

UNITED STATES NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

November 14, 1994

Vocker File

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

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION CONCERNING GENERIC LETTER 94-03, "INTERGRANULAR STRESS CORROSION CRACKING OF CORE SHROUDS IN BOILING WATER REACTORS" (TAC NOS. M90088 AND M90110)

Dear Mr. Farrar:

By letter dated July 25, 1994, the NRC issued Generic Letter (GL) 94-03, "Intergranular Stress Corrosion Cracking of Core Shrouds in Boiling Water Reactors." The purpose of the generic letter was to request each licensee to inspect the core shroud no later than the next refueling outage, and perform a safety analysis supporting continued operation of the facility until inspections are conducted.

By letter dated August 23, 1994, ComEd responded to the GL. The NRC staff reviewed the response for Dresden Unit 2 and Quad Cities Unit 2 and found the response to be incomplete concerning the safety analysis supporting continued operation of the units.

By letter dated September 27, 1994, the staff issued a request for additional information. By letters dated October 7 and October 13, 1994, ComEd responded to the RAI. In addition, on October 14, 1994, the staff held a public meeting with ComEd to discuss the responses to the RAIs. A number of questions raised by the staff were discussed during the meeting. Enclosed is an RAI which formalizes the questions discussed during the meeting. We request that you provide written responses to these questions within 30 days from the date of this letter. The response should be for all four units if the question is applicable to all four units.

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Mr. D. L. Farrar

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This requirement affects 9 or fewer respondents and, therefore, is not subject to Office of Management and Budget review under P.L. 96-511.

Sincerely,

Original signed by

John F. Stang, Senior Project Manager Project Directorate - III+2 Division of Reactor Projects III/IV Office of Nuclear Reactor Regulation

Docket Nos.: 50-237, 50-249, 50-254, and 50-265

Request for Additional Information Enclosure:

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cc w/encl: See next page

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Mr. D. L. Farrar Commonwealth Edison Company

cc:

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Regional Administrator U.S. NRC, Region III 801 Warrenville Road Lisle, Illinois 60532-4351 Quad Cities Nuclear Power Station Unit Nos. 1 and 2

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REQUEST FOR ADDITIONAL INFORMATION

CONCERNING CORE SHROUD CRACKING AT

DRESDEN UNITS 2 AND 3

DOCKET NOS. 50-237 AND 50-249

<u>and</u>

QUAD CITIES UNITS 1 AND 2

DOCKET NOS. 50-254 AND 50-265

- 1. In the October 14, 1994 meeting, ComEd discussed the TRAC-G analysis technique for the evaluation of the main steamline break and its effect on the core shroud. To better aid the staff in the review of the core shroud cracking issue at both Dresden and Quad Cities, the following should be provided concerning the TRAC-G main steamline break calculations for all four units:
 - a. All assumptions used in the calculations.
 - b. Entry level conditions.
 - c. Correlations to other calculation techniques and the justification for their use for the plant specific calculation for Dresden and Quad Cities.
 - d. Conservatism used in the calculations.
 - e. Identify all uncertainties and inaccuracies in the TRAC-G calculation.
- 2. Provide justification that the differential pressure across the core shroud for Dresden and Quad Cities resulting from a feedwater line break is less limiting than a main steamline break or a recirculation line break.
- 3. Provide justification that the core spray system will perform its intended function following design basis accidents if the core spray piping is also cracked as well as the core shroud.
- 4. Provide the justification for the use of the PLEDGE model for crack depth sizing and predicting crack growth rate for the core shrouds. The

Enclosure

response should include the calculation techniques the PLEDGE model uses including the following:

a. Calculation methodology.

b. Assumptions used.

c. Conservatism and uncertainties used in the calculations.

5. By letter dated September 2, 1994, you provided the staff with the results of a recirculation line break analysis as it relates to the core shroud cracking issue using TRAC-G calculation techniques, in response to an RAI issued by the staff in a letter dated July 21, 1994. The staff has performed a preliminary review of the results and requests the following additional information:

a. Provide the break flow from both sides of the break.

b. Provide the steam dome pressure.