

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) )

MOTION OF LONG ISLAND LIGHTING  
COMPANY TO ADD DR. STANLEY LUCKS  
AS A WITNESS ON SOC CONTENTION 19(e)

The Long Island Lighting Company respectfully requests permission to add Dr. Stanley Lucks as a supplemental witness on SOC Contention 19(e). On May 27, 1982, the Board ruled that the Contention did not involve the issue of how the design response spectra interacted with other considerations to produce an adequately conservatively seismic design (a perspective which Dr. Wong is well able to provide). Rather, the Board indicated that it wished an in-depth discussion of the scientific and technical bases of the Shoreham's design response spectra. Transcript at 2442-43. Dr. Lucks can provide that discussion.

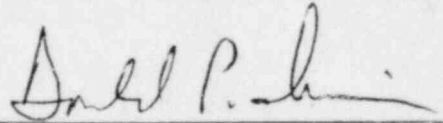
As Chief Geotechnical Engineer at Stone & Webster, he is responsible for that firm's geologic, seismologic, geotechnical and geophysical engineering work, including that for Shoreham. In this capacity, Dr. Lucks has developed

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design response spectra and is an expert on how the scientific and technical inputs affect the spectra. Moreover, he and his colleagues have studied Shoreham's soil characteristics and published their findings in "The Effect of Change in the Effective Stress on STP-N Values," (June, 1981). He has also authored or co-authored other papers on seismic design.

Dr. Lucks is an expert regarding the Shoreham design response spectra and can aid in providing the Board with a detailed explanation of the scientific and technical bases that underlie the spectra. Accordingly, the Long Island Lighting Company requests that he be added as a witness on SOC Contention 19(e).

Respectfully submitted,



Donald P. Irwin  
Daniel O. Flanagan

HUNTON & WILLIAMS  
Post Office Box 1535  
Richmond, Virginia 23212

DATED: June 8, 1982

## PROFESSIONAL QUALIFICATIONS

A. Stanley Lucks  
Chief Geotechnical Engineer

STONE & WEBSTER ENGINEERING CORPORATION

My name is Stanley Lucks. My business address is 245 Summer Street, Boston, Massachusetts, 02107. I am employed by Stone & Webster Engineering Corporation as Chief Geotechnical Engineer responsible for the management of the Geotechnical Division. Geotechnical Division staff are responsible for all geologic, seismologic, geophysical and geotechnical engineering work for Stone & Webster projects. I have held this position since April 1978. My responsibilities include providing review and technical guidance for geotechnical work, including that involving Long Island Lighting Company's Shoreham Project. My responsibilities have included the development of design response spectra.

I received my Bachelor of Science degree, with first class honors in civil engineering, from Heriot-Watt University, Edinburgh, Scotland, in 1963; Diploma of Imperial College in Soil Mechanics from Imperial College, London, England, in 1964; and Doctor of Philosophy in geotechnical engineering from the Massachusetts Institute of Technology in 1970.

Prior to joining Stone & Webster Engineering Corporation, I was a Project Soils Engineer with Lambe Associates, Concord, Massachusetts, from 1970 to 1972. From 1966 until 1970, I was a Research Assistant at MIT and a Consultant to T. W. Lambe and Associates. My research included conducting studies and analyses of the shear strength of granular soils. From 1964 until 1966, I was a Civil Engineer with R. H. Cuthbertson & Associates, Edinburgh, Scotland.

I joined Stone & Webster Corporation as a soils engineer in June 1972. In November 1973 I was promoted to Senior Soils Engineer and Group Supervisor. In these positions I was responsible for geotechnical work on several projects. This work included geologic, seismologic and geotechnical engineering studies for several nuclear power plant siting and design projects. In November 1976 I was promoted to Assistant Chief Geotechnical Engineer responsible for the supervision of geotechnical work on several projects as well as the operation of the Geotechnical Testing Laboratory and the review of Technical Procedures for the control of Geotechnical Division work. In April 1978 I was promoted to Chief Geotechnical Engineer responsible for the management of the Geotechnical Division.

I have coauthored several professional papers and reports in the field of geotechnical engineering. These papers have included the assessment of seismic hazard, the sliding and stability of structures during earthquakes, the seismic stability of soil deposits and criteria for the design of retaining walls to withstand earthquakes. One paper, which I coauthored, was an analysis of certain soil characteristics at Shoreham: "The Effect of Change in the Effective Stress on STP-N Values," 10th International Conference on Soil Mechanics and Foundation Engineering (1981).

I am a Registered Professional Engineer in Massachusetts, a member of the American Society of Civil Engineers and the Boston Society of Civil Engineers Section, the International Society of Soil Mechanics and Foundation Engineering. I am also an Associate Member of the Institution of Civil Engineers (London). I am a member of the Embankment Dams and Slopes and Publications Committees of the American Society of Civil Engineers.

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CERTIFICATE OF SERVICE

I hereby certify that copies of (1) Professional Qualifications of A. Stanley Lucks, Chief Geotechnical Engineer, Stone & Webster Engineering Corporation, and (2) Motion of Long Island Lighting Company to Add Dr. Stanley Lucks as a Witness on SOC Contention 19(e) have been served this date upon each of the following by hand (as indicated by an asterisk) or by deposit in the U.S. Mail, first class, postage prepaid:

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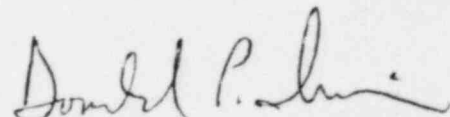
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DATED: June 8, 1982

  
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