

Commonwealth Edison Company  
LaSalle Generating Station  
2601 North 21st Road  
Marseilles, IL 61341-9757  
Tel 815-357-6761



June 12, 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:** Plant Specific ECCS Evaluation Changes – 10 CFR 50.46  
Report

- References:**
- (1) Letter from J. A. Benjamin (Commonwealth Edison (ComEd) Company) to U.S. NRC, "Plant Specific ECCS Evaluation Changes – 10 CFR 50.46 Report, LaSalle County Station, Units 1 and 2, Facility Operating Licenses NPF-11 and NPF-18, NRC Dockets Nos. 50-373 and 50-374," dated February 9, 2000.
  - (2) Letter from R. M. Krich (ComEd) to U.S. NRC, "Request for License Amendment for Power Uprate Operation, LaSalle County Station, Units 1 and 2, Facility Operating Licenses NPF-11 and NPF-18, NRC Dockets Nos. 50-373 and 50-374," dated July 14, 1999.
  - (3) Letter from D. M. Skay (U.S. NRC) to O. D. Kingsley (ComEd), "LaSalle – Issuance of Amendments Regarding Power Uprate (TAC Nos. MA6070 and MA6071," dated May 9, 2000.
  - (4) "Project Task Report, LaSalle County Station, Power Uprate Evaluation, Task 407: ECCS Performance," GE report number GE-NE-A1300384-39-01, Revision 0, Class 3, dated September 1999.
  - (5) "LaSalle LOCA-ECCS Analysis MAPLHGR Limits for ATRIUM™-9B Fuel," Siemens document EMF-2175(P), dated March 1999.

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This letter fulfills the thirty day and annual reporting requirement of 10 CFR 50.46(a)(3) for LaSalle County Station, Units 1 and 2. The previously calculated Peak Cladding Temperature (PCT) of 1301°F for GE fuel was reported in Reference 1. The PCT remains at 1301°F for power uprate. However, LaSalle County Station, Units 1 and 2, are establishing a new analysis of record for GE fuel as a result of the mid-cycle power uprate of five (5) percent (%) of rated thermal power for the current operating cycles, Cycle 9 and Cycle 8, respectively (References 2 and 3). The sum of the absolute magnitudes of these changes was 110°F. However, the net change in PCT is 0°F from the PCT reported in Reference 1.

In addition to reporting this change, we are including in this submittal all other changes to PCT since the submittal of the previous annual report. Therefore, this submittal will also fulfill the annual reporting requirement of 10 CFR 50.46(a)(3).

Both units employ a mixed core design containing co-resident General Electric (GE) and Siemens Power Corporation (SPC) fuel. The Loss of Coolant Accident (LOCA) analyses of record for both GE fuel and SPC fuel are within all of the acceptance criteria set forth in 10 CFR 50.46.

The GE fuel in both units is bounded by the new GE LOCA analysis performed for power uprate (Reference 4), which is summarized in Attachment 1. The GE LOCA analysis was approved in 1999 and utilizes approved methodology.

The SPC fuel in both units is bounded by the current SPC LOCA analysis identified in Reference 5 and the +18°F increase due to SPC identified code errors (Attachment 2, Margin Allocation). There have been no changes to the 1825°F PCT assessments for SPC fuel since the last 10 CFR 50.46 transmittal (Reference 1).

Attachments 1 and 2 provide PCT information for the limiting Loss of Coolant Accident evaluations for LaSalle County Station, including all assessments as of June 12, 2000. The assessment notes are contained in Attachment 3 and provide a detailed description for each change or error reported.

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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,

A handwritten signature in black ink, appearing to read "Charles G. Pardee". The signature is fluid and cursive, with a large loop at the end.

Charles G. Pardee  
Site Vice President  
LaSalle County Station

Attachment

cc: Regional Administrator – NRC Region III  
NRC Senior Resident Inspector – LaSalle County Station

## Attachment 1

### LaSalle Units 1 and 2 10 CFR 50.46 Report (GE Fuel)

PLANT NAME: LaSalle Units 1 and 2  
ECCS EVALUATION MODEL: SAFER/GESTR LOCA  
REPORT REVISION DATE: 6/12/2000  
CURRENT OPERATING CYCLES: L1C9 and L2C8

#### ANALYSIS OF RECORD

Evaluation Model Methodology: "GESTR-LOCA and SAFER Models for the Evaluation of the Loss-of-Coolant Accident", Volumes I, II and III, NEDE-23785-1-P-A, February, 1985.

Calculation: "Project Task Report, LaSalle County Station, Power Uprate Evaluation, Task 407: ECCS Performance," GE report number GE-NE-A1300384-39-01, Revision 0, Class 3, dated September 1999.

