

March 22, 2000

Template # NRR-058

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: LASALLE - ISSUANCE OF EXIGENT AMENDMENT ON WELD EXAMINATION  
(TAC NO. MA8259)

Dear Mr. Kingsley:

The U.S. Nuclear Regulatory Commission (Commission) has issued the enclosed Amendment No. 123 to Facility Operating License No. NPF-18 for the LaSalle County Station, Unit 2. The amendment is in response to your application for an exigent amendment dated February 21, 2000.

The amendment changes Technical Specification Surveillance Requirement 4.0.5.f to allow the required examination of weld RH-2005-29 to be deferred until the next scheduled refueling outage or December 31, 2000, whichever is earlier. The TS change is issued as a follow-up to NOED 00-6-003, which was verbally granted on February 18, 2000.

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,

/RA/

Donna M. Skay, Project Manager, Section 2  
Project Directorate III  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Docket No. 50-374

Enclosures: 1. Amendment No. 123 to NPF-18  
2. Safety Evaluation

cc w/encls: See next page

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\*see previous page for concurrence

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

COMMONWEALTH EDISON COMPANY

DOCKET NO. 50-374

LASALLE COUNTY STATION, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 123  
License No. NPF-18

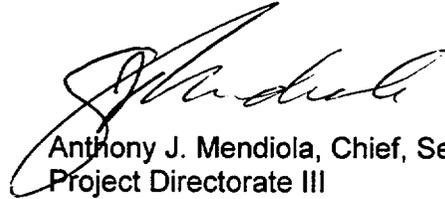
1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment filed by the Commonwealth Edison Company (the licensee), dated February 21, 2000, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's 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 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 set forth in 10 CFR Chapter I;
  - 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 enclosure to this license amendment and paragraph 2.C.(2) of the Facility Operating License No. NPF-18 is hereby amended to read as follows:

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 123 , and the Environmental Protection Plan contained in Appendix B, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. This license amendment is effective as of the date of its issuance and shall be implemented within 30 days.

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: March 22, 2000

ATTACHMENT TO LICENSE AMENDMENT NO. 123

FACILITY OPERATING LICENSE NO. NPF-18

DOCKET NO. 50-374

Replace the following page of the Appendix "A" Technical Specifications with the enclosed page. The revised page is identified by amendment number and contains a vertical line indicating the area of change.

REMOVE

3/4 0-3

INSERT

3/4 0-3

## APPLICABILITY

### SURVEILLANCE REQUIREMENTS (Continued)

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- c. The provisions of Specification 4.0.2 are applicable to the above required frequencies for performing inservice inspection and testing activities.
- d. Performance of the above inservice inspection and testing activities shall be in addition to other specified Surveillance Requirements.
- e. Nothing in the ASME Boiler and Pressure Vessel Code shall be construed to supersede the requirements of any Technical Specification.
- f. The inservice inspection program for piping identified in NRC Generic Letter 88-01 shall be performed in accordance with the NRC staff positions on schedule, methods, personnel, and sample expansion included in Generic Letter 88-01 or in accordance with alternate measures approved by the NRC staff.

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\*Augmented examination of weld RH-2005-29, per the approved program, will be deferred until the next scheduled refueling outage, L2R08, or December 31, 2000, whichever is earlier.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 123 TO FACILITY OPERATING LICENSE NO. NPF-18

COMMONWEALTH EDISON COMPANY

LASALLE COUNTY STATION, UNIT 2

DOCKET NO. 50-374

1.0 INTRODUCTION

By letter dated February 21, 2000, Commonwealth Edison Company (ComEd, the licensee) submitted a request to amend the LaSalle County Station, Unit 2, Technical Specifications (TSs). The proposed amendment would add a footnote to TS Surveillance Requirement (SR) 4.0.5.f that would allow the required examination of weld RH-2005-29 to be deferred until the next scheduled refueling outage or December 31, 2000, whichever is earlier.

LaSalle, Unit 2, TS 3.4.8, "Structural Integrity," requires that the structural integrity of American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code (Code) Class 1, 2, and 3 components be maintained in accordance with SR 4.4.8. SR 4.4.8 requires no additional surveillance requirements other than those required by SR 4.0.5. SR 4.0.5.f requires that the inservice inspection program for piping identified in NRC Generic Letter (GL) 88-01, "NRC Position on IGSCC [intergranular stress corrosion cracking] in BWR Austenitic Stainless Steel Piping," be performed in accordance with the NRC staff positions on schedule, methods, and sample expansion included in GL 88-01 or in accordance with alternate measures approved by the NRC staff.

During a review of historical examination data for welds susceptible to IGSCC, the licensee discovered a clerical error involving two IGSCC susceptible welds in the Unit 2 Residual Heat Removal Shutdown Cooling return piping. The licensee's records depicted these two welds at different physical locations than the inservice inspection drawings. Therefore, the stress relief that was documented to have been applied to these two welds was actually applied to welds designated RH-2005-30 and RH-2005-33. Consequently, welds 28 and 29 have never been subjected to any stress improvement process and should have been categorized as Category D, in accordance with GL 88-01. The examination schedule for Category D welds would have required that the two welds be examined every two refueling cycles beginning with the second refueling outage. Examinations of weld RH-2005-28 were not completed during the third or fifth refueling outages, but this weld was examined during the seventh refueling outage which ended in April 1999. Therefore, this weld is not required to be examined again until the ninth refueling outage, currently scheduled for fall 2002 and no examination deferral is needed for weld RH-2005-28.

