

NOV 18 1985

Docket No. 50-373

Mr. Dennis L. Farrar
Director of Licensing
Commonwealth Edison Company
P.O. Box 767
Chicago, Illinois 60690

Dear Mr. Farrar:

SUBJECT: SAFETY EVALUATION OF MECHANICAL STRESS IMPROVEMENT PROCESS
LA SALLE COUNTY STATION, UNIT 1

By letter dated July 19, 1985, Commonwealth Edison submitted its application for utilizing the Mechanical Stress Improvement Process (MSIP). In your letter, you stated that you proposed to apply MSIP to the primary system stainless steel piping in the La Salle Unit 1 plant to modify the residual stress pattern at piping butt welds. Enclosed is our Safety Evaluation to your submittal.

Based on the available information, the staff concludes that the MSIP can be used on stainless steel piping to reduce the probability of intergranular stress corrosion (IGSCC) and that its effect is expected to be comparable to that afforded induction heating stress improvement treated welds if and when the action items listed below are satisfactorily completed:

- (1) Pipe samples containing MSIP treated weldments should be included in the ongoing EPRI test program;
- (2) independent elasto-plastic analyses should be performed to confirm those already done by O'Donnell & Associates; and
- (3) through-the-wall experimental residual stress analyses should be performed to confirm the theoretical analysis results.

Furthermore, the staff also concludes that the long range benefits of MSIP can only be proven out by long term pipe tests and actual service experience. Therefore, augmented inspections to confirm the performance of MSIP treated welds are considered necessary.

If there are questions concerning these matters, please contact A. Bournia, the Project Manager (301-492-8535).

Sincerely,

8511270143 851118
PDR ADOCK 05000373
P PDR

Original Signed by
Walter R. Butler, Chief
Licensing Branch No. 2
Division of Licensing

Enclosure: As stated

cc: See next page

LB#2/DL/PM LB#2/DL/BC
ABournia:lb WButler
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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

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Sincerely,

Walter R. Butler
Walter R. Butler, Chief
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Division of Licensing

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Mr. Dennis L. Farrar
Commonwealth Edison Company

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Units 1 & 2

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