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May 6, 1985

SNRC-1169

Mr. Harold R. Denton, Director
Office of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Washington, D.C. 20555

Emergency Diesel Generator Qualified Load
Job/Task Analysis
Shoreham Nuclear Power Station - Unit 1

Reference: Letter From Mr. J. D. Leonard, Jr. to
Mr. H. R. Denton Dated April 4, 1985,
Titled, "Emergency Diesel Generator Loading"

Dear Mr. Denton:

During hearings before the Atomic Safety and Licensing Board on the TDI emergency diesel generators, LILCO committed to perform a job/task analysis, as was further defined in our letter to you dated April 4, 1985.

LILCO contracted with General Physics Corporation of Columbia, Maryland to perform this analysis and submitted in the reference letter, the General Physics plan to perform this review. The purpose of this analysis was to ascertain whether there is reasonable assurance that loads in excess of the qualified load would not be imposed upon the TDI emergency diesel generators by the plant operators utilizing the existing emergency operating procedures. In addition, the analysis was to determine whether or not timely load reduction could be expected in the unlikely event that the qualified load was exceeded. Finally, the analysis was to ensure that the training program adequately addressed the 3300 KW qualified load associated with the emergency diesel generators.

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The job/task analysis referenced above was conducted in four main phases:

- (1) A system functional review and job/task analysis.
- (2) A verification of the availability and suitability of the emergency diesel generator instrumentation and controls.
- (3) A validation of emergency operating procedures and control room functions related to emergency diesel generator loading.
- (4) A review of the emergency diesel generator training plan against the job/task analysis worksheets.

The job/task analysis was performed by human factors and operations personnel and considered two scenarios: (1) the loss of off-site power, and (2) the loss of off-site power with loss of coolant accident.

Members of your staff reviewed the methodology and approach for this job/task analysis and concurred with its content and formulation. The General Physics Corporation performed the analysis during the months of March and April, 1985. This included the use of the Limerick simulator for scenario evaluations as well as walk-throughs at the Shoreham plant.

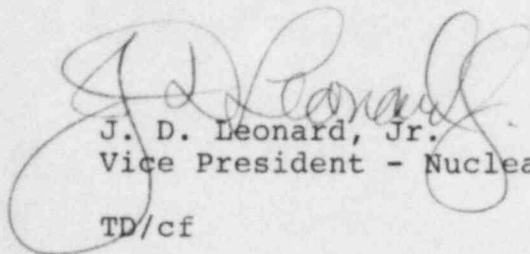
Based on the job/task analysis, General Physics has concluded, that the operators demonstrated a proficiency in managing emergency diesel generator load in a degraded plant condition. The evaluation found that there is reasonable assurance that (1) the procedures and training do not lead the operators to load the emergency diesel generators over 3300 KW, (2) the procedures and training provide the necessary guidance to have the emergency diesel generator load reduced to less than 3300 KW within one hour in the unlikely event loads exceed 3300 KW, and (3) that the training program adequately addresses the 3300 KW qualified load associated with the emergency diesel generators.

Additionally, as a result of the job/task analysis, the General Physics Corporation has made several recommendations to enhance the existing procedures, training, and instrumentation and controls associated with emergency diesel generator operation with the qualified load of 3300 KW. LILCO has evaluated and accepted these recommendations. A brief discussion of the implementation of each recommendation is contained in Attachment A to this letter.

It is our conclusion that the General Physics job/task analysis further substantiates our previous position that the Shoreham TDI emergency diesel generators can be effectively operated given the 3300 KW qualified load.

Should you or your staff have additional questions concerning our response, please contact my office.

Very truly yours,

A large, stylized handwritten signature in dark ink, appearing to read "J. D. Leonard, Jr.".

J. D. Leonard, Jr.
Vice President - Nuclear Operations

TD/cf

cc: P. Eselgroth
All Parties listed in Attachment 1

ATTACHMENT I

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ATTACHMENT A

LILCO DISPOSITION OF GENERAL PHYSICS (GP) RECOMMENDATIONS CONTAINED IN THEIR REPORT, "SHOREHAM NUCLEAR POWER STATION EMERGENCY DIESEL GENERATOR LOADING ANALYSIS METHODOLOGY AND RESULTS" (GP-R-212137, dated May 2, 1985)

GP Item 5.1.1

LILCO will add three color coded (red back light) annunciators, one to each of the emergency diesel generator control panels in the main control room, to alarm when the 3300 KW qualified load is reached. This recommendation was part of the NRC SER issued in December 1984. The labelling of these alarms will be as suggested by General Physics. It is LILCO's position that these alarms will be in place prior to declaring the diesel generators operable under the Shoreham Technical Specifications. General Physics' recommendation that alarms be in the same position within the annunciator panels for each of the three diesel generators is considered a further enhancement to the annunciator design. However, engineering and materials restrain the implementation of this recommendation; therefore, LILCO will ensure that the alarms are in the same location by August 1, 1985.

GP Item 5.1.2

LILCO will provide a digital indication of emergency diesel generator kilowatt load for each emergency diesel generator on the interim SPDS CRT display on Panel 603 within the Shoreham Control Room. Due to engineering and material constraints, implementation of this recommendation will be completed by August 1, 1985.

GP Item 5.1.3

LILCO will provide digital indication and bar graphic displays for each emergency diesel generator kilowatt load on the final phase II SPDS CRT display which will be installed in the Shoreham Control Room.

GP Item 5.1.4

LILCO will, as necessary, clean and maintain the meter pointer of the internal prism for the three emergency diesel generator kilowatt load meters located on MCB-01 to ensure visibility of the indicators.

GP Item 5.1.5

LILCO will revise the labelling and demarcation of motor control center shunt trip and supply breaker switches in the emergency switchgear rooms as described by the task analysis of LOOP and LOOP-LOCA scenarios. Implementation of this recommendation will be completed prior to declaring the associated emergency diesel generator operable under the Shoreham Technical Specifications.

GP Item 5.2.1- 5.2.6

LILCO concurs with the recommendations made by General Physics for improvement of procedures: containment control and level control emergency procedures will be separately bound; kilowatt load ratings for ECCS pumps will be listed in the LOOP procedure; a note will be added prior to step 4.10.1 of the LOOP procedure indicating that the substeps can be performed in any order; the table in SP23.311.01 will be revised to specify the locations of the shunt trip overrides and supply breakers located in the emergency switchgear rooms; the recommended caution statement will be added in station procedures dealing with the MSIV leakage control system and primary containment post-LOCA hydrogen recombination system; and plant locations for loads in Table 1 of the LOOP procedure will be further enhanced by adding the quadrant within the reactor building and the number of the motor control center containing the subject load. These procedural enhancements will be completed prior to declaring the emergency diesel generators operational under the Shoreham Technical Specifications.

GP Item 5.2.7

LILCO will evaluate utilization of flow chart format for symptom oriented emergency operating procedures as part of the Emergency Response Capability program.

GP Item 5.3

LILCO concurs with the General Physics' recommendations regarding the emergency diesel generator training lesson plan. LILCO will add a section to the lesson plan that reviews the location of motor control center shunt trip override and supply breaker switches listed in referenced Station Procedures. LILCO will incorporate the existing discussion of the MESL and emergency operating procedure step transition discussions into the lesson plan for future training. The Shoreham operators have received this training, although it was not included specifically into the subject lesson plan. LILCO will also incorporate in operator training a discussion of the existing requirements to log loads that are manually added to or removed from the emergency buses as well as a description of the new emergency diesel generator qualified load annunciator alarms and their setpoints. These items will be implemented prior to declaring the emergency diesel generators operable under the Shoreham Technical Specifications.