Weld RH-2005-29 was examined during the third refueling outage (completed in March 1990) but was not reexamined during the fifth or seventh refueling outages as required by ComEd's augmented inspection program. Because weld RH-2005-29 had not been examined since 1990, the requirements of TS SR 4.0.5.f could not be met and TS 3.4.8, Action A was entered. TS 3.4.8, Action A for Class 1 piping requires restoration of the structural integrity of the affected component to within its limit, or isolation of the component prior to increasing the Reactor Coolant System temperature more than 50 degrees Fahrenheit above the minimum temperature required by nil-ductility transition considerations. When the error was discovered, the unit was at a temperature in excess of this requirement and the action statement could not be complied with, requiring entry into TS 3.0.3 which would require shutdown of the unit. On February 18, 2000, the NRC staff verbally granted a Notice of Enforcement Discretion from the requirements of TS 4.0.5.f. The staff concluded that Criterion 1 of Section B and the applicable criteria in Section C.4 to NRC Manual Chapter 9900, "Technical Guidance, Operations - Notice of Enforcement Discretion (NOED)," was met. Criterion 1 of Section B states that for an operating plant, the NOED is intended to avoid an undesirable transient as a result of forcing compliance with the license condition and, thus, minimize the potential safety consequences and operational risks.

The licensee proposes to amend the Unit 2 TS by adding a footnote to TS SR 4.0.5.f that allows the licensee to defer the required examination of weld RH-2005-29 until the next refueling outage or December 31, 2000, whichever is earlier. This exigent amendment supersedes and terminates the previously granted NOED.

## 2.0 EVALUATION

Weld RH-2005-29 is considered a category D weld, which is a weld made of susceptible materials that has not received an IGSCC mitigation treatment. By deferring the required augmented inspection of this weld as the licensee proposes, information regarding the condition of this weld would not be available until the next refueling outage. The licensee has stated that, for the reasons discussed below, it believes that the weld is in an acceptable condition and, if the weld is flawed, compensatory measures are in place that will ensure leaks would be readily detected.

A report by the Boiling Water Reactor Vessel and Internals Project-75 (BWRVIP) Electric Power Research Institute (EPRI) Technical Report (TR) 113932, "BWR Vessel and Internals Project, Technical Basis for Revisions to Generic Letter 88-01 Inspection Schedules," states that industry experience for examination of Category D welds has been excellent. The report states that of the 33 plants that responded to the survey, there are 432 Category D welds that have been examined 1325 times, and only one crack was detected. In that case, the cracking occurred in a dissimilar weld that had experienced multiple repairs. Weld RH-2005-29 at LaSalle is not a dissimilar metal weld and has had no documented weld repairs.

ComEd also stated that, based on a review of the LaSalle Unit 2 reactor water chemistry program, chemistry parameters have been maintained within (EPRI) guidelines 93.7 percent of the time since the last inspection of weld RH-2005-29 in 1990 and, when a non-standard condition developed, the EPRI guidelines were followed to restore chemistry to normal

operating parameters. ComEd stated that no major chemistry excursions have occurred since the last weld examination in 1990.

Previous examinations of this weld and the weld on the opposite side of the valve, with a similar operating environment, showed no indications.

The licensee stated that, if the weld is actually flawed due to weld-unique conditions, safety is not jeopardized because austenitic stainless steel is ductile and IGSCC has an irregular crack form and, therefore, the piping will leak before it breaks. ComEd stated that a plant-specific flaw evaluation was performed to assess the weld using the loads from the LaSalle stress reports and the results are bounded by the EPRI Report NP-4991, "Application of the Leak-Before-Break Approach to BWR Piping." Therefore, ComEd concluded that if weld RH-2005-29 is flawed, it will create a leak that would be readily detected by reactor coolant system leakage detection instrumentation well in advance of the pipe break. ComEd stated that, as a compensatory action, the leak detection system is operating properly and will provide reasonable assurance that small leaks across the reactor coolant system boundary can be detected. The staff agrees that stainless steel piping has high fracture toughness and that loading in piping usually includes bending loads that tend to promote asymmetrical crack growth. This would tend to promote a leak rather than rupture. However, the staff has neither reviewed the cited report nor approved "Leak-Before-Break" for BWR piping subject to IGSCC.

The staff has reviewed the licensee's justifications for deferring examination of weld RH-2205-29. Based on industry operating experience, previous examinations of this weld and similar welds at LaSalle, and the data from LaSalle's reactor water chemistry program, the staff agrees that the weld would not be expected to fail catastrophically during the requested operating period. We agree that the leak detection system would identify significant leakage that would be a precursor to severance of the pipe. However, based on available information, we cannot conclude that design margins would be maintained.