Fuel: GE8x8NB (GE9)

Limiting Single Failure: HPCS Diesel Generator

Limiting Break Size and Location: Double Ended Guillotine of Recirculation Suction Piping

Reference PCT: (Note 1) PCT = 1301°F

#### MARGIN ALLOCATION

- A. PRIOR LOCA MODEL ASSESSMENTS  
None due to new analysis of record
- B. CURRENT LOCA MODEL ASSESSMENTS (Since 2/9/2000 submittal)
- |  |                      |
|--|----------------------|
| Counter Current Flow Limitation (CCFL) coefficient error (Note 2) $\Delta$ PCT = +5°F                          | Included in Ref. PCT |
| Power Uprate based on GE9 (Note 3) $\Delta$ PCT = +30°F  | Included in Ref. PCT |
| Maximum Extended Load Line Limit Analysis (MELLLA) and Increased Core Flow (ICF) (Note 4) $\Delta$ PCT = +20°F | Included in Ref. PCT |
| Limiting fuel changed from P8x8R to GE9 (Note 5) $\Delta$ PCT = -55°F  | Included in Ref. PCT |
| Revised Linear Heat Generation Rate (LHGR) and Average Planar Linear Heat Generation Rate (APLHGR) (Note 6)    | $\Delta$ PCT = +0°F  |

NET PCT: PCT = 1301°F

## Attachment 2

### LaSalle Units 1 and 2 10 CFR 50.46 Report (SPC Fuel)

PLANT NAME: LaSalle Units 1 and 2  
ECCS EVALUATION MODEL: EXEM BWR Evaluation Model  
REPORT REVISION DATE: 6/12/2000  
CURRENT OPERATING CYCLE: L1C9 and L2C8

#### ANALYSIS OF RECORD

Evaluation Model Methodology: Advanced Nuclear Fuels Corporation  
Methodology for Boiling Water Reactors EXEM  
BWR Evaluation Model, ANF-91-048(P)(A),  
January, 1993.

BWR Jet Pump Model Revision for RELAX,  
ANF-91-048(P)(A), Supplement 1 and  
Supplement 2, Siemens Power Corporation,  
October 1997.

Calculation: LaSalle LOCA-ECCS Analysis MAPLHGR Limits  
for ATRIUM™-9B Fuel, EMF-2175(P),  
March, 1999.

and

LOCA Break Spectrum Analysis for LaSalle  
Units 1 and 2, EMF-2174(P), March 1999.

Fuel: ATRIUM™-9B

Limiting Single Failure: HPCS Diesel Generator

Limiting Break Size and Location: Discharge side 1.1 ft<sup>2</sup> Recirculation Line Break

Reference PCT: PCT = 1807°F

#### MARGIN ALLOCATION

A. PRIOR LOCA MODEL ASSESSMENTS Not included in Ref. PCT  
Described to USNRC on February 9, 2000

SPC Incorrect RELAX Decay Heat Model  $\Delta$ PCT = +8°F  
SPC Incorrect RELAX Fuel Avg. Temperature  $\Delta$ PCT = +10°F

B. CURRENT LOCA MODEL ASSESSMENTS (Since 2/9/2000 submittal)

None

NET PCT: PCT = 1825°F

## Attachment 3

### LaSalle Units 1 and 2 PCT Assessment Notes

#### 1. Power Uprate GE SAFER/GESTR LOCA Analysis

For Power Uprate to 3489 MWth, the new SAFER/GESTR-LOCA analysis of record PCT included adders for the bottom head drain, CCFL error, and the jet pump riser flaw evaluation. GE explicitly determined the PCT impact of power uprate and MELLLA with ICF separately for reporting purposes. It was done for GE9 fuel type only since it is the only GE bundle type remaining in either unit cores.

#### 2. CCFL Coefficient error (PCT increase)

GE reported an error to the USNRC for some applications of the GE LOCA Evaluation Model SAFER/GESTR. It was determined that in some analyses a counter current flow coefficient was incorrectly specified. This error had impact on the GE9 fuel analysis for LaSalle and was not explicitly corrected in the SAFER/GESTR-LOCA power uprate calculation. However, this error was included in the analysis of record PCT results.

#### 3. Power Uprate based on GE9 (PCT increase)

GE completed an explicit SAFER/GESTR-LOCA calculation based on GE9 fuel that determined a 30°F increase in PCT due to power uprate alone.

#### 4. MELLLA and ICF based on GE9 (PCT increase)

GE completed an explicit SAFER/GESTR-LOCA calculation based on GE9 fuel that determined a 20°F increase in PCT due to MELLLA alone.

#### 5. Limiting fuel type changed from P8x8R to GE9 (PCT decrease)

In the previous analysis of record, GE completed an explicit SAFER/GESTR-LOCA calculation based for both P8x8R and GE9 fuel that determined a -55°F decrease in PCT due to the fuel type change alone. The current LaSalle cycles for both units have only GE9 fuel remaining in the cores with Siemens ATRIUM-9B fuel. Therefore the conservative penalty for P8x8R can be removed.

#### 6. Revised LHGR and MAPLHGR ( no PCT change)

GE supplied ComEd an analysis demonstrating that with revised and improved LHGR and MAPLHGR limits only for higher bundle exposures, there was no impact on the PCT for GE fuel.