

November 16, 1995

Mr. D. L. Farrar, Manager
Nuclear Regulatory Services
Commonwealth Edison Company
Executive Towers West III
1400 Opus Place, Suite 500
Downers Grove, IL 60515

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION - LASALLE COUNTY STATION, UNITS 1
AND 2 (TAC NOS. M93597 AND M93598)

Dear Mr. Farrar:

By letter dated August 28, 1995, Commonwealth Edison Company (ComEd), the licensee of LaSalle, Units 1 and 2, proposed to amend Appendix A, Technical Specifications, of Facility Operating License Nos. NPF-11 and NPF-18 to support elimination of the Main Steam Isolation Valve Leakage Control System (MSIV LCS) and instead use the main steam drains and condenser to process MSIV leakage. The proposed changes would also increase the allowable MSIV leakage from 100 standard-cubic-foot-per-hour (scfh) for all four main steam lines to 100 scfh per steam line (400 scfh for all four main steam lines). The above submittal provided the licensee's evaluations to demonstrate seismic adequacy of the proposed alternate leakage pathway for each unit.

The staff has completed their preliminary review of your submittal and determined that additional information, as discussed in the enclosure, is required in order to complete the review.

We request that your response be provided within 30 days of receipt of this letter to meet the staff's review schedule.

This requirement affects one respondent and, therefore, is not subject to the Office of Management and Budget review under Public Law 96-511.

Sincerely,

Original signed by:

Robert M. Latta, Project Manager
Project Directorate III-2
Division of Reactor Projects - III/IV
Office of Nuclear Reactor Regulation

Docket Nos. 50-373, 50-374

Enclosure: Request for Additional
Information

cc w/encl: See next page

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Docket PUBLIC PDIII-2 r/f J. Roe (JWR) ACRS T-2 E26 B. Clayton, RIII
OGC R. Latta C. Moore R. Capra

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OFFICE	LA:PDIII-2	PM:PDIII-2	D:PDIII-2				
NAME	C. Moore	R. Latta:lm	R. Capra				
DATE	11/15/95	11/15/95	11/16/95				

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D. L. Farrar
Commonwealth Edison Company

LaSalle County Station
Unit Nos. 1 and 2

cc:

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REQUEST FOR ADDITIONAL INFORMATION

MAIN STEAM ISOLATION VALVE ALTERNATE LEAKAGE TREATMENT SYSTEM

LASALLE, UNITS 1 AND 2

1. The August 28, 1995, submittal indicated that the application of the Main Steam Isolation Valve Leakage Control System (MSIV LCS) amendment partly relied on the earthquake experience database contained in the Boiling Water Reactor Owners' Group (BWROG) Topical Report, "BWROG Report for Increasing MSIV Leakage Rate Limits and Elimination of Control Systems," NEDC-31858P, Revision 2. The NRC has not completed its review of the Topical Report. Subsequent to the issuance of the report, the NRC has sent the BWROG questions pertaining to the ground motion estimates developed in the database. The BWROG has not, as yet, responded to the NRC request for information.

For each of the earthquake-facility pairs in the experience database which are being relied upon to demonstrate the seismic adequacy of the alternate leakage path for LaSalle, Units 1 and 2, provide the following information:

- a. The name, location (latitude and longitude), and foundation geology (i.e., rock, deep soil, shallow soil) of the facility.
 - b. The name, date, time, epicenter (latitude and longitude), and magnitude of the earthquake and the closest distance from the facility to the earthquake rupture.
 - c. The 5 percent of critical damping response spectra of the ground motion estimated at the facility from the earthquake.
 - d. The method used to estimate the ground motion at the facility. If the ground motion is based on actual ground motion recordings, provide the location (latitude and longitude) and foundation geology of the recording station and its distance from the facility and its distance to the closest part of the fault rupture. If the estimation is based on a method other than an actual recording of the earthquake ground motion or if the recording station is not collocated with the facility, describe the method used to estimate the ground motion in detail and provide any ground motion attenuation equations which may have been used to obtain the estimate.
2. The submittal stated that the turbine building would not collapse under a safe shutdown earthquake (SSE). This conclusion appears to be based on the fact that there have been no known cases of structural collapse of either turbine buildings at power stations or structures of similar construction from an earthquake. To support the conclusion that the LaSalle turbine building will not collapse under an SSE, provide the following information:

ENCLOSURE

- a. Clarify whether the word "collapse" used in the submittal implies a total building collapse or a partial collapse, such as a roof beam collapse.
 - b. Justify the conclusion that the LaSalle turbine building will not collapse under an SSE, which was drawn on the basis that no other turbine buildings collapsed in past earthquakes.
 - c. Discuss the ground motion associated with the Uniform Building Code (UBC) seismic zone factor used for the LaSalle turbine building design. Since UBC dictates a seismic demand which is usually less conservative than an SSE, provide an evaluation or analysis to substantiate the structural integrity of the turbine building subject to the LaSalle SSE ground motion.
 - d. Provide in further detail (beyond what is already in the submittal), a description of the turbine building design features that are relied upon to resist seismic loads, and which would enable a determination of its structural behavior (e.g., concrete shear walls, steel moment resistant or braced frames, or a steel frame/concrete shear wall dual system).
3. NRC has not approved the use of a probabilistic approach to justify the adequacy of the condenser anchorage. Provide additional information or perform a deterministic evaluation to substantiate the assertion that the condenser anchorage system is indeed seismically adequate.
 4. The submittal stated that the piping supports and anchorages in the alternate leakage treatment (ALT) path were visually inspected during walkdowns. However, it is not clear whether the anchorages were evaluated for an SSE loading. Provide a justification for the adequacy of the anchorages for the piping supports. Refer to the criteria contained in the NRC IE Bulletin 79-02, "Pipe Support Base Plate Designs Using Concrete Expansion Anchors," and the USI A-46 Generic Implementation Procedure (GIP), developed by the Seismic Qualification Utilities Group, for the verification of seismic adequacy of nuclear power plant equipment, which are considered acceptable by the staff.
 5. Provide a legible piping and instrumentation diagram specifically for MSIV ALT path, which clearly indicates all the lines and equipment as well as system boundary included in the amendment request. Refer to the similar information provided on the same issue under the Susquehanna dockets.
 6. Provide an example document of a bounding seismic analysis for a representative portion of the ALT path piping that would yield the most conservative piping stresses and support loads, including the seismic input motion and methodology used.

7. Ensure that all the supports associated with the ALT path piping have been analyzed for their seismic capability, using seismic inputs and methodologies acceptable to the staff. Provide examples of analyses and calculations for representative pipe supports for staff review.
8. For the portions of the ALT path lines which utilized earthquake experience database as a method of demonstrating seismic adequacy, provide a comparison for the pipe thickness and pipe diameter-to-thickness ratio between LaSalle piping and database piping, for each pipe diameter involved.
9. Provide a detailed comparison between pipe spans in the ALT path and those in the database plants, considering both typical pipe runs as well as those with more unique layout configurations.
10. Provide the basis for concluding that the earthquake floor motions which excite the ALT piping are bounded (in terms of acceleration and frequency content) by those experienced by the corresponding database piping.
11. Provide calculations that demonstrate the seismic adequacy of the condenser structural components and support members, by using an acceptable analytical methodology.
12. Provide a copy of LaSalle's seismic verification walkdown procedure used for the ALT path walkdown.