The staff also reviewed ComEd's risk assessment and agreed that the core damage frequency and large early release frequency associated with deferring this examination are well below the risk increase thresholds considered acceptable for permanent plant changes as delineated in Regulatory Guide 1.174, "An Approach for Using Probabilistic Risk Assessment in Risk-Informed Decisions on Plant Specific Changes to the Licensing Basis," and are much lower than the risks associated with shutting down the reactor for a forced outage.

Therefore, the staff has determined that a deferral of the augmented examination for weld RH-2005-29 until the next refueling outage or December 31, 2000, is acceptable.

### 3.0 EXIGENT CIRCUMSTANCES

In its submittal, the licensee requested that the NRC review and approve the proposed change as an exigent amendment pursuant to 10 CFR 50.91(a)(6). This TS change is issued as a follow-up amendment to NOED 00-6-03, which was verbally granted on February 18, 2000. The public notification used was a shortened individual Federal Register notice (65 FR 11809, March 6, 2000) with a comment period of 2 weeks and maintaining the normal 30-day period to request a hearing.

In support of its exigent amendment request, the licensee stated that during a recent review of historical IGSCC weld examination data, a clerical error was discovered involving two IGSCC-susceptible welds in the Unit 2 "A" residual heat removal shutdown cooling return piping. The stress relief that was believed to have been applied to welds RH-2005-28 and RH-2005-29 was actually applied to other welds. Consequently, these two welds have never been subjected to any stress improvement process and should have been categorized as IGSCC Category D welds in accordance with GL 88-01. The examination for Category D welds would have required that the two welds be examined every two refueling cycles, beginning with refueling cycle L2R02 in 1987. ComEd states that it "had no prior knowledge of this clerical error."

Weld RH-2005-29 was examined in the third refueling outage (March 1990) with no indication of cracking noted, but was not reexamined during the fifth or seventh refueling outages. Examination of the welds requires the plant to be in a shutdown condition. ComEd requested enforcement discretion to allow continued operation of Unit 2 by deferring the required augmented examination of the weld until the next refueling outage in order to avoid cycling the unit through a thermal transient. The NRC staff reviewed ComEd's safety rationale for the requested enforcement discretion and verified that the request not to enforce compliance with TS 3.4.8 for weld number RH-2005-29 until an exigent amendment is reviewed and approved does not involve an increase in risk to the safe operation of LaSalle, Unit 2. Therefore, the staff issued an NOED for the period from February 18, 2000, until an amendment request is approved and implemented.

As stated below, the NRC has determined that the amendment request involves no significant hazards consideration. Additionally, ComEd and the Commission must act quickly and time does not permit the Commission to publish a Federal Register notice allowing 30 days for prior public comment. Moreover, based on ComEd's February 21, 2000 submittal, the NRC finds that ComEd did not act to create the exigency. Accordingly, the NRC finds that the requirements of 10 CFR 50.91(a)(6) have been satisfied.

#### 4.0 FINAL NO SIGNIFICANT HAZARDS CONSIDERATION DETERMINATION

The Commission has provided standards for determining whether a significant hazards consideration exists (10 CFR 50.92(c)). A proposed amendment to an operating license for a facility involves no significant hazards consideration if operation of the facility in accordance with the proposed amendment would not: (1) involve a significant increase in the probability or consequences of an accident previously evaluated; or (2) create the possibility of a new or different kind of accident from any accident previously evaluated; or (3) involve a significant reduction in a margin of safety.

The licensee has analyzed the proposed amendment to determine if a significant hazards consideration exists, as follows:

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

The proposed change represents a minimal increase in the probability of a pipe break resulting in a Loss of Coolant Accident (LOCA). The proposed change will not impact

the source term used in the derivation of the LOCA dose consequences. Therefore, the consequences will remain unchanged since the resulting LOCA is bounded by current analysis.

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

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

The proposed change does not introduce a new mode of plant operation and does not involve a physical modification to the plant. The proposed change does not introduce a new failure mode.

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

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

Since the LOCA analysis remains unchanged, the fuel integrity margin, as expressed as Peak Cladding Temperature, is not affected. The change does not impact the Reactor Coolant Pressure Boundary Overpressure Analysis; therefore the margin of safety for the Reactor Coolant Pressure Boundary is not affected. The blowdown energy, resulting from a LOCA and the ability of the suppression chamber to maintain the margin of safety of the containment barrier are not affected.

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

The staff has reviewed the licensee's analysis and agrees with it. The staff, thus, makes a final determination that this amendment does not involve a significant hazards consideration.

## 5.0 STATE CONSULTATION

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

## 6.0 ENVIRONMENTAL CONSIDERATION

The amendment changes a surveillance requirement. The NRC staff has determined that the amendment involves 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 made a final finding that the amendment involves no significant hazards consideration. Accordingly, the amendment meets 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 amendment.

## **7.0 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 amendment will not be inimical to the common defense and security or to the health and safety of the public.

**Principal Contributor:** D. Skay

**Date:** March 22, 2000