutdown Cooling - COLD SHUTDOWN 3/4.6-27

BASES

<u>SECTION</u>		<u>PAGE</u>
<u>3/4.6</u>	<u>PRIMARY SYSTEM BOUNDARY</u>	
3/4.6.A	Recirculation Loops	B 3/4.6-1
3/4.6.B	Jet Pumps	B 3/4.6-1
3/4.6.C	Recirculation Pumps	B 3/4.6-1
3/4.6.D	Idle Recirculation Loop Startup	B 3/4.6-1
3/4.6.E	Safety Valves	B 3/4.6-3
3/4.6.F	Relief Valves	B 3/4.6-3
3/4.6.G	Leakage Detection Systems	B 3/4.6-4
3/4.6.H	Operational Leakage	B 3/4.6-4
3/4.6.I	Deleted	B 3/4.6-4
3/4.6.J	Specific Activity	B 3/4.6-5
3/4.6.K	Pressure/Temperature Limits	B 3/4.6-5
3/4.6.L	Reactor Steam Dome Pressure	B 3/4.6-8
3/4.6.M	Main Steam Line Isolation Valves	B 3/4.6-8
3/4.6.N	Structural Integrity	B 3/4.6-9
3/4.6.O	Shutdown Cooling - HOT SHUTDOWN	B 3/4.6-9
3/4.6.P	Shutdown Cooling - COLD SHUTDOWN	B 3/4.6-9

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BASES

Each safety/relief valve is equipped with diverse position indicators which monitor the tailpipe acoustic vibration and temperature. Either of these provide sufficient indication of safety/relief valve position for normal operation.

3/4.6.G Leakage Detection Systems

The RCS leakage detection systems required by this specification are provided to monitor and detect leakage from the reactor coolant pressure boundary. Limits on leakage from the reactor coolant pressure boundary are required so that appropriate action can be taken before the integrity of the reactor coolant pressure boundary is impaired. Leakage detection systems for the reactor coolant system are provided to alert the operators when leakage rates above the normal background levels are detected and also to supply quantitative measurement of leakage rates. Leakage from the reactor coolant pressure boundary inside the drywell is detected by at least one or two independently monitored variables, such as sump level changes and drywell atmosphere radioactivity levels. The means of quantifying leakage in the drywell is the drywell floor drain sump pumps. With the drywell floor drain sump pump system inoperable, no other form of monitoring can provide the equivalent information. However, primary containment atmosphere sampling for radioactivity can provide indication of changes in leakage rates.

3/4.6.H Operational Leakage

The allowable leakage rates from the reactor coolant system have been based on the predicted and experimentally observed behavior of cracks in pipes. The normally expected background leakage due to equipment design and the detection capability of the instrumentation for determining system leakage was also considered. The evidence obtained from experiments suggests that for leakage somewhat greater than that specified for UNIDENTIFIED LEAKAGE the probability is small that the imperfection or crack associated with such leakage would grow rapidly. However, in all cases, if the leakage rates exceed the values specified or the leakage is located and known to be PRESSURE BOUNDARY LEAKAGE, the reactor will be shutdown to allow further investigation and corrective action.

An UNIDENTIFIED LEAKAGE increase of more than 2 gpm within a 24 hour period is an indication of a potential flaw in the reactor coolant pressure boundary and must be quickly evaluated. Although the increase does not necessarily violate the absolute UNIDENTIFIED LEAKAGE limit, IGSCC susceptible components must be determined not to be the source of the leakage within the required completion time.

BASES

3/4.6.I This section intentionally left blank

3/4.6.J Specific Activity

The limitations on the specific activity of the primary coolant ensure that the 2 hour thyroid and whole body doses resulting from a main steam line failure outside the containment during steady state operation will not exceed small fractions of the dose guidelines of 10 CFR 100. The values for the limits on specific activity represent interim limits based upon a parametric evaluation by the NRC of typical site locations. These values are conservative in that specific site parameters, such as site boundary location and meteorological conditions, were not considered in this evaluation.

The ACTION statement permitting POWER OPERATION to continue for limited time periods with the primary coolant's specific activity greater than 0.2 microcuries per gram DOSE EQUIVALENT I-131, but less than or equal to 4.0 microcuries per gram DOSE EQUIVALENT I-131, accommodates possible iodine spiking phenomenon which may occur following changes in THERMAL POWER. Information obtained on iodine spiking will be used to assess the parameters associated with spiking phenomena. A reduction in frequency of isotopic analysis following power changes may be permissible if justified by the data obtained.

Closing the main steam line isolation valves prevents the release of activity to the environs should a steam line rupture occur outside containment. The surveillance requirements provide adequate assurance that excessive specific activity levels in the reactor coolant will be detected in sufficient time to take corrective action.

3/4.6.K Pressure/Temperature Limits

All components in the reactor coolant system are designed to withstand the effects of cyclic loads due to system temperature and pressure changes. These cyclic loads are introduced by normal load transients, reactor trips, and startup and shutdown operations. The various categories of load cycles used for design purposes are provided in Section 4 of the FSAR. During startup and



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20455-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 173 TO FACILITY OPERATING LICENSE NO. DPR-19
AND AMENDMENT NO. 169 TO FACILITY OPERATING LICENSE NO. DPR-25
COMMONWEALTH EDISON COMPANY
DRESDEN NUCLEAR POWER STATION, UNITS 2 AND 3
DOCKET NOS. 50-237 AND 50-249

1.0 INTRODUCTION

By letter dated May 3, 1999, as supplemented by letter dated September 10, 1999, the Commonwealth Edison Company (ComEd, the licensee) proposed changes to the Dresden Nuclear Power Station, Units 2 and 3, Technical Specifications (TSs). The requested changes will relocate TS 3/4.6.I, "Chemistry," and the associated bases from the TS to the Updated Final Safety Analysis Report (UFSAR). The September 10, 1999, submittal provided clarifying information that did not change the initial proposed no significant hazards consideration determination.

The licensee intends to inject noble metal compounds into the reactor coolant to prevent crack initiation and to mitigate any existing crack growth in the reactor vessel surfaces, internal components and piping due to intergranular stress corrosion cracking. The noble metal solutions are expected to temporarily increase reactor coolant conductivity and pH levels which will later be reduced to normal pre-application operation levels by the reactor water cleanup system. The noble metal injection will be performed in Mode 3.

2.0 BACKGROUND

Section 182a of the Atomic Energy Act requires applicants for nuclear power plant operating licenses to state the TSs to be included as part of the license. The Commission's regulatory requirements related to the content of the TSs are set forth in 10 CFR 50.36. That regulation requires the TSs to include items in five specific categories, including (1) safety limits, limiting safety system settings and limiting control settings; (2) limiting conditions for operation; (3) surveillance requirements; (4) design features; and (5) administrative controls. However, the regulation does not specify the particular requirements to be included in a plant's TSs.

The four criteria defined in 10 CFR 50.36 to be used in determining whether a particular limiting condition for operation (LCO) and related surveillance is required to be included in the TSs are as follows:

- (1) installed instrumentation that is used to detect, and indicate in the control room a significant abnormal degradation of the reactor coolant pressure boundary;

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- (2) a process variable, design feature, or operating restriction that is an initial condition of a design basis accident or transient analysis that either assumes the failure of or presents a challenge to the integrity of a fission product barrier;
- (3) a structure, system, or component that is part of the primary success path and which functions or actuates to mitigate a design basis accident or transient that either assumes the failure of or presents a challenge to the integrity of a fission product barrier; and
- (4) a structure, system, or component which operating experience or probabilistic safety assessment has shown to be significant to public health and safety.

As a result, existing TS requirements which fall within or satisfy any of the criteria in 10 CFR 50.36 must be retained in the TSs, while those TS requirements that do not fall within or satisfy these criteria may be relocated to other licensee controlled documents.

3.0 EVALUATION

The licensee has proposed relocating TS 3/4.6.I, "Chemistry," and the associated bases to licensee controlled documents. This TS contains requirements for reactor coolant chloride concentration, conductivity, and pH. The four criteria of 10 CFR 50.36 are addressed below:

- (1) The reactor coolant chemistry limits as specified in TS 3/4.6.I are not used to detect and indicate in the control room a significant abnormal degradation of the reactor coolant pressure boundary. The TS provides limits on particular chemical properties of the primary coolant, and surveillance requirements to monitor these properties to ensure that degradation of the reactor coolant pressure boundary is not exacerbated by poor chemistry condition. However, degradation of the reactor coolant pressure boundary is a long-term process. Other regulations and TS provide direct means to monitor and correct the degradation of the reactor coolant pressure boundary; for example, in-service inspection and primary coolant leakage limits.
- (2) Chemistry parameters are not used as an initial condition of a Design Basis Accident or Transient Analysis that either assumes the failure of or presents a challenge to the integrity of a fission product barrier.
- (3) Reactor coolant conductivity, chloride concentration, and pH are not used as part of the primary success path which functions or actuates to mitigate a Design Basis Accident or Transient.
- (4) Operating experiences or probabilistic safety assessments have not shown chemistry parameters to be significant to public health and safety.

In their May 3, 1999 submittal, the licensee proposed to relocate the Chemistry TS to the UFSAR and to plant procedures controlled by 10 CFR 50.59. Initially, the staff could not establish that all of the TS being relocated would be relocated either to the UFSAR or to

procedures nor could the staff establish that changes to the information being relocated to procedures would be controlled by 10 CFR 50.59. In order to resolve this issue, the licensee committed to relocate all of the TS requirements and bases removed by this Amendment to the UFSAR. License condition number three of this Amendment establishes this commitment as a regulatory requirement. Any changes to these requirements will be controlled by the provisions of 10 CFR 50.59 and any unreviewed safety questions must obtain NRC review and approval.

The September 10, 1999, ComEd submittal described the water chemistry monitoring and controls that they use during normal operation and the additional monitoring and controls that will be in place during noble metal chemical injection. The staff reviewed these and found them to be acceptable.

The relocation of Section 3/4.6.1 from the TSs to the UFSAR will continue to provide adequate assurance that concentrations in excess of the limits will be detected and addressed. The proposed TS is consistent with NUREG-1433, "Standard Technical Specifications, General Electric Plants, BWR/4, Revision 1."

In conclusion, the above relocated requirements are not required to be in the TSs under 10 CFR 50.36 or §182a of the Atomic Energy Act, and are not required to obviate the possibility of an abnormal situation or event giving rise to an immediate threat to the public health and safety. In addition, the staff finds that sufficient regulatory controls exist under 10 CFR 50.59 to assure continued protection of the public health and safety.

Accordingly, the staff has concluded that these requirements may be relocated from the TSs to the licensee's UFSAR.

4.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Illinois State official was notified of the proposed issuance of the amendments. The State official had no comments.

5.0 ENVIRONMENTAL CONSIDERATION

The amendments change a requirement with respect to the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and change surveillance requirements. The NRC staff has determined that the amendments involve no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendments involve no significant hazards consideration, and there has been no public comment on such finding (64 FR 43766). Accordingly, the amendments meet the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendments.

6.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendments will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: L. Rossbach

Date: September 23, 1999