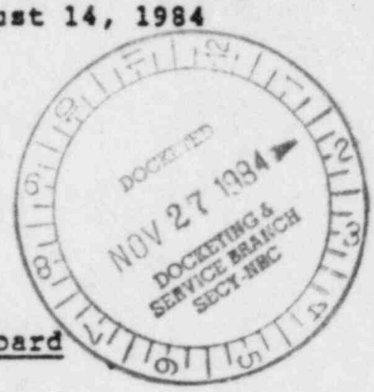
LILCO, August 14, 1984



UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

Before the Atomic Safety and Licensing Board

In the Matter of	)	
	)	
LONG ISLAND LIGHTING COMPANY	)	Docket No. 50-322 (OL)
	)	
(Shoreham Nuclear Power Station, Unit 1)	)	
	)	

TESTIMONY OF DAVID O. HARRIS, DUANE P. JOHNSON, ROGER L. McCARTHY, FRANZ F. PISCHINGER, CRAIG K. SEAMAN, LEE A. SWANGER AND EDWARD J. YOUNGLING ON BEHALF OF LONG ISLAND LIGHTING COMPANY ON SUFFOLK COUNTY CONTENTION REGARDING AE PISTON SKIRTS ON DIESEL GENERATORS AT SHOREHAM

Exhibits 1 through 34

Volume 2 of 2

LILCO, August 14, 1984

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In the Matter of	)	
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AE PISTON SKIRT EXHIBITS

TESTIMONY OF DAVID O. HARRIS, DUANE P. JOHNSON, ROGER L. McCARTHY, FRANZ F. FISCHINGER, CRAIG G. SAMAN, LEE A. SWANGER AND EDWARD J. YOUNGLING ON BEHALF OF LONG ISLAND LIGHTING COMPANY ON SUFFOLK COUNTY CONTENTION REGARDING AE PISTON SKIRTS ON DIESEL GENERATORS AT SHOREHAM

P-1 Photograph of piston skirt with mounted crown and rings

P-2 Photograph of a piston from a Shoreham EDG showing skirt and crown

P-3 Cross section of crown and skirt indicating the two areas of load transfer from the crown to the skirt

P-4 Piston reassembly guidelines showing measurement of cold gap

P-5 Gas pressure versus crank angle diagram

P-6 Comparison of all AE and AF piston skirts in the region of the stud attachment bosses

P-7 Representative dimension checks shown on Task Evaluation Reports Q-338, 310, 114, 203 and 182

P-8 Trip report on nondestructive examination of AE piston skirt and a copy of AE piston skirt, inspection, requirements, certificates of compliance and receipt inspection documentation

P-9 A sample preoperational test procedure and Appendix F showing peak firing pressures taken before the crankshaft failure and after the crankshaft replacement

P-26 Liquid dye penetrant inspection results after 100 hours operation for EDGs 101, 102, 103

P-27 Eddy current test results after 100 hours operation for EDGs 101, 102, 103; FaAA Procedure NDE 11.5, Rev. 0 and Rev. 1

P-28 Iron Castings Handbook, page 34

P-29 Results of inspection of AE pistons on the Kodiak Electric Association engine and the TDI R-5 prototype engine

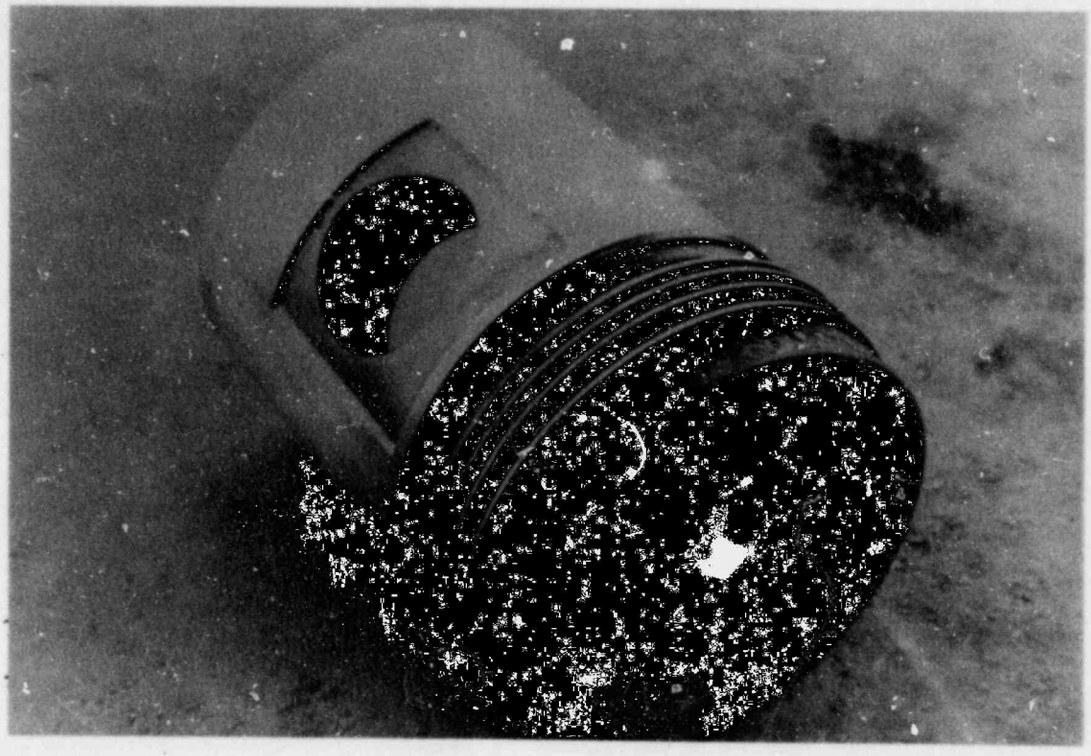
P-30 Volume I, TDI Owners Manual (sections discussing engine lubrication)

P-31 Excerpts from Diesel Engine Design by T.D. Walshaw and Internal-Combustion Engines by V. L. Maleev

P-32 Task evaluation reports and LILCO deficiency reports which discuss the DRQR's visual inspections of AE piston skirts

P-33 Liquid dye penetrant test results for AF piston skirts

P-34 Minimum and maximum stresses in AE piston skirt for various peak firing pressures for isothermal and steady state operaing conditions; applied values of Delta K and R as a function of crack depth and corresponding values of Delta K_{th} (2,200 psig)



Photograph of piston skirt with mounted crown and rings.