

Commonwealth Edison Company  
LaSalle Generating Station  
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April 28, 2000

United States Nuclear Regulatory Commission  
Attention: Document Control Desk  
Washington, D.C. 20555

LaSalle County Station, Units 1 and 2  
Facility Operating License Nos. NPF-11 and NPF-18  
NRC Docket Nos. 50-373 and 50-374

Subject: Application for Amendment to Unit 1 License Condition 2.C.(37)  
and Unit 2 License Condition 2.C.(21)

In accordance with 10 CFR 50.90, "Application for amendment of license or construction permit," Commonwealth Edison (ComEd) Company proposes changes to Operating License Nos. NPF-11 and NPF-18. Specifically, we propose changes to Unit 1 License Condition 2.C.(37) and Unit 2 License Condition 2.C.(21).

The proposed changes modify, for Units 1 and 2, License Conditions added by the NRC in Amendment No. 136 to Facility Operating License No. NPF-11 and Amendment No. 121 to Facility Operating License No. NPF-18. The License Conditions prohibit the moving of any fuel assemblies within the reactor pressure vessel unless all control rods except one are fully inserted during refueling in Mode 5. The proposed changes reword the license conditions as follows.

The licensee is prohibited from loading and shuffling any fuel assemblies within the reactor pressure vessel, unless all control rods are fully inserted during refueling in Operational Condition 5, "Refueling."

The information supporting the proposed changes is subdivided as follows.

1. Attachment A gives a description and safety analysis of the proposed changes.
2. Attachment B includes the marked-up license pages with the proposed changes indicated.

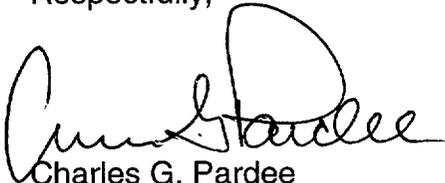
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The proposed changes have been reviewed by the LaSalle County Station Plant Operations Review Committee (PORC) and approved by the Nuclear Safety Review Board (NSRB) in accordance with the Quality Assurance Program.

ComEd is notifying the State of Illinois of this application for amendment by transmitting a copy of this letter and its attachments to the designated State Official.

Should you have any questions concerning this letter, please contact Mr. Frank A. Spangenberg, III, Regulatory Assurance Manager, at (815) 357-6761, extension 2383.

Respectfully,



Charles G. Pardee  
Site Vice President  
LaSalle County Station

Attachments:

- Attachment A: Description and Summary Safety Analysis for the Proposed Changes
- Attachment B: Marked-up License Pages for the Proposed Changes
- Attachment C: Information Supporting a Finding of No Significant Hazards Consideration
- Attachment D: Information Supporting an Environmental Assessment

cc: Regional Administrator – NRC Region III  
NRC Senior Resident Inspector – LaSalle County Station  
Office of Nuclear Facility Safety - Illinois Department of Nuclear Safety

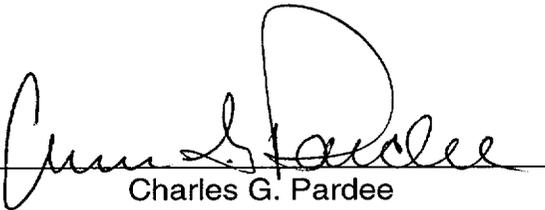
STATE OF ILLINOIS )  
IN THE MATTER OF )  
COMMONWEALTH EDISON COMPANY )  
LASALLE COUNTY STATION - UNIT 1 & UNIT 2 )

Docket Nos. 50-373  
50-374

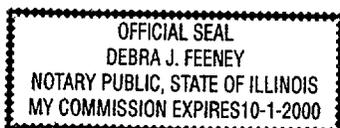
Subject: Application for Amendment to Unit 1 License Condition 2.C.(37)  
and Unit 2 License Condition 2.C.(21)

**AFFIDAVIT**

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

  
Charles G. Pardee  
Site Vice President  
LaSalle County Station

Subscribed and sworn to before me, a Notary Public in and for the State above named, this 27<sup>th</sup> day of April, 2000.  
My Commission expires on 10-1, 00.



