



LONG ISLAND LIGHTING COMPANY

SHOREHAM NUCLEAR POWER STATION

P.O. BOX 604, NORTH COUNTRY ROAD • WADING RIVER, N.Y. 11792

March 26, 1984

SNRC-1029

Mr. Carl Berlinger
Nuclear Regulatory Commission
7920 Norfolk Avenue
Bethesda, Maryland 20555

AE Pistons
SHOREHAM NUCLEAR POWER STATION - UNIT 1
W.O. 44430/48923

Dear Mr. Berlinger:

The purpose of this letter is to supplement the information presented to you at the March 22, 1984 TDI Owner's Group meeting at Shoreham relating to AE piston inspections. You will recall that some of these inspections were still in progress during our meeting. All NDE inspections on the lead R-48 (Shoreham) engines for the Transamerica Delaval (TDI) Owner's Group have now been completed in accordance with the DR/QR Program. The results of these NDE inspections confirm the conclusions presented to you at last week's meeting; that is the AE pistons are acceptable for their intended use in emergency diesel generators at nuclear power plants.

With regard to the observations of in-process NDE inspections referred to at the March 22, 1984 meeting, they had not been completed, nor had they been interpreted by a level III inspector at the time the NRC consultant observed a portion of the inspections. By the evening of March 22, 1984 the final results of these inspections were available and these results indicated that there were no rejectable indications in the number 8 piston skirt, which is the one observed by your consultant. The indications observed by your consultant, which were discussed at the meeting, were actually surface finish conditions which are typical for castings of this type, and which are neither relevant nor deleterious. As indicated above, all piston NDE inspections called for on the Shoreham pistons have now been completed with satisfactory results.

As you requested at the meeting, the following is a brief explanation of the NDE examinations performed on the lead R-48 (Shoreham) pistons. The DR/QR Program required NDE inspections

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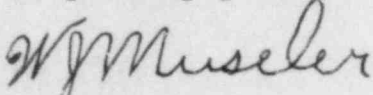
Mr. Carl Berlinger
AE Pistons

on the following pistons by engine; DG 101 - pistons 5, 7 and 8; DG 102 - pistons 5, 6, 7 and 8; DG 103 - pistons 5, 7 and 8. On DG 101, 102 and 103 pistons required inspections, the piston skirt bosses, (the crown to skirt bolting area), were subjected to eddy current and liquid penetrant (LP) inspection. These inspections were specified to confirm our conclusion that the AE piston design would not be subject to cracking similar to that found on the AF piston design. (As we discussed at last week's meeting, examination of the Kodiak AE pistons and the TDI R5 test engine AE pistons considered together with analytical and strain gauge test results formed the basis for this conclusion.) An additional inspection performed on the DG 102 pistons noted above was an LP of the wrist pin boss area. These NDE inspections were specified to confirm that wrist pin boss cracking which had been experienced on improperly heat treated AN pistons was not a concern for AE pistons. All of these inspections have been completed and no relevant indications were observed. It should be noted that all inspections were performed after completion of the 100 hour test run at 100% power.

Inspection reports for all pistons have been completed and are available for NRC review.

We trust this information has been responsive to your request and provides sufficient detail for you to complete your review. If you have any further questions, please let me know.

Very truly yours,



W. J. Museler
Program Technical Manager
TDI Diesel Generator Owners Group