Commonwealth Edison
One First National Plaza, Chicago, Illinois
Address Reply to: Post Office Box 767
Chicago, Illinois 60690

February 9, 1984

Mr. James G. Keppler
Regional Administrator
U.S. Nuclear Regulatory Commission
Region III
799 Roosevelt Road
Glen Ellyn, IL 60137

Subject: LaSalle County Station Units 1 and 2
Supplemental Response to Inspection
Report Nos. 50-373/83-41 and
50-374/83-42
NRC Docket Nos. 50-373 and 50-374

References (a): J. F. Streeter letter to Cordell Reed dated December 7, 1983.

(b): D.L. Farrar letter to J.G. Keppler dated January 20, 1984

Dear Mr. Keppler:

Reference (a) transmitted Inspection Report Nos. 50-373/83-41 and 50-374/83-42 and a Notice of Violation. Reference (b) provided Commonwealth Edison Company's response to Reference (a). The purpose of this letter is to supplement Reference (b).

As further explained in the attachment to this letter, statements in our initial response (Reference b) concerning responsibility of the valve supplier for design requirements were not intended to mean that we had transferred our overall design control responsibility as licensee and owner. We believe that specific designs are the responsibility of the supplier, but we did not intend nor do we ever propose to relinquish our responsibilities for overall design control. Commonwealth Edison is accountable for all design activities associated with our Nuclear Power Plants.

For clarification purposes a brief history of the events leading up to the noncompliance is provided.

In September, 1983, the inboard feedwater check valves failed their local leak rate test (LLRT). Inspection of the ethylene propylene (EPR) soft seats in these valves indicated some wear on the face of the seals and cutting damage on the back side of the seals. After discussion with other seal manufacturers, CECo concluded that damage to the seal face was due to improper material removal by cutting/machining instead of a more appropriate grinding process. Back side damage was linked to

sharp edges/burrs on the pressure vent groves. The pressure vent grooves were deburred and smoothed and the procedure for excess material removal from the seal face was revised to include only the approved grinding method. When replacement seals of the original molded design were unavailable, replacements with extruded EPR seals with a vulcanized joint were reviewed and approved by the valve supplier, Anchor-Darling Valve (A/DV), and CECo. These seals failed a LLRT in November, 1983. Inspection of the valve indicated that the primary failure mode was a separation of the vulcanized joints by about 1/2 to 1 1/2 inches. Additional inspection indicated some potential alignment problems between the disc and seat of the valve. Corrective actions taken were to remachine eccentric bushings to improve alignment and to allow only the use of one-piece molded EPR seals. Since the second failure was completely different from the first, CECo believes that the corrective action of the original seals was and still is appropriate.

The only remaining concern is the long term qualification of the soft seats to withstand operating/abnormal conditions. To resolve this, CECo is pursuing a testing program on three different seal materials including EPR, to qualify them for the required service. The results of these tests should provide information in time to make modifications, if required, by the first refueling outage.

Attachment 1 is the supplement 1 response.

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 and contractor employees. Such information has been reviewed in accordance with Company practice and I believe it to be reliable.

If there are any further questions regarding this matter, please conctact this office.

Very truly yours,

D. L. Farrar
Director of Nuclear Licensing

CWS/lm

cc: NRC Resident Inspector - LSCS

Attachment

8120N

ATTACHMENT 1

In response to our telephone conference of February 1, 1984, we are supplementing our January 1984 response to you.

Discussion and Corrective Action Taken

Item A: Our statement that A/DV has the responsibility for the structural adaquacy of the check valve is intended to convey that as the valve designer and manufacturer, A/DV has an ASME defined responsibility to perform detailed analysis and stress calculations to determine the adaquacy of the pressure boundary of the valves to withstand those conditions defined by our Purchase Specification using methodology prescribed by the ASME Sec. III code. It is CECo's responsibility to provide basic design parameters the valves must meet, assure the valves are built to these conditions, assure ASME code and documentation requirements are met, and review the supplied stress reports. This is to be accomplished under the guidance of the CECo QA Manual. CECo has always maintained overall owners responsiblity for these valves.

The review of the design change could have been more extensively documented, and a more precise specification reference given to A/DV in the change order. About 90% of the change orders to A/DV do reference explicity the purchase specification J-2938. However, we feel that unless specifically modified, all requirements of the original purchase order apply to all change orders as well.

The change order to add the soft seat was written to authorize A/DV to make a design change to incorporate an additional sealing surface to meet containment leakage requirements imposed by the NRC during licensing of the LaSalle units. A/DV proposed the change in response to CECo's request to make the valves meet the new leakage requirements. Since the only change was the leakage criteria, and the new seals were not ASME components, no revision to the specification temperature, pressure, or radiation requirements were imposed. We believe the design change to use EPR met the practices for mechanical components selection in place at the time. The use of EPR was based on previous uses of EPR by A/DV for similar feedwater service at other nuclear plants and the general operating capabilities attributed to EPR materials.

Item B: With respect to the use of vulcanized vs. one piece molded seals, CECo believes that the approval to use the vulcanized seals was consistent with our practices for procurement of spare parts.

The original seals were purchased directly from A/DV as original parts of the valve (as per the change order to authorized A/DV's proposed design change). The vulcanized seals were also purchased from A/DV as OEM supplied replacement parts. The vulcanized seals were evaluated and approved for use by A/DV as the OEM. Our review of the vulcanized seals and the vulcanization process gave us no reason to reject their use. If properly applied, we believed the vulcanized joint would have strength properties similar to the base materials.

Based on the above, CECo believes that design control measures in accordance with our Quality Assurance requirements were implemented when the vulcanized seals were approved and purchased.

Corrective Action to Prevent Recurrence

In addition to the corrective actions identified in Reference b, the following actions have also been taken:

1. The modification approval letter checklist (SNED procedure Q6 Exhibit F) will be revised to include provisions for determing the need to revise any applicable stress reports. Directions to identify environmental qualification requirements were added 8/4/82 (subsequent to the original valve design change) and no additional revisions are deemed necessary.

2. The Safety Related/ASME code change order procedures (SNED/PE Procedure Q.28 Exhibit B) will be revised to include documentation from the vendor that for ASME III items, any applicable stress reports have been reconciled or revised stress reports will be provided.

We believe that implementation of the above procedure changes will prevent recurrence of events of this type.

Date When Full Compliance will be achieved

Procedure revisions identified in items 1 and 2 above will be implemented by April 15, 1984.