  
Notary Public

ATTACHMENT A  
Proposed Changes to License Conditions for  
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**DESCRIPTION AND SAFETY ANALYSIS  
FOR THE PROPOSED CHANGES**

**A. SUMMARY OF THE PROPOSED CHANGES**

In accordance with 10 CFR 50.90, "Application for amendment of license or construction permit," Commonwealth Edison (ComEd) Company proposes changes to Operating License Nos. NPF-11 and NPF-18. Specifically, we propose changes to Unit 1 License Condition 2.C.(37) and Unit 2 License Condition 2.C.(21).

The proposed changes modify, for Units 1 and 2, License Conditions added by the NRC in Amendment No. 136 to Facility Operating License No. NPF-11 and Amendment No. 121 to Facility Operating License No. NPF-18. The License Conditions prohibit the moving of any fuel assemblies within the reactor pressure vessel unless all control rods except one are fully inserted during refueling in Mode 5. The proposed changes reword the license conditions as follows.

The licensee is prohibited from loading and shuffling any fuel assemblies within the reactor pressure vessel, unless all control rods are fully inserted during refueling in Operational Condition 5, "Refueling."

The proposed changes are described in detail in Section E of this Attachment. The marked-up license pages are shown in Attachment B.

**B. DESCRIPTION OF THE CURRENT REQUIREMENTS**

The NRC, in a letter dated October 18, 1999, added License Condition 2.C.(37) to LaSalle County Station, Unit 1, Operating License and License Condition 2.C.(21) to the Unit 2 Operating License. The license conditions are worded as follows.

The licensee is prohibited from moving any fuel assemblies within the reactor pressure vessel unless all control rods except one are fully inserted during refueling in Mode 5.

**C. BASES FOR THE CURRENT REQUIREMENT**

In a submittal dated August 13, 1999, we proposed changes to Technical Specifications (TS) Section 1.0, "Definitions," Item 1.7, "Core Alteration," to allow the maintenance and replacement of control rod drives and nuclear instrumentation to be conducted without these activities being designated as a Core Alteration. The purpose of the proposed changes was to allow maintenance and replacement of multiple control rod drives and nuclear instrumentation at the same time, during a refueling. The NRC in a letter dated October 18, 1999, approved the proposed changes and added License Condition 2.C.(37) to the LaSalle County Station, Unit 1, Operating License and License Condition 2.C.(21) to the Unit 2 Operating License.

The NRC noted in its letter of October 18, 1999, that TS Section 3/4.1.1, "Shutdown Margin," is based on the following assumptions:

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- The highest worth single control rod is withdrawn.
- The refueling equipment interlocks are operable and prevent the withdrawal of a second control rod or fuel assembly loading of an unrodded core cell.

The NRC additionally noted that the approval of the revision to the definition for Core Alteration would allow the defeating of the refueling equipment interlocks in order to permit the withdrawal of multiple control rods. The NRC noted that in this situation, if a second control rod is withdrawn from a fueled core cell or an unrodded core cell is loaded with a fuel assembly, protection against criticality is not guaranteed. Thus, the NRC letter of October 18, 1999, included the License Conditions to prohibit the moving of any fuel assemblies within the Reactor Pressure Vessel (RPV) unless all control rods except one are fully inserted, during refueling in Mode 5.

#### **D. NEED FOR REVISION OF THE REQUIREMENT**

LaSalle County Station, Unit 1, utilized the revised Core Alteration definition during the last refueling outage, in the Fall of 1999. The revised definition allowed Unit 1 to perform maintenance and replacement of multiple control rod drives and nuclear instrumentation at the same time, during the refueling. An unanticipated situation developed which required maintenance to a control rod drive in a fueled core cell. The core cell could not be immediately defueled and the control rod drive repaired, due to Unit 1 License Condition 2.C.(37). Specifically, since other control rods had been removed, the fuel assemblies from the core cell in question could not be offloaded until all control rods, except one, were replaced in the RPV.

#### **E. DESCRIPTION OF THE PROPOSED CHANGES**

The proposed changes modify the Units 1 and 2 License Conditions as follows.

The licensee is prohibited from loading and shuffling any fuel assemblies within the reactor pressure vessel, unless all control rods are fully inserted during refueling in Operational Condition 5, "Refueling."

In this way, during a refueling with multiple control rods withdrawn, fueled assemblies can be removed from a core cell if the fuel assemblies are not loaded or shuffled within the RPV.

#### **F. SAFETY ANALYSIS OF THE PROPOSED CHANGES**

Fuel assembly movements during a refueling that affect shutdown margin are grouped into the three categories identified below.

- Loading - Movement of a fuel assembly from outside the RPV to a core cell location within the RPV.
- Shuffling - Movement of a fuel assembly from one core cell location to another core cell location within the RPV.

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- Offloading - Movement of a fuel assembly from a core cell location directly to a location outside the RPV.

The shuffling and loading of a fuel assembly, during a refueling, requires the insertion of a fuel assembly into a core cell location. The proposed changes to the License Conditions will ensure that the required shutdown margin is maintained by requiring the full insertion of all control rods during fuel assembly movements that involve the insertion of a fuel assembly into a core cell location. The proposed changes are consistent with the NRC guidance contained in NRC Information Notice No. 83-35, "Fuel Movement with Control Rods Withdrawn at BWRs," and the guidance contained in General Electric Service Information Letter (SIL) 372, "Recommended Technical Specifications for Fuel Loading."

The offloading of a fuel assembly, during a refueling, does not require the insertion of a fuel assembly into a core cell location. The required shutdown margin is ensured during offloading by the fuel assembly and control rod requirements specified in TS Sections 3/4.9.10.1, "Single Control Rod Removal," and 3/4.9.10.2, "Multiple Control Rod Removal."

TS Section 3/4.9.10.1 allows the removal of a single control rod during refueling, if the following control rod restrictions are in place.

- All other control rods in a five-by-five array centered on the control rod being removed are inserted and electrically or hydraulically disarmed, and
- All other control rods are inserted.

TS Section 3/4.9.10.1 control rod requirements are consistent with the current wording of the Units 1 and 2 License Conditions and will continue to be applicable with the proposed changes to the License Conditions specified in this submittal.

TS Section 3/4.9.10.2 allows the removal of multiple control rods, during a refueling, if the following fuel assembly and control rod restrictions are in place.

- All other control rods are either inserted or have the surrounding four fuel assemblies removed from the core cell, and
- The four fuel assemblies surrounding each control rod to be removed from the core and/or RPV, are removed from the core cell.

The fuel assembly and control rod restrictions of TS Section 3/4.9.10.2 will ensure that the core will be maintained sufficiently subcritical to preclude inadvertent criticality in the shutdown condition. The single failure inadvertent criticality concerns, during a refueling, are an unexpected withdrawal of a control rod or the loading of a fuel assembly into the wrong core location. The analysis of these single failure inadvertent criticality concerns for a fully loaded core has determined that the most limiting event is the unexpected withdrawal of the highest worth control rod from a fueled core cell.

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The single failure inadvertent criticality concerns for offloading fuel assemblies, under TS Section 3/4.9.10.2 fuel assembly and control rod restriction requirements, are bounded by the current analysis for an unexpected withdrawal of the highest worth control rod from a totally fueled core as follows.

- The utilization of the current TS Section 3/4.9.10.2 fuel assembly and control rod requirements will allow the withdrawal of multiple control rods in unfueled core cells. The withdrawal of control rods from unfueled core cells does not have a significant impact on the shutdown margin of the core and it does not have a significant reactivity impact on the calculation of the worth of the inserted control rods. Thus, the current analysis for an unexpected withdrawal of the highest worth control rod from a totally fueled core remains bounding during an offload refueling, in accordance with TS Section 3/4.9.10.2 with multiple control rods withdrawn.
- The utilization of TS Section 3/4.9.10.2 fuel assembly and control rod requirements will allow the withdrawal of multiple control rods in unfueled core cells. TS Section 3/4.9.10.2 requires that all fueled core cells have their control rods fully inserted. The most limiting single failure inadvertent criticality concern for inserting a fuel assembly into a core cell location, during offloading, is to load the assembly into a core cell that does not have its control rod inserted. This condition of having one fuel assembly in an unrodded core cell, has less of an effect on shutdown margin than having the withdrawal of the highest worth control rod from a totally fueled core cell. Thus, the current analysis for an unexpected withdrawal of the highest worth control rod from a totally fueled core remains bounding, during an offload refueling, in accordance with TS Section 3/4.9.10.2 fuel assembly and control rod requirements.

Additionally, the removal of a fuel assembly from a core cell location reduces the total core reactivity.

Thus, the proposed license conditions will provide assurance that the core will be maintained sufficiently subcritical to preclude inadvertent criticality during the loading, shuffling and offloading of a fuel assembly.

#### **G. IMPACT ON PREVIOUS SUBMITTALS**

We have reviewed the proposed changes regarding impact on any previous submittals, and have determined that there is no impact on any outstanding previous submittals.

#### **H. SCHEDULE REQUIREMENTS**

We request approval of this submittal by October 2, 2000, to support the LaSalle County Station, Unit 2, upcoming refueling outage, currently scheduled for early November 2000.

ATTACHMENT B  
Proposed Changes to License Conditions for  
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**MARKED-UP LICENSE PAGES**

Am. 117 (36)  
01/29/97

Relocated Technical Specifications

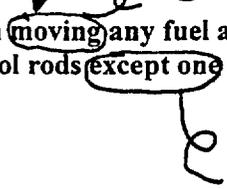
Commonwealth Edison Company shall relocate certain technical specification requirements to licensee-controlled documents as described below. The location of these requirements shall be retained by the licensee.

- a. This license condition approves the relocation of certain technical specification requirements to licensee-controlled documents (UFSAR), as described in the licensee's application dated October 31, 1996. The approval is documented in the staff's safety evaluation dated January 29, 1997. This license condition is effective as of its date of issuance by Amendment No. 117 and shall be implemented within 90 days from the date of issuance. Implementation shall include the relocation of technical specifications requirements to the appropriate licensee-controlled document as identified in the licensee's application dated October 31, 1996.

Am. 136 (37)  
10/18/99

The licensee is prohibited from moving any fuel assemblies within the reactor pressure vessel unless all control rods except one are fully inserted during refueling in Mode 5.

loading and shuffling



*loading and shuffling*

Am. 121  
10/18/99

(21) The licensee is prohibited from moving any fuel assemblies within the reactor pressure vessel unless all control rods except one are fully inserted during refueling in Mode 5.

Am. 87  
3/16/95

D. The facility requires exemptions from certain requirements of 10 CFR Part 50, 10 CFR Part 70, and 10 CFR part 73. These include:

- (a) Exemptions from certain requirements of Appendices G, H and J to 10 CFR part 50, and to 10 CFR Part 73 are described in the Safety Evaluation Report and Supplement Numbers 1, 2, 3, and 5 to the Safety Evaluation Report.
- (b) An exemption was requested until completion of the first refueling from the requirements of 10 CFR 70.24.
- (c) An exemption from the requirement of paragraph III.D of Appendix J to conduct the third Type A test of each ten-year service period when the plant is shutdown for the 10-year plant inservice inspections.
- (d) A one-time exemption from the requirement of paragraph III.A.6(b) of Appendix J to resume a Type A test schedule of three times in ten years. Exemptions (c) and (d) are described in the Safety Evaluation accompanying Amendment No. 87 to this license.

Am. 97  
04/05/96

- (e) An exemption was granted to remove the Main Steam Isolation Valves (MSIVs) from the acceptance criteria for the combined local leak rate test (Type B and C), as defined in the regulations of 10 CFR Part 50, Appendix J, Option B, Paragraph III.B. Exemption (e) is described in the safety evaluation accompanying Amendment No. 97 to this License.

These exemptions are authorized by law and will not endanger life or property or the common defense and security and are otherwise in the public interest. Therefore, these exemptions are hereby granted. The facility will operate, to the extent authorized herein, in conformity with the application, as amended, and the rules and regulations of the Commission (except as hereinafter exempted therefrom), and the provisions of the Act.

E. Before engaging in additional construction or operational activities which may result in a significant adverse environmental impact that was not evaluated or that is significantly greater than that evaluated in the Final Environmental Statement and its Addendum, the licensee shall provide a written notification to the Director of the Office of Nuclear Reactor Regulation and receive written approval from that office before proceeding with such activities.

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

Commonwealth Edison (ComEd) Company has evaluated the proposed changes and has determined that the proposed changes do not involve a significant hazards consideration and is providing the following information to support a finding of no significant hazards consideration. According to 10 CFR 50.92(c), a proposed amendment to an operating license involves no significant hazards consideration if operation of the facility in accordance with the proposed amendment would not:

Involve a significant increase in the probability of occurrence or consequences of an accident previously evaluated;

Create the possibility of a new or different kind of accident from any previously analyzed;  
or

Involve a significant reduction in a margin of safety.

The proposed changes to LaSalle County Station, Unit 1, License Condition 2.C.(37) and Unit 2 License Condition 2.C.(21), modify the License Conditions to prohibit the loading and shuffling of any fuel assemblies within the Reactor Pressure Vessel (RPV), unless all control rods are fully inserted during refueling in Operational Condition 5, "Refueling."

The information supporting the determination that the criteria set forth in 10 CFR 50.92 is met for these proposed changes is provided below.

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

The proposed changes to LaSalle County Station, Unit 1, License Condition 2.C.(37) and Unit 2 License Condition 2.C.(21), will require that control rods be fully inserted during the loading and shuffling of fuel assemblies during refueling in Operational Condition 5. The requirement to have control rods fully inserted during the loading or shuffling of fuel assemblies, during a refueling in Operational Condition 5, does not have an effect on any accident previously evaluated. The removal of fuel assemblies from the RPV does not affect the initiators or assumptions of a previously analyzed accident, including inadvertent critically. Thus, the probability of the occurrence of an accident previously evaluated is not increased.

The proposed changes do not affect the analyzed refueling accidents, the integrity of the Reactor Coolant System or Secondary Containment. Thus, the radiological consequences of an accident previously evaluated are not increased.

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

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

The proposed changes to the Units 1 and 2 License Conditions do not affect the assumed accident performance of any structure, system, or component previously evaluated. The proposed changes do not introduce any new modes of system operation or failure mechanisms.

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

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

The shutdown margin required during a refueling is specified in Technical Specifications (TS) Section 3/4.1.1, "Shutdown Margin." The required shutdown margin ensures that the core will be maintained sufficiently subcritical to preclude inadvertent criticality in the shutdown condition. The single failure inadvertent criticality concerns, during a refueling, are an unexpected withdrawal of a control rod and the loading of a fuel assembly into the wrong core cell location. The analysis of these single failure inadvertent criticality concerns, for a fully loaded core, has determined that the most limiting event is the unexpected withdrawal of the highest worth control rod from a fueled core cell.

The proposed changes, to the Units 1 and 2 License Conditions, will prohibit the loading and shuffling of any fuel assembly within the RPV unless all control rods are fully inserted during a refueling in Operational Condition 5. The unloading of a fuel assembly will be consistent with the fuel assembly and control rod requirements of TS Sections 3/4.9.10.1, "Single Control Rod Removal," and 3/4.9.10.2, "Multiple Control Rod Removal." These TS requirements ensure that the proposed changes to the license conditions will provide assurance that the current analysis for an unexpected withdrawal of the highest worth control rod from a totally fueled core remains bounding during a refueling outage.

Thus, the proposed changes do not involve a significant reduction in a margin of safety.

Therefore, based upon the above evaluation, ComEd has concluded that the proposed changes do not constitute a significant hazards consideration.

**ATTACHMENT D**  
**Proposed Changes to License Conditions for**  
**LaSalle County Station, Units 1 and 2**

**INFORMATION SUPPORTING AN ENVIRONMENTAL ASSESSMENT**

ComEd has evaluated these proposed changes against the criteria for identification of licensing and regulatory actions requiring environmental assessment in accordance with 10 CFR 51.21. ComEd has determined that these proposed changes meet the criteria for a categorical exclusion set forth in 10 CFR 51.22(c)(9) and as such, has determined that no irreversible consequences exist in accordance with 10 CFR 50.92(b). This determination is based on the fact that these changes are being proposed as an amendment to a license issued pursuant to 10 CFR 50, that the proposed changes are to a requirement with respect to installation or use of a facility component located within the restricted area, as defined in 10 CFR 20, or that changes are proposed to an inspection or a surveillance requirement, and the amendment meets the following specific criteria:

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

As demonstrated in Attachment C, these proposed changes do not involve any significant hazards consideration.

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

As documented in Attachment C there will be no significant increase in the amounts, and no significant change in the types of any effluents released offsite.

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

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 these proposed changes.