

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of)
LONG ISLAND LIGHTING COMPANY)
(Shoreham Nuclear Power Station,)
Unit 1)

Docket No. 50-322-1
(OL)

AFFIDAVIT OF JERRY L. MAUCK
IN RESPONSE TO ALAB-788

I, Jerry L. Mauck, depose and say:

1. I am a Reactor Engineer (Instrumentation) within the Instrumentation and Control Systems Branch, Division of Systems Integration, Office of Nuclear Reactor Regulation, United States Nuclear Regulatory Commission. My Professional Qualifications are already a matter of record in this proceeding. This Affidavit is submitted in response to that portion of ALAB-788 dealing with Unresolved Safety Issue (USI) A-47 and as a supplement to the Affidavit of Andrew J. Szukiewicz (Szukiewicz Affidavit).

2. Sections 7.7.1, 7.7.2, and 7.5 of Shoreham SSER 4 referenced in the Szukiewicz Affidavit were prepared by me. I hereby certify that the statements contained therein are true and correct to the best of my knowledge and belief. All documents relied on by me in my review are set forth in the above referenced sections of SSER 4.


3. As stated in the above referenced SSER Sections, the applicant was requested to (1) review the possibility of consequential control system failures that exacerbate the effects of high-energy line breaks (HELBs) and adopt new procedures or perform design changes, where needed, to ensure that the postulated events would be adequately mitigated; (2) review and identify any power sources or sensors (sensor lines) that provide power or signals to two or more control systems and to demonstrate that failures or malfunctions of these power sources or sensors will not result in consequences beyond the bounds of the FSAR Chapter 15 analyses or beyond the capability of operators or safety systems; and (3) review the adequacy of emergency operational procedures used by control room operators to attain safe shut down upon loss of any class 1E or non-class 1E buses supplying power to safety-or non safety-related instruments and to control systems (IEB 79-27). The applicant responded to these three requests for information and the conclusions of the staff review of this information are set forth in the above referenced SSER Sections. There we concluded that (1) HELB's would not cause control system malfunctions such that resulting dose consequences would exceed 10% of 10 CFR 100 criteria and complicate events beyond the FSAR analysis; (2) the consequences of failures of power sources or sensors (sensor lines) that provide power or signals to two or more control systems were bounded by previous analyses presented in FSAR Chapter 15; and (3) Shoreham procedures provide adequate, sufficient and detailed instructions for the operator to attain safe shutdown upon loss of any Class 1E or non-class 1E buses supplying power

to safety-related or nonsafety-related instruments and to control systems.

4. In summary, the staff has reviewed the applicant's responses to these concerns and, as stated in the above references SSER sections, has found them an acceptable means to resolve these staff concerns.


Jerry L. Mauck

Subscribed and sworn to before me
this, 3rd day of November, 1984


Melinda L. McDonald
Notary Public

My commission expires: 7/1/86