Commonwealth Edison
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December 28, 1982

Mr. Gus C. Lainas
Assistant Director for Operating Reactors
U.S. Regulatory Commission
Washington D.C. 20555

Subject: LaSalle County Station Units 1 and 2
Response to Generic Letter 81-04 on
Implementation of NUREG-0313, Rev. 1
NRC Docket Nos. 50-373 and 50-374

Reference: (a) Gus C. Lainas letter to L. O. DelGeorge
dated October 28, 1982

Dear Mr. Lainas:

Reference (a), which was received on November 3, 1982, stated in part:

"You are therefore, requested to provide within 60 days of receipt of this letter the information and programs previously requested by our Generic letter 81-04 of February 26, 1981."

Enclosed please find a list of general and specific actions that were pursued and completed for LaSalle County Station.

To the best of my knowledge and belief the statements contained herein and in the attachment are true and correct. In some respects these statements are not based on my personal knowledge but upon information furnished by other Commonwealth Edison employees. Such information has been reviewed in accordance with Company practice and I believe it to be reliable.

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Enclosed for your use is one signed original and thirty-nine (39) copies of this letter and the enclosure.

If there are any further questions in this matter, please contact this office.

Very truly yours,

C W Schroeder 12/20/82

C. W. Schroeder
Nuclear Licensing Administrator

CWS/pl

cc: NRC Resident Inspector - LSCS

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Enclosure

Beginning with the 1974 discovery of cracks in stainless steel piping, Commonwealth Edison's LaSalle Engineering Group has actively improved the LaSalle design and equipment installation to reduce intergranular stress corrosion cracking (IGSCC). Both general and specific corrective actions are noted here to indicate the scope of changes at LaSalle since stainless steel cracking became an issue.

General Actions Pursued:

1. Type 304 stainless steel has been replaced where cracking conditions have been found or are expected based upon the three contributory causes: overstress, sensitization, and high oxygen content in semi-stagnant flows. Replacement materials were 304L, 316L, 316K or carbon steel in some places. Crevices and stress amplification designs were avoided.

2. Post fabrication solution annealing was used on shop fabricated assemblies and piping spools. Sensitization temperatures (800-1500°F) were avoided.

3. Field welding utilized controlled heat inputs to limit the heat affected zone. Controlled deposition of weld cladding was needed in safe-end replacements.

4. Grinding was not allowed on reactor coolant wetted surfaces of pressure boundary equipment.

5. Stagnant lines and certain NRC "target lines" were evaluated for possible removal or rerouting.

6. Where possible cold water sources (CST) were avoided and piping was rerouted to decrease thermal stresses.

7. Where possible, highly oxygenated water was avoided when low oxygen-content water could be used.

Specific Actions Completed:

1. The core spray lines, LPCI piping, and RWCU piping have been changed from stainless steel type 304 to carbon steel.

2. The core spray safe-ends and transition spools have been replaced with carbon steel components.

3. The CRD return line has been eliminated; nozzle N-10 capped; CRD pressure equalization equipment installed; and carbon steel eliminated from CRD service lines.

4. CRD drive water is now taken from the condensate system for a low oxygen source (14-200 PPB) of water, instead of the condensate storage tank.

5. The collet retainer tube has been redesigned with colmonoy hardfacing; and the index tube and piston tube now contain XM-19 alloy. (Stainless)

6. The recirculation system bypass lines (10 inch) have been eliminated.

7. The jet pump riser assemblies were solution heat treated after assembly as were the entrance elbows and pipe spools.

8. The feedwater sparger has been redesigned with new spray nozzles which decrease thermal cycle stresses.

9. A leak detection system has been designed, installed and tested to the criteria defined in Regulatory Guide 1.45.

10. Stress Rule indices have been determined for all Class I and II stainless piping. Forty-two welds in Class I piping were found to have high indices. These welds will have augmented ISI applied to them.

11. Surveys have been completed on the recirc system welds for evaluation of the feasibility of performing IHSI.

12. Proposals are being evaluated, and negotiations are in progress for the application of induction heating stress improvement program to the Unit 2 recirc system piping. Our present goal is to have this Unit 2 work completed before Unit 2 start-up with Unit 1 similarly treated during a future outage.

The above updates the activities to reduce the effects of IGSCC at LaSalle. Most of this information has been submitted during the licensing process in such documents as FSAR Sections 5.2.3.4, 7.1.7.6, 11.6, Q 121.8 and in our ISI Plan.

Based on the above submittals and described actions, Commonwealth Edison believes LaSalle is in compliance with NUREG-0313, Rev. 1 and no further action